THE PEASANTRY IN THE EXPANSION OF THE AMAZONIAN FRONTIER

by
Vera Lucia Botelho

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University College London
Department of Social Anthropology

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Regarded as one of the last agricultural frontiers in the world, the Brazilian Amazon has, in the last 20 years, been subject to a steady process of occupation and colonization. Since the beginning, this process has given rise to intense debate by scholars concerned with, among others things, the ecological damage the occupation may provoke and the effects on the native inhabitants (Indians) resulting from the settlement of new social groups in the Region. However, it is the violent struggle for the possession of land between the newly-arrived, large-scale capitalist enterprises and the landless rural workers that has caused the greatest discussion during the last few years.

Such discussion, based on the examples of the early frontier occupation processes in Brazil and the role played by the State, often concludes that the expansion of a small farming system in the Amazonian frontier Region will not occur. The formation and expansion of such a social category, many argue, will be blocked by the predominance of capitalist relations of production which will inevitably lead to the emergence of a process of social differentiation in which some of the settled peasants become capitalists and others proletarian.

This thesis proposes to check the consistency of such a conclusion, amplifying the universe of investigation and adding new analytical approaches. It is argues that, despite the apparent similarities with the early processes which occurred in the country, the Amazonian frontier expansion process is quite different. Such difference is mainly determined by the physical environment and by the particular characteristics of the social agents - the State, the capitalist enterprises and the small farm producers - involved in this process. It also argued that despite all the constraints of a State policy favouring the capitalist enterprises and the hardships of the rain forest environment,
even expand the small farming system of production in the Amazonian frontier region.

The empirical ground for these arguments is found in a historical, political and social analysis of the particularities presented by the frontier expansion process in Amazonia and in a case study of two groups of small farm producers or peasants newly settled in the Region.

Special attention is given to the case study which includes a detailed ethnographic analysis of the two groups of peasants and an evaluation of their present economic situation.

The ethnographic analysis accounts for the background of the peasant families, their settlement process, their ability to adapt to the new physical and social environment and the main characteristics of the emerging social organization found in the newly formed rural communities. The economic analysis is mainly concerned with the means of production and how the peasants organize their system of production in order to maintain their condition as independent producers.

Finally, an attempt is made to identify the main indicators of the economic performance of the small farmers and to what extent such indicators can actually be used to predict the viability and expansion of the small farming system in the Amazonian frontier in the long run.
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The systematic occupation of the Brazilian Amazonian Region during the last two decades has generated intense debate among scholars of different fields. This debate has included issues such as the ecological damage caused by the exploitation of natural resources (Meggers-1971; Goodland and Irwin-1975); the dire effect on the native inhabitants (Indians) presented by the new settlers (Davis-1977; Ramos-1980); the presence of multinational corporations and their threat to national capital (Garrido Filha-1980); the discovery of new mineral deposits and their economic importance for the country (Perpetuo-1983; Maia Filho-1982). However, it is the conflict between two social agents involved in the process of occupation, that is, large-scale capitalists and small farm producers, that has drawn the greatest attention from both social scientists and the press during the last few years.

Although the conflict between these two social agents has been a constant in the Brazilian processes of frontier expansion, in Amazon's case, such conflict has been far more intense than any other and has been largely attributed, by many concerned analysts, to a contradictory presence of the State in the process of occupation of the region.

Indeed, during the 1970's, the military government adopted a dual policy regarding the occupation and development of the Amazonian Region. On the one hand, the government launched a major programme to attract small farm producers to the Region. Such a programme envisaged the provision of a basic infrastructure, such as the construction of highways and the creation of several projects for a directed settlement of small farm producers along these highways. By doing this, the government aimed to relieve social and economic tension in the overcrowded rural sector of the Northeastern Region and to provide a solution for an increasing number of landless workers throughout the country. On the other hand, alleging the need for export earnings, the government, far too soon
for a realistic evaluation of the long-term viability of the settlement program's yet in progress, shifted its priorities and gave in to its new development planning preference for large-scale investments in the Amazonian Region.

Both government policies for the Amazonian Region met their explicit objectives. Despite the fact that the number of families settled in the government colonization programmes turned out to be relatively small (around 50,000 settled by 1979, compared to the 2.7 million that were expected to be settled by 1980 according to the government's original plans) the highly publicized settlement programmes stimulated an intense influx of landless rural workers from different parts of the country to the Amazonian Region.

Similarly, the generous programme of fiscal incentive subsidies and virtually free allocation of land attracted a large number of capitalist enterprises.

The effects of such dual or contradictory policies became even more explicit due to the attitude taken by the capitalist enterprises. Instead of making investments in productive activities, as had been expected, such enterprises saw a better investment for their capital in land speculation. As a result, sooner than was probably expected by the Government, the amount of "free" land actually available to the landless rural workers who continued to arrive became more and more limited, a phenomenon interpreted by some authors as a process of "closing of the frontier for the settlement of small farm producers" (Schmink-1982; Graziano da Silva-1979). The consequence of such a precocious "closing frontier" process is a permanent social unrest provoked by a not infrequent violent struggle for land between capitalist enterprises and small farm producers.

The struggle between capitalist enterprises and small producers on its own does not make the expansion of the Amazonian frontier a particular case. Such conflict has taken place and has been largely studied in many other frontier expansion processes either in Brazil, as mentioned before, or in other countries (Katzman-1976; Pompemayer-1979;
However, the occupation of the Amazonian Region constitutes a singular phenomenon and therefore deserves further investigation due to the presence of the following easily noticed aspects: a) the rapid pace in which the process of occupation and its conflicts took place. Such fact, at first glance, suggests that in the Amazonian case, some stages usually found in other processes were either suppressed or contained particular characteristics which might drive the process of expansion to an unprecedented economic and social outcome; b) the simultaneous presence in the first stage of the process of expansion of capitalist enterprises and peasant farmers has been accelerating more than any other earlier experience, the antagonism between these two social agents; c) an unprecedented and direct intervention of the State in the process of occupation. In addition, it is important to stress that the Amazonian Region constitutes the last frontier area to be occupied within the Brazilian territory.

Although these particular characteristics of the frontier expansion in the Amazon give rise to several different aspects regarding analysis, I am particularly concerned with the present and future situation of the small farm producers, newly settled in this region. Specifically, I seek answers to the following questions: is the process of frontier expansion in the Amazon leading to the formation of a viable small farming system? Or, does the frontier expansion in the Amazon embody the reproduction of the same typical phenomena of other expansion frontiers in the country? That is, after the pioneering period, the peasants are either evicted from their lands or engaged in a process of social differentiation with the result that many have to move away and only a few can actually keep their lands and their position as independent agricultural producers.

In this thesis I attempt to answer these questions. In order to achieve this objective, I have guided my analysis based on
1) The historical, social and physical context in which the frontier expansion in the Amazon takes place make this process quite different from those which occurred earlier in Brazil.

2) The expansion of a peasantry in the Amazonian frontier is not conditioned only by super-structural factors but equally by the peasants themselves, their own internal dynamics and by the type of relationship they establish with other sectors of society, especially with those linked to the economy. As Long says "Peasant households or family farms are not simply reproduced by the working of the wider structure but also depend upon the way existing cultural rules and social relationships affect access to and utilization of essential resources" (1984:2).

3) A process of differentiation among the peasants is inevitable since the expansion of the Amazonian frontier is inserted into a capitalist system. However, at least for the time being, this process does not provide the necessary conditions to split up the peasants into a bourgeoisie and a proletariat or even to hamper a certain expansion of the small farming system in the Region.

Outline of the Thesis

The thesis is divided into three parts. The first Chapter of Part I presents a review of the main theoretical approaches utilized for studies of peasantry and its process of reproduction under the capitalist system. It will also be the concern of this chapter to analyse the literature dedicated to the newly emerged peasantry in the Amazonian frontier. After this review, then, a framework is proposed to guide the investigation into the small farming system in the Amazonian frontier.

The subsequent Chapters II, III and IV consist of an attempt to outline the social formation in which the peasantry in the
In Chapter II, I discuss the process of land occupation in Brazil and its links with the expansion of frontier areas, as well as the role reserved for and played by the peasants in this process. Emphasis is also given to the role of the state which, through legislation, has always favoured the expansion of great estates in opposition to the expansion of small farm production.

Chapter III, concentrates on the history of the Amazonian Region itself. In particular, I focus my analysis on trying to explain two issues: a) why this part of Brazil has been kept peripheral to the development taking place elsewhere in the country up to the middle of this century; b) how the Amazonian cyclical extraction economy did not create the necessary economic and social conditions for the emergence of a peasantry similar to what occurred in other regions of Brazil. This Chapter also focuses on the government’s first attempts to stimulate the region’s economy through development programs up to 1970 and to what extent these government moves failed to achieve their objectives.

The integration of the Amazonian Region to the national economy and its present situation is the main objective of Chapter IV. Such an investigation focuses on the government’s participation through its programmes of directed colonization and of fiscal incentives to private enterprises; the increased influx of landless migrants to the region, looking for land to work with or without government support; and, finally, the conflicts and violence that have marked the process of occupation and the struggle for land in the Region, during the last fifteen years.

In the second Part of this thesis, I embark on an empirical analysis of the peasantry in the Amazonian frontier through a case-study of two groups of peasants newly settled in the Region (one with government support, the other without).

The introduction of Part Two contains a description of how the field work was undertaken, including the methodology
sample of families to be studied. Some comments have also
been made about the conditions and difficulties I faced
during the field work.

Following this, in Chapter V, I give a brief historical,
geographical and economic description of the micro-regions
where the two chosen groups of peasants have settled, as well
as the manner in which the peasants have developed their
settlement process in its initial stage.

In Chapter VI, I make an inventory of the peasants' background, considering their geographical and cultural
origins, previous employment, migration history and their particular reasons for immigrating to the Amazonian Region.

Chapter VII attempts to throw some light on how these newly arrived peasants have been coping with the physical and social environment of the rain forest. This will be done through an analysis of their housing standards, eating habits and the impact of tropical disease on their daily lives.

It is the concern of Chapter VIII to identify possible changes due to the migration process in the peasants' institutional and social way of life. Here I examine some aspects of the peasants' family structure, kinship system, religion and education. I also attempt to bring to light the kind of social interaction and conflicts which have been emerging in these newly-formed communities.

Part III of this thesis deals with the production system (Chapters IX and X) and with the conditions of reproduction and differentiation among the families (Chapter XI).

In Chapter IX, I examine the means of production available to the peasants and how the peasants organize their available resources in order to insert them into a productive process. It is part of such investigation an analysis of the way the peasants prepare and utilize the land, their instruments of work, the agricultural cycle and the problems they experience.
Chapter X focuses on the structure and division of family labour power, use of hired labour and the different forms of labour reciprocity existing among the peasants. This chapter also includes a description and analysis of the alternative use of family labour in off-agricultural activities as well as the income provided by these activities.

Finally, in Chapter XI, I make an analysis of the composition of the peasants' income and the weight of each activity in this composition. Taking income as one of the main indicators, I then suggest a methodology of how to identify the conditions of reproduction of the households and the level of differentiation existing among the families. Next, with the help of some statistical techniques, I highlight those factors that most strongly determine the different levels of income and to which extent these factors can actually determine the conditions of reproduction and therefore the process of social differentiation among the peasants.

The last section of the thesis is reserved for some general comments and final conclusions.
PART ONE

Part I is initially reserved for a theoretical review (Chapter I) of the main focus of this thesis, that is, the peasantry.

Such a review attempts to set up and discuss the main theoretical approaches which underlie the vast majority of studies on peasantry.

Based on such a review, with certain adaptations, a framework is then proposed which will serve as a theoretical and methodological guide for the development of this thesis and the achievement of its objectives.

The subsequent chapters (II, III and IV), following the proposed framework, provide a wide background for the social formation from which the peasantry of the Amazonian frontier emerged and in which such peasantry is inserted.

Chapter II concentrates on the process of land occupation in Brazil, emphasizing the frontier expansion processes which occurred in the country.

Chapter III deals with the Amazon's own social history up to 1970, stressing its particularities in relation to the rest of the country.

Chapter IV gives a detailed analysis of the different aspects and social agents involved in the frontier expansion process in Amazonia from 1970 until today.
As mentioned in the introduction, the main concern of this thesis is with regard to the small agricultural producers and their possibilities of reproduction in the Amazonian frontier. Despite the controversy concerning a correct definition (Wolf-1966; Shanin-1972; Ennew, Hirst, Tribe-1977), small agricultural producers are widely referred to, and taken to be, peasants. Being "peasants", therefore, the focus of analysis of this thesis, this chapter proposes to review the theoretical and scientific approaches given by the authors to this social segment within a capitalist society.

1 - The peasantry as an object of study

The study of peasants has been the concern of many diverse scholars for a long time. A number of sophisticated peasant studies have been produced by the historians of medieval Europe and especially by the Russian economists and "rural statisticians" of the last century. The focus of interest of these studies was basically the politically problematic peasantry of particular nations (Silverman-1979).

As a subject of western anthropology, however, the emergence of peasant studies can be largely attributed to the publication of Redfield’s description of the community of Tepoztlan (1930). The focus of Redfield’s interest, as well as of other anthropologists (Taylor-1933; Linton-1936; Steward-1938; Foster-1948), in the years immediately following lay basically in the comparative study of the human condition. Kroeber (1948) is usually credited with identifying "peasantry" as a concept for anthropology. He offered the following definition:

"Peasants are definitely rural - yet live in relation to market towns; they form a class segment of a larger population which usually contains also urban centers, sometimes metropolitan capitals. They constitute part societies with part cultures. They lack the isolation,
In subsequent years, Kroeber’s definition was greatly expanded and refined by many writers (Steward-1951, Firth-1951, Wolf-1955, Redfield-1956, Foster-1967) who have emphasized to varying degrees the cultural, social structural, economic or political criteria mentioned in Kroeber’s brief statement, and greatly contributed to the establishment of "peasant" as an analytic category and an object of study in its own right.

From 1960 on, fostered by Western political interests in rural inhabitants of the Third World, a geometric growth in studies of peasants by anthropologists, as well as by a variety of other disciplines, took place. The best example of this interdisciplinary interest in the political-economic and historical aspects of peasantry is the appearance in the early 1970s of The Journal of Peasant Studies. There, as well as in other publications, the research interest has been stimulated by the "discovery" of the peasantry, on the one hand, as an important component of the class struggle in capitalist societies and, on the other, as producers of "wage goods" and commodities which constitute a large portion of the reproduction of the labour force in capitalist production.

A large number, as well as the most significant of these studies, have concentrated their analyses based on the organization of peasant production, i.e., combinations of labour processes and relations of production, taking inspiration from Marx’s oft-quoted statement from the 1859 preface to A Contribution to the Critique of Political Economy and which has been taking as Marx’s concept of modes of production, i.e.:

"The relations of production (correspond) to a given stage in the development of the material forces of production. The totality of these
structure of society, the real foundation, in which arises a legal and political superstructure and to which correspond definite forms of social consciousness" (Marx-1970:20)

Although starting from the same principle, that is, the concept of "modes of production"⁴, the majority of these studies have been directed toward a theoretical conceptualization of the peasantry, both in terms of a dualistic view of peasants and capitalist production, in line with the classical Chayanovian approach, and in terms of a more orthodox Marxist conception of the mode of production as a unit of the processes of production and exchange. In short, however, the crucial question among these scholars is whether peasant forms are to be considered as external to capitalism or as part of it. The two currents or perspectives, as well as certain combinations of the two, are reviewed in the following section. However, although some criticism may be made of the approaches reviewed below, the aim of this section is above all to outline the main currents or perspectives of peasants and social change in rural societies currently made by scholars, rather than to offer a detailed evaluation of these approaches.

A - Peasant Forms as External to Capitalism

The view that peasantry are external to capitalism involves the notion that peasants possess or participate in a separate mode of production that is pre-capitalist, or, as some prefer, non-capitalist.

For the adherents of this approach who basically take Chayanov's view³, peasantry is associated with an economy in which the household is the dominant unit of production, and the organisation of the peasant enterprise is thus derived from the social organisation of the peasant family. Peasant economic behaviour in contrast to that of the capitalist is not guided by the motive of accumulation; but aims at securing the needs of the family rather than at making a
"family"; land is distributed on a relatively egalitarian basis and can in general be worked by family labour under the prevailing conditions of production (Deere and de Janvry-1978; Ennew, Hirst, Tribe-1976). As Deere and de Janvry note, those who take the peasant mode of production as a historical reality, argue that the peasant mode of production articulates with, and is subordinated to, other modes to which it is functional, surrendering a surplus. What makes peasants reproduce themselves over time, however, is the fact that not having objectives of accumulation, there is also no internal differentiation into classes among them (Deere and de Janvry-1978:17). In other words, the peasant economy has a functional rationality of its own, even if it is necessarily subordinated to another economic system (Servolin-1972; Vergopoulos-1971; Gutelman-1974; Amin-1976; Sahlins-1972).

It is interesting to noted that it is in Marx’s concept of the mode of production that many of the adherents of the existence of a peasant mode of production seek theoretical support for their suppositions. Tepicht, for example, states that

"...the peasant economy presents a particular combination of factors of production (produtive forces) united to a particular type of relationship between men (relations of production). This then possesses all the features of what Marx called mode of production, except one: it has been kept in a position of subordination" (Tepicht 1973:13).

Similarly, Boguslaw Galeski defined the peasant family farm as one of the four "basic modes of agricultural production", which although not used in a strict Marxist sense, bears some similarity to Marx’s concepts. The peasant family farm, in which there is identification of the family and the farm, operates on the basis of domestic economy, which produces use values, and the basis for value estimation is the product’s material characteristics in satisfying given family needs. Domestic economy is contrasted to the enterprise, which
calculation: costs, profits, etc. With regard to the traditional peasant farm, Galeski wrote:

"The principal part of the product serves direct family consumption and the surplus is sold in order to satisfy other family needs (this part may be estimated in terms of monetary profitability) and to assure the farm's functioning (Chayanov, 1966). The farm is not regarded only instrumentally, as a means of obtaining the greatest possible money income for the family, but rather as the family home, hence as a complex of facilities satisfying direct family needs" (Galeski-1968:258).

Galeski did not insist on a clear-cut separation between the peasant farm and the enterprise; his scheme was, in fact, postulated on a series of "continua" or "scales" along which transformations occur.

According to Samir Amin, the peasant mode of production belongs to the "family" of simple commodity mode of production in which "the producer who possesses his means of production (land and equipment), exchanges his products (or at least part of them) with other commercial producers, placed in an analogous situation" (Amin-1976:27). Thus, Amin's definition, at least as it stands, does not allow economic exchanges with other modes of production. Its subordination is necessarily political.

A somewhat different approach was taken by Paul Singer, who allowed for various coexisting modes of production in the Brazilian countryside. He wrote:

"Several modes of production confront each other in agriculture: capitalism (monopolistic and competitive), petty commodity production and subsistence economy, these last two combined in various degrees in what is called peasant economy" (Singer-1977:6).

Thus, for Singer, peasants represent a combination of modes of production.
the logical consequence of positioning various coexisting modes of production is an analysis in terms of articulation of modes of production, an approach developed, initially, by P. P. Rey (1973).

From this perspective, social change in rural societies occurs according to the reproduction needs of capitalism and the degree of resistance to change by pre-capitalist or peasant economy. In the process of articulation the capitalist mode becomes dominant over the peasant mode, which is altered to satisfy the needs of labour and commodities for capitalist enterprises and provide a market for the latter's goods (Taylor-1979; Key 1973; Grossman-1983).

Even though there are a number of scholars (Laclau-1971; Meillassoux-1972; Bradby-1975; Foster-Carter-1978; Wolpe-1980;) who defend the existence of a peasant mode of production and the analysis of social change in the countryside based on the articulation of modes of production, this approach has, however, been strongly criticized by others, such as Ennew, Hirst, & Tribe (1976); Littlejohn (1977); Friedmann (1980); Bernstein (1977, 1979). Bernstein, for example, sustains his criticism by saying that:

"the problem with this kind of theory (peasant mode of production) is that its object is not a mode of production in the materialist sense, but the peasant family or household as a unit of production and reproduction. In these "models" of peasant economy, the social relations suggested are those internal to the producing unit (the relations through which family labour is organised and the product of labour distributed among the members of the household). They (models) cannot formulate the social relations of production which provide the most important element in the materialist theory of a mode of production" (Bernstein-1979-p.422).

A similar critical posture is taken by Deere and de Janvry
"the mode of production as a theoretical category implies the specification of a determinate set of social relations and ideological-political superstructure that remain unidentified in definitions of the peasant mode of production". (Deere and de Janvry-1978:17)

Another criticism made by Deere and de Janvry is in relation to the economic conditions of simple reproduction. They argue that the defenders of the peasant mode of production do not clarify whether peasants actually desire simple reproduction or whether they are unable to accumulate as a result of the conditions imposed on them by the capitalist system. Such suppositions, Deere and de Janvry add, are easily discarded since empirical observations (whenever economic and social conditions permit) show concentration of the land by some peasants and increasing proletarization of the majority. This in itself is a clear contradiction of the peasant mode concept (Deere and de Janvry-1978).

Two other important aspects are stressed by Sawyer (1979). First, this author considers that taking into account that the concept of mode of production implies a totality with dynamics or "laws" of its own, which mold society, one can conclude that, as a mode of production, the peasantries possess considerable autonomy, even when they have been thoroughly subjugated and radically transformed by capitalism. Thus, as Sawyer argues, "there is a risk of neglecting crucial external relations and their repercussions on peasant life" (Sawyer-1979:51). Second, considering, as many authors do, that a mode of production must comprise various "levels" or "instances", this condition would be severely limited by the position of "subordination" attributed to the peasant mode of production. Besides, as Tepicht mentions, a peasant mode of production can never be represented in a social formation by a ruling class
"Unlike all historical modes of production except primitive communism, a peasant mode of production could not, strictu sensu, give rise to different classes at all, since there is no differentiation of the social relations of production within the peasantry. While adjectives such as "subordinate", "subsidiary", or "dependent" may serve as reminders of these differences, the concept of mode of production loses the characteristics which make it analytically powerful" (Saywer-1979:51).

The concept of a peasant mode of production also shows some problems concerning the diversity of ways in which peasant production occurs. The vast literature on historical peasantries shows that land, instruments and means of subsistence are held in different ways by communities and/or individuals, and that the product is appropriated in different ways by the producers themselves, the community, landlords, merchants, the State, etc. To subsume this immense diversity - at the level of production, not to mention other levels or instances - under one mode of production can be useful only at a very general or abstract level of analysis. Yet to consider each and every combination of elements as a separate mode of production would trivialize the concept.

Finally, it seems pertinent to consider the criticisms made by Mouzelis (1980) and Grossman (1983) regarding the articulation of the modes of production. According to these authors, the problems regarding this theory rely basically on the causal primacy generally given to structures and on the types of linkages between modes of production.

Indeed, in the way that the adherents of this theory stand, the peasant mode of production eventually becomes altered to satisfy the reproductive requirements of the capitalist mode, that is, structural needs (Long and Richardson-1978:183). So, rural economic differentiation is viewed as effects of the process of articulation and the resulting structural changes.
result of the priority given to structures, Grossman argues that:

"minimal considerations are given to the role of human agency in the analysis of change and, consequently, this perspective can lead to teleological explanations... such as that socioeconomic patterns arise or persist in the Third World because they are beneficial to the capitalist mode of production, that is, because they serve its reproductive requirements (Cliffe-1976; Taylor-1979)" (Grossman-1983:60).

In his criticisms, Grossman does not deny that the structures that characterize modes of production do influence and constrain the activities of individuals and groups. However, Grossman argues, "to view social patterns and human action as simply a function of structural needs is inadequate in understanding social transformations" (idem-pg.60). Indeed, this aspect stressed by Grossman, will be well illustrated in the second part of this thesis where the strategies and aggregate actions of individuals and groups appear as essential to explain the social transformations that have been occurring among the peasants on the Amazonian frontier.

Concerning the types of linkage between modes of production, Grossmann argues that researchers usually give prime consideration to economic and political aspects such as the market, exchange of labor and commodities and the role of the State and ideology. Even though Grossmann considers these aspects as crucial in influencing the structure of production, they are, however, not the only ones. Here again Grossmann stresses the importance of the human agency in understanding social transformations, adding the flow of information between agents of different modes of production in the process of articulation. The manipulation and control of the flow of information from the State, for example, argues Grossmann, can lead to the gaining of control over land, labor, and financial resources, thus facilitating economic differentiation.
Among scholars who oppose the notion of a peasant mode of production, peasantries are considered as part of capitalism, either because they are seen to possess the characteristics of capitalism or because, despite certain differences, they are, in effect, "modalities" of capitalist development, thoroughly subject to its laws, or as elements of class under capitalism. Two lines of interpretation can therefore be identified in the analysis of peasantries within capitalism.

a) Initially there are the supporters of the "classic model of agrarian transition". This interpretation attributes capitalist characteristics to peasants (Lenin-1977; Kautsky-1976) treating them as if they were small-scale entrepreneurs, thereby simply projecting capitalist categories and logic onto peasant economies. This is particularly true of the "formalist" school in economic anthropology as represented by Firth and Yamey (1964); Burling (1962); Cooke (1966); LeClair and Schneider (1968), even though this group is not concerned with class and mode of production in the Marxist sense.

For the adherents of this approach, peasants are a transitory and differentiating class in a process of decomposition, whose components will inevitably be absorbed by the essential classes - proletariat and bourgeoisie - of the mode of production (Deere and de Janvry-1978:18).

On the other hand, peasants may also be seen as a rural labour force that is structurally quite similar to a proletariat except for certain differences deriving from historical circumstances or peculiarities of agricultural production. Because of competition with more efficient agrarian capitalists, in the same country or abroad, the prices of peasant products are reduced to such a point that the ground rent imputed to their property is annulled, and remuneration of their labor is put on a par with the value of proletarian labor force (Amin and Vergopoulos-1977;
This "classic model" has been especially criticized due to the insistence of its supporters on simply transferring the "European agrarian question" to peripheral social formations. As Goodman and Redclift point out:

"there are strong reasons to doubt that 'the crucial class configurations' required to pose the 'agrarian question' in its classic form will arise in peripheral social formations... several recent analyses of the capitalist incorporation and social differentiation of peasant agriculture... reject the view that the emergence of a class of capitalist farmers and a rural proletariat represents the dominant tendency in these formations. Rather, the trend is to incorporate and maintain, not destroy, rural petty commodity production and peasant family labour farms" (Goodman and Redclift-1981:71). Emphasis in original.

Similar to this position is that taken by Laclau, who sees in the "classic model" of interpretation the creation of a society in which the principal class contradiction is between proletariat and bourgeoisie, a somewhat teleological perspective. He suggests that even in the long run it may be to the interest of core capitalists to utilise a non-wage labour mode of exploitation (Laclau-1971).

b) The second line uses a broad definition of capitalism which permits inclusion of forms that would otherwise not be considered capitalist. Within this line, there are various interpretations, including those developed by A. G. Frank (1967, 1969) who defends the thesis that capitalism is present wherever agriculture is connected to the world market and Laclau (1971) who emphasize that pre-capitalist relations, i.e., those not based on free labour, are perfectly compatible with production for the market. Extending Laclau's scheme to peasants in Latin America, one would include them in the capitalist economic system but not in the capitalist mode of
and Zamosc (1977) and many other Brazilian authors (Saffioti-1976; D'Incao-1978) who view heterogeneity in agriculture (defended by authors such as Guimaraes (1968) as being vestigial of feudalism) as reflecting different "modalities" of capitalist development. D'Incao, for example, says:

"...I would put the question in terms of different roads of the development of capitalism... Observing the present agrarian reality, we see that these backward forms are serving the very process of internal capitalist accumulation. In recent years another opinion has been formed, in which the countryside is considered as already capitalist and the so-called vestiges are an integral part of the dominant mode of production" (D'Incao-1978:5).

C - Peasantries as Both Internal and External to Capitalism

Alternatively to the currents mentioned above, some authors consider peasantries to be simultaneously a part of, and outside of, capitalism, applying in their interpretations different criteria or notions, such as "unequal and combined" or "subordinated" in explaining the relations between the peasantry and the capitalist development in agriculture. A dimension along which the capitalist and pre-capitalist characteristics of agriculture can be separated is that of production-circulation. Florestan Fernandes raised this point when he wrote:

"Consequently, in the agrarian economy there coexist, for long periods of time, capitalist forms of marketing with pre-capitalist, sub-capitalist and capitalist forms of production. This coexistence is not incidental, but necessary to the situation described" (Fernandes-1972:143).

In an influential critique of dualist interpretations of the Brazilian economy, Francisco de Oliveira used the concept of "unequal and combined development" and a central focus on
"This combination of inequalities is not original; in any change of systems or cycles, it is, rather, a constant presence. Its originality might consist in, let us say--without abusing our taste for paradox--that the expansion of capitalism in Brazil occurs introducing new relations in the old and reproducing old relations in the new, a way of making compatible global accumulation, in which the introduction of new relations in the old frees labor power which supports industrial-urban accumulation and in which the reproduction of archaic relations in the new preserves the potential for accumulation freed exclusively for purposes of self renewal" (Oliveira-1975:28).

In short, the concept of "combined" development permits peasants to be considered part of the capitalist economy, while the concept of "unequal" allows them certain specificities.

The notion of "subordinated" is developed by Sergio Silva who, analysing Brazilian agriculture, says:

"The simple acceptance of the predominance of pre-capitalist relations in agriculture is a necessary but insufficient condition for the analysis of agriculture itself... Pre-capitalist relations exist only as subordinate forms and the analysis of its relations in agriculture is the analysis of the development of capitalism in agriculture" (Silva-1977:10).

In summary, if the notion of subordination is defined in such a way that "pre-capitalist" forms retain fundamental characteristics that make them distinct, the subordinate relationship involves incorporation rather than assimilation. Although reviewed very briefly, the above positions do not offer an explanation of change, and defining the system in terms of subordination does not itself solve this problem (the specificity of peasant forms) since subordination does
remains problematical.

A recent alternative proposal has been made by Goodman and Redclift (1981) who suggest that the analysis should consider different forms of capital and the relations of exploitation associated with them in the process of penetration of agriculture. The key note of this framework is the argument that

"the family-labour farm is not the direct product of capital, nor does it depend for its reproduction on the realization of an average rate of profit. Nevertheless, once incorporated into commodity production, its conditions of existence are determined by the capitalist mode of production and the particular forms of capital to which it is subordinated" (Goodman and Redclift-1981:94).

Goodman and Redclift's framework establishes that the differences and forms of integration in commodity production by household production must be understood by the relations that these household productions maintain with different branches of capital and their specific modes of expansion in agriculture.(idem:94).

To demonstrate the difference between their proposal and that of the "classic model" (as developed by Lenin) the authors argue that the emergence of a class of rural capitalists and a free landless proletariat is not necessarily a form of capitalist development in agriculture. To understand why it does not occur, the authors state that the commoditisation of household producers can place them under formal or real subsumption to capital. Therefore, the distinction between the formal and real subsumption of peasant producers turns out to be the crucial issue in understanding the process of differentiation in rural societies.

Although this framework developed by Goodman and Redclift (largely based on the work of Bernstein-1977) is a significant advance towards a better understanding of the
omissions become apparent when used in empirical analysis. For example, when establishing that the production conditions of the peasants determine the type of relations they have with the different forms of capital (or vice-versa?) the authors do not explain what determines these conditions. Arguing as they do that such conditions are determined by the formal and the real subsumption of labour by capital, is not sufficiently comprehensive.

Finally, I wish to stress the position taken by Friedmann (1978, 1980), who argues that the problems of the above approaches can be resolved through a theorization of the relation between the unit of production and social formation. Following this, she establishes that form of production is the central concept for analysis of agrarian social relations. In doing so, she adds the notion of simple or petty commodity production as a concept within political economy, rejecting "peasantry" as a concept or replacing it with existing concepts, since it does not refer to a unique set of productive relations (Friedmann-1980:164).

In developing her framework, Friedmann differentiates petty commodity production from both capitalism and from "peasant" production. The basic distinction between peasant and simple commodity forms of production made by Friedmann rests on the degree of commitment to the market. She states that, while peasants characteristically reserve some of their production for home consumption or for inter-household, non-monetary exchange, simple commodity producers are more heavily committed to the market and depend, to a considerable extent, on commodity relations for reproduction. Producing basically for the market, petty commodity producers face a competition for the means of production (land, labour, credit) similar to the capitalist enterprises, but almost inexistent among "peasant" production. Friedmann also establishes that petty commodity producers neither extract surplus from wage labour, as happens among capitalists, nor pay surplus value to non-producers, the latter a characteristic usually found
commodity production and a capitalist enterprise is that the
former has no structural requirement for profit, absolute or
relative, and its personal consumption levels are flexible,
which, in some conditions, means an advantage over capitalist
producers (Smith-1984:81).

According to Carol Smith, the framework proposed by
Friedmann, thus requires the following conditions for the
existence of petty commodity production: a) a commodity
economy; b) competition among units of production; c) free
contract relations among producers; d) competitive markets in
all means of production and credit; and e) labour mobility

Besides these conditions cited by C. Smith, Friedmann also
emphasizes the important direct and indirect effects of state
policy through making land, basic infrastructure and credit
available (Friedmann-1978:582-586).

Another interesting aspect touched upon by Friedmann in her
analysis of small farm producers is the question of social
differentiation among them. Although such an issue does not
constitute a centre of discussion in her studies, she however
holds the position that reproduction of agricultural
households takes one of two possible directions, that is:
commoditisation or not commoditisation. About commoditisation
she affirms:

"each household is severed from direct reciprocal ties,
both horizontal and vertical, for renewal of means of
production and subsistence, and comes to depend
increasingly on commodity relations for reproduction.
The end point of commoditisation is simple commodity
production" (Friedmann-1980:163).

On the other hand, she argues, reproduction of the
agricultural households may occur in the opposite way To
justify what Friedman claims:

"Whatever the level of specialization in production of
commodities, if household reproduction is based on
renewal of means of production, and subsistence, then reproduction resists commoditisation". (Friedmann 1980:163).

Two aspects of Friedmann’s framework deserve further comments. The first one is related to the following statement made by Friedmann:

"as a logical category, simple commodity production implies minimally that all external relations of the enterprise are commodity relations, that is, the enterprise sells all it produces saving nothing for direct consumption, and buys all it consumes, both for means of production and for sustaining the life of the laborers...The continuous existence of any simple commodity production enterprise, therefore, implies generalized commodity production" (Friedmann-1981: 5)

This statement contrasts with several researches which show a preference of family farmers for maintaining a pattern of diversified farming despite the potentially higher efficiency of more specialized production (Hedley-1976:417). This pattern ensures the farmers virtual self-sufficiency in domestic consumption and protects them "against unpredictable price fluctuations and the vulnerability of a single commodity to the effects of natural hazards" (Hedley-1976:417).

The second aspect to be criticized in Friedmann’s analysis lies in her claim that one result of generalized commodity relations is competition among enterprises. By saying that, Friedmann denies largely empirical evidence of co-operation among relatives and/or neighbours in family farming (Hedley-1976; Bennett-1968). The non-recognition of the importance of these particular non-commodity relations among family farmers is a serious flaw in Friedmann’s framework.

This defect in Friedmann’s framework is stressed by some authors (Khan-1980; Portes-1981; Gavin Smith-1979; Carol Smith-1984) who, at least partially, adopt her framework in their own studies. In the analysis of their case studies and
that the articulation of petty commodity producers with both capitalist and non-commodity forms of production is the key to understanding their reproduction and the presence or lack of differentiation among them. Being more explicit, Carol Smith states that what impedes petty commodity producers from becoming full-fledged capitalists, characterizing a situation of lack of differentiation, is the link that they have to both subsistence production and capitalist production in their social formation. (C. Smith-1984).

The majority of these authors, however, fail to give a sufficiently clear explanation of the nature of this "articulation" in order to sustain their arguments. The only exception is probably Gavin Smith (1978) who stresses that the crucial element preventing differentiation is the technological impoverishment of petty producers. According to this author the impossibility of accumulating capital and, therefore improving their technological level is because, unlike the capitalists, petty commodity producers limit their exploitation of the subsistence producers due to the relations characterized by obligations of reciprocity, gift-giving, etc. that they maintain with peasant production.

It is clear that Friedmann's framework does not apply to the wide definition of peasants as usually made by scholars. However, as C. Smith says,

"whereas petty commodity has a single, universal underlying logic, peasant commodity production systems are each historically unique and can be analysed only as particular combinations of factors rather than as a unified, logical system" (Smith, C.-1984:81).

As is clear from the above review there is little conceptual consensus upon the definition, process of reproduction and future of the "peasantry" within the capitalist system. Different and antagonic positions on this subject can be found not only among scholars who profess to be working in the same theoretical perspective but also among the analysts
2 - The Peasantry of the Amazonian Region as an Object of Study

A review of the literature regarding peasantries in the Amazonian Region suggests that each of the great economic transformations faced by the Region has led to the emergence of new and distinct peasant forms of production (Wagley-1953; Santos-1968, 1977; Sawyer-1979). In this way one can talk about: 1) the peasantry which emerged during colonial times; 2) the peasantry which sprang up during the rubber boom period; 3) the peasant forms of production developed in the period following the fall of the rubber economy and up to 1970; 4) and finally, the peasantry which emerged with the expansion of the frontier and the integration of the Region into the national economy. Although a more detailed analysis of the peasantries which emerged during the first three periods is beyond the scope of this section, some of their general characteristics can be briefly stated.

During the colonial times the local economy was fundamentally based on a collection of tropical products known as "drogas do sertao" (backland drugs) for the European markets. The export trade, however, was not prosperous enough for estate owners to purchase many subsistence supplies on the market. Therefore, that rural population which was not linked either to the mission settlements or to collecting expeditions had no alternative but to establish themselves along the rivers and develop a livelihood based on the subsistence economy.
similar to what Friedmann (1978) called petty commodity producers. Living in the areas around urban centres their economic system was set up to supply foodstuffs for a population almost entirely linked to export production (Ross-1978; Santos-1977; Sawyer-1979). Their reproduction, therefore, was very much linked to the export economy, that is, expanding when this economy experienced a boom and diminishing when it faced periods of contraction.

During the period that followed the fall of the rubber economy, a type of peasantry emerged which is usually referred to as caboclos. This peasantry was comprised by those labourers who spread themselves throughout the Amazonian Region due to the fall of the export rubber economy and started to make their livelihood on the basis of a system of production very close to a subsistence economy since their participation in the market was minimal (Wagley-1953; Moran-1974; Reis-1965). One should also include, aside from the "caboclo" type of peasantry that emerged during this period, the gatherers of export products who provide for their own subsistence, therefore being part-time subsistence peasants and part-time laborers in large enterprises (Saywer-1979-pg.30)10. From 1930 on, with a relative improvement in the means of transportation and an increase in urban population, the Amazonian Region began to receive an increased number of migrants, especially from its neighbouring region, the Northeast. Although the Amazon Region by this time already demonstrated some conditions for the expansion of peasantries engaged in petty commodity production, these migrants, however, developed a system of production and a way of making their livelihood very similar to that of the caboclos11.

Further accounts of the conditions of emergence and reproduction of these peasantries which appeared during the colonial time, the rubber boom period and after the rubber boom period are made in Chapter III of this thesis.

The expansion of the Amazonian frontier and the integration
given rise to quite a different type of peasantry and it is this peasantry, which begins to emerge as of 1970, that constitutes the main subject of analysis of this thesis.

Although a detailed description and analysis of this emerging peasantry will be found in the following chapters of this thesis, there are at least two reasons to suppose, a priori, that this peasantry that has been emerging in the Amazonian Region differs from the previous ones.

The first reason can be related to the social, economic and political transformations that the Amazonian Region has been experiencing since its integration to the national society. From an almost "forgotten" region, the Amazon has become, since 1970, the centre of attraction for: 1) the Government and its economic and social programmes; 2) for private capitalists who saw in the region a fertile field for the valorization of their capital, and 3) for thousands of landless rural labourers, from different parts of the country in search of land to work. A detailed analysis of the transformations suffered by the region, as well as the role of the different agents involved on it, is given in Chapter III. For the moment, I shall limit myself to state that the presence of the Government and capitalist interests became important conditioning factors for the emergence and expansion of the small farming system of production.

The other reason is related to some characteristics of the population that constitutes this emerging peasantry in the Amazonian frontier areas. First, there is little room to imagine that this population, coming from different regions and somehow having different backgrounds, will adopt the same way of living as the "caboclos". Secondly, this population (as will be better explained in Part II of this thesis) has already considerable experience as petty commodity producers and one of their objectives for coming to the Amazonian Region seems to be to increase their integration with the market.

In the following section a review is made on how the related
The Recently Emerging Peasantry in the Amazonian Frontier Region

The literature concerning this emerging peasantry in the Amazonian frontier areas is not exactly scarce. During the last two decades, a large number of researchers from different fields has dedicated itself to studying and analysing the process of frontier expansion in the Amazonian Region in which the small agricultural producers have, undoubtedly, an important role. However, most of the research findings constitute, or are limited to, fragmented essays and monographs which lack the theoretical framework that alone could provide the necessary elements for generalized conclusions on the process of frontier expansion in the Amazonian as a whole, and especially on the role played by the small farmers in this process.

Limiting the literature to that more concerned with the small farmers within the process of frontier expansion, the available studies can generally be divided into two categories: one is comprised by those which attempt to give a wider but simpler interpretation of the conditions and obstacles faced by these newly arrived migrants or small farmers in the Amazonian frontier areas. The other category of studies is limited to case-studies whose method of research — at least from a theoretical standpoint — does not make possible any generalization about the process of expansion as a whole and the role played by the small farmers. A brief review of these two categories of studies supports this argument.

Regarding the first category, most of the existing studies are generally written in a journalistic style (Pinto-1980; E. Martins-1982; Branford and Glock-1985). Such studies tend to concentrate on land conflict issues, stressing the violence and the policial aspects while scant attention is given to a more accurate analysis of the factors that have actually given rise to these conflicts. Exceptions to this are
Para, especially those by Jean Hebett (1979; 1983) and those published by Cedeplar. Although very useful to understanding some aspects of this emerging peasantry in the Amazonian frontier, the publications from both the University of Para and Cedeplar still remain very speculative and lack a more delineated and consistent framework which could be applied for the analysis of other groups of peasants apart from those focalized by the authors.

Aside from the journalistic style reports, there are also the frequently cited studies by Octavio Ianni (1978, 1979) and Jose de Souza Martins (1979, 1982). From my point of view, however, these authors also fail to provide an adequate framework of analysis of the emerging peasantry in the Amazonian frontier. Octavio Ianni has concentrated his arguments on the super-structural aspects conditioning the emergence and reproduction of the peasantry in the Region to the ideology of the State. As a result, the peasants are considered "passive" agents in a clearly negligent attitude towards their potential and towards their capacity of acting for themselves. On the other hand, Jose de Souza Martins, with an almost "emotional" approach, considers the peasantry as a social segment of the society which is unable to overcome the constraints placed on them by the great capitalists enterprises. Therefore, the presence of capitalist enterprises means, for him, an impossibility for the emergence and expansion of small farmers in the Amazonian frontier. By taking such an approach, Jose de Sousa Martins seems to forget a series of historical examples which show that the presence of capitalist social relations may bolster, rather than limit, the expansion of the peasantry.

The second category of studies is concerned basically with small farmers who settled in the Amazonian frontier under the sponsorship of the Government (Contini-1976; Wood & Schmink-1979; Moran-1981; Turchi-1979; Smith, N.-1982).

From these studies, the one produced by Moran (1981), is by far the best. Taking a planned community as a case-study,
looking at the ecological problems of the Region, the institutional difficulties faced by the small farmers, the cultural and economic diversities existing among the colonists and the weight of these diversities on the process of settlement and performance of the them.

However, from my point of view, Moran's study contains two restrictions: the first one is related to the fact that the research was carried out after only 5 years of settlement. In such a short time it is very likely that the relations among the peasants themselves or between them and the outside world remained very "artificial" and mediated by government officials. Furthermore, having been there for such a short period of time, the peasants had not yet had enough time to adapt themselves to the new physical and social environment, nor had they had the opportunity to establish a more definite and lasting system of production by themselves.

The second restriction is that by dealing with a group of peasants who settled under government sponsorship and which is therefore a special settlement (as the author himself admits), it becomes very hazardous to generalize and extend the conclusions from this study to other groups of peasants, especially those who settled in the Region without Government sponsorship.

Other attempts to study peasants who settled under the Government Colonization Programmes do not go beyond specific problems faced by the small farmers in relation to, for example, official institutions (Bunker-1982), health (Smith, N.-1982), and/or commercialization of products (Wood & Schmink-1979). By being so specific, none of these studies presents a broader analysis of the internal organization of the peasantry or any other aspect that could help predict the possibility of expansion of the small farming system in the Region.

As one can deduce from the above review, among the studies produced so far, there still have a lack of ethnographic description and theoretical framework which could present
peasantry and the possibilities of its survival and expansion in the Amazonian frontier. An exception, however, is the analysis made by Charles Wood (1983), whose main aspects and proposed framework I shall summarize below.

Wood begins his analysis by reminding us of the theories that are usually applied to the process of the expansion front in Brazil and the role of the peasant in such a process. The predominant idea among the authors who support these theories is that the expansion front is characterized by a succession of stages by which a region is settled and incorporated to the national economy. Within this approach, the process of expansion changes from a "subsistence" to a market-oriented frontier (Katzman-1976); from an "expansion" stage to the "pioneer" stage as claimed by Martins (1975); and from the "non-capitalist", to the pre-capitalist and then to the capitalist stage, as suggested by Foweraker (1982). Although each author stresses different factors, in general, they agree upon the essential elements that characterize each stage. In its first stage, the frontier area is informally occupied by poor migrants whose production is essentially for their own subsistence. There is no market for land and the most common forms of labour control are the "clientage", debt relation and labour exchange. The area is still isolated from the national system of production and distribution. In the subsequent stages, the region is linked to the national centres, the price of land increases, there is heavy in-migration, a wage labour market and the capitalist social relations of production emerge, although the small production system may persist and even expand. It is during the change over from one stage to the other that the social conflicts occur. The introduction of capitalist relations of production either through private appropriation of land and other means of production, or through the creation of a "free" labour force face resistance and are not easily accepted by those engaged in other systems of production. The antagonism between these two factions is especially evident in the struggle for land. The outcome of this conflict, with or
the small farmers and the concentration of land ownership.

This "stage" theory is strongly criticized by Charles Wood who stands that:

"an approach that divides social change into consecutive stages is premised on a dualist conception of social structure, a factor that ultimately renders the perspective insensitive to some of the principal mechanisms by which change occurs" (Wood-1983).

Actually, the dualistic approach to the frontier expansion tends to reduce the process to the existence of only two forms of production - modern and traditional - which are independent, autonomous and antagonic and the relations between them would be based on antagonism. Therefore, the social conflict in the frontier is nothing more than conflicts of interest between the capitalist and noncapitalist sectors. For Wood, however, the opposition between capitalist and small farm agriculture is only one aspect of the interaction between the two forms of production. There are other forms of interaction between these two sectors, including functional interaction, which allows the existence of both forms of production.

As an alternative to the dualistic conception, Wood, utilizing basically the articulation of the modes of production approach, holds that in the Amazonian frontier capitalist and noncapitalist modes of production co-exist, and that they are neither separate nor autonomous, but integral parts of the same regional system.

Admitting that the articulation between modes of production implies a transfer of values from one mode to the other, Wood then presents examples of some mechanisms through which this transfer occurs in the Amazonian frontier. Of special concern for Wood is the process of primitive accumulation, the migration of labour and the labour-intensive production of commodities.
systematic expropriation of land undergone by the small farmer, especially the "posseiros" (squatters) in the Amazonian Region. However, adds Wood, while some of those who have lost their land may work for wages (expanding the capitalist mode of production), others move further on to repeat the process of land occupation in more distant places (expanding the non-capitalist economic environment).

Analysing the labour migration issue, Wood focuses on two aspects. First, he presents the example of the large-scale capitalists in the formation of cattle ranches. Using rudimentary technology, these enterprises usually utilize traditional forms of worker recruitment (crew leaders are contracted to hire and supervise work gangs) on a seasonal basis. This transitory employment, on the one hand, has freed the capitalists of the costs of social and health benefits (that is, "cheap" labour) and, on the other, has permitted the worker (in general members of a semi-autonomous household) to occasionally sell his labour force - a sustenance strategy formulated by households in the noncapitalist mode of production.

Second, Wood presents the example of the relationship between small capitalists and noncapitalists. Not having enough capital to recruit large work crews, the landholder sets up with the worker and his family an "exchange for the formation of pasture" (troca pela forma) through which a portion of land is lent to the latter to be cleared and planted. After the harvest is over, the worker agrees to plant grass for the landholder's cattle. By means of this system, according to Wood, some portion of the worker's surplus product is appropriated by the landholder as a form of rent. At addition, Wood claims that "the value of the worker's labor expended to clear an agricultural plot to reproduce his own existence is subsequently transferred to the landholder in the form of an area of finished pasture" (idem-pg.267). In the end of the agreement, Wood says that "once the whole pasture is completed, the worker and his family are divorced from the means of production, and are forced to
Regarding the labour-intensive production of commodities, Wood adopts the argument that the noncapitalist mode of production, being highly labor-intensive, can produce staple goods and raw materials at a lower cost than within the capitalist mode of production. Indeed, he says, "in the Brazilian frontier, capitalist enterprises rarely compete with peasants in the production of rice, beans, and other staples" (Wood-1983-268). Wood, however, does not make clear in which way the production of low-cost commodities by the noncapitalists could offer advantages to the capitalists in the Amazonian frontier.

Finally, Wood stresses that the social relations and the articulation between different modes of production can be modified by the socioeconomic, political and demographic factors that characterize different moments in the process of frontier expansion. In the case of the Amazon at the present, Wood stresses the following factors: a) land scarcity - contrary to what is widely supposed, unoccupied territory in the Amazon is diminishing, either because of the heavy in-migration or because there is an increase of landownership. b) intensity of social conflicts - to a great extent due to the scarcity of land, impeding the establishment of relations like "trocada pela forma" between noncapitalist and capitalist modes of production; c) the role of the state - with its contradictory policy, that is: on the one hand favouring the expansion of the noncapitalist mode of production, especially to avoid an intensification of the social conflicts, and on the other, especially in recent years, favouring the concentration of land ownership, the implantation of a regime of private property, and the dominance of capitalist social relations in the region.

In conclusion Wood says:

"... the social relations of production that emerge on the frontier, and the manner in which different forms
limited number of factors subject to empirical investigation. Moreover, ... it is necessary to abandon the tendency to treat capitalist production as homogenous. The distinct investment strategies pursued by large and small ranchers, and the different implications of each course of action for small farmers, provide examples of the importance of accounting for different capitalist formations" (Idem-pg.272).

Although the ideas put forth by Wood add a great contribution to the understanding of the complexities of the Amazonian frontier and the small farming system in the Region, two reservations must be made in relation to his argument.

First, Wood does not explain why the Amazonian region offered propitious conditions for the development of that specific capitalist and/or social formation. Nor does Wood explain why the role of the State is actually contradictory. This author made clear that both the capitalist formation and the State have had a decisive role in the manner in which capitalist and non-capitalist sectors articulate and therefore, defined the shape of the course taken by the process of the expansion front so far.

However, without a more accurate historical analysis of the involved agents (State, capitalist and noncapitalist sectors) it becomes difficult to predict how they would behave or what would be the possible outcome of the Amazonian expansion process in the case of interruption or alteration of the mechanisms through which capitalist and non-capitalist sectors interrelate at the moment. Alterations can be motivated by aspects not underlined in Wood’s framework, such as social and political changes in the national society. Such changes could culminate, for example, in increased pressure or opposition from the non-capitalist sector. This type of consideration is not purely speculative. It is widely known that Brazil lives under the threat of social and political instability and the process of frontier expansion in the
Amazon cannot be taken as being isolated from the national society.

The second aspect to be criticized in Wood’s framework is that, in analysing the mechanisms and the manner in which the capitalist and non-capitalist sectors articulate, scant attention is paid to the role of the peasants in the determination of these interrelationships. In the manner in which Wood develops his framework, the peasantry is not only taken as a homogeneous, but also as a passive, group, acting according to, and in consonance with the rules established by the capitalist sector and by the State. However, to limit the role of the peasants to this level of homogeneity and passivity is to neglect aspects (such as the cultural and ideological dimensions) already considered as being fundamental by several studies dealing with the persistence of peasant forms of production within the capitalist system (Mouzelis-1980; Grossman-1983;).

The very fact that a process of social differentiation among peasants has been identified in many different parts of the Amazonian frontier area (Moran-1984; Botelho-1981) suggests that there is a diversification of attitudes among the peasants themselves regarding their interrelationships with the capitalist sector and regarding their insertion in the wider structure. To identify this diversification of attitudes among the peasants and how it influences their relationships within their own group and with other social agents is, therefore, crucial to understand the pattern of articulation between the noncapitalist and capitalist sectors at a given moment and to predict its development and outcome for the future.

The two limitations touched upon above, show that Wood’s framework needs to be expanded in order to obtain a wider and precise analysis of the peasantry and its future within the process of frontier expansion underway on the Amazon.
The contrasting positions and conclusions drawn by all the theories reviewed make the integral use of any of them as a definitive framework upon which to analyse the case of the peasantry in the Amazonian Frontier very precarious. This assumption is valid for both types of studies focalized in this review: those concerned with formulating a more generalized theory about peasantry and those limited to the peasantry within a context of frontier expansion.

The attempt to apply standard categories of economic and social analysis to the reality of the Amazonian frontier generates perplexity at almost every turn. The frontier expansion in Amazonia may not be a universe apart, similar only to itself, or inscrutable, but it is certainly - as it will be clear throughout this thesis - quite different from the societies or situations with which most social scientists are accustomed to deal. Such an observation does not suggest that conventional categories are inapplicable to the case of the frontier expansion in Amazonia, but rather that they call attention for their more correct application.

Due to these problems of finding appropriate theoretical tools to deal with such a special case, this thesis is not organized in the usual manner; that is, beginning with a review of several theories and then applying one of them to a concrete situation. Instead, I decided to develop this thesis based on those principles that, to a greater or lesser degree, are found in all the different theoretical positions reviewed in this chapter, that is: a) the need to analyse the social formation\textsuperscript{13} in which the subject of study - the peasantry - is inserted; b) independently of being considered as part of, external to, or articulated with, capitalism the peasantry was presented, although not always explicitly, as having a special social, cultural and ideological characteristics. It suggests that for an unknown peasantry, as is the case of those newly emerged in the Amazonian frontier, to establish the extent to which such characteristics are important for their process of
reproduction, would require empirical investigation and could only be set out through an ethnographic account of this social group.

Taking these assumptions as starting points, a framework within which to study the dynamic of the Amazonian frontier and the process of expansion of small farming system would include two levels of analysis:
The first (which is focalized in the following three chapters of this thesis) attempts to insert the process of frontier expansion of the Amazon in the wider historical context of the Brazilian process of land occupation and its relationship to the political, economic and social reality of the country. In addition, such an attempt also requires: a) a detailed analysis of the Amazon's own history in order to understand the specific social formation of this Region; b) an investigation of the particularities of the present economic, political and social conditions of the country and the Amazon in which a frontier expansion process has been developed.

Such a level of analysis will permit, on the one hand, the establishment of the differences and similarities that may exist between this process and those which occurred earlier in other parts of Brazil. On the other hand, it will allow us to verify to what extent the theories, applied to the other earlier processes of frontier expansion already occurred in Brazil, can actually be applied to the Amazon case.

The second level (which is the focus of Parts II and III of this thesis) contains an analysis of the peasantry's own internal dynamics, upon which stress is placed on the adaptive strategies developed by the peasants in order to establish themselves as independent rural producers within the new physical, social and economic environment of the Amazon. Such an approach implies to consider the peasants as active agents, having social, cultural and ideological peculiarities whose real influence on their internal reproductive processes, work ethics and social consciousness can only be identified and evaluated by means of a detailed investigation of their lives before and after coming to the
Amazonian frontier.

These two levels of analysis will offer grounds on which it will be possible to move beyond the assumption often underlying studies on peasantry, that is: the expansion of a small farming system is conditioned by the need and/or convenience of the wider socio-economic structure. Instead, the proposed framework suggests how it is possible to make a true evaluation of the weight, and to what extent the structural needs of the capitalist mode of production acts upon the peasants and how the peasants, in turn, react to it. More specifically, such an approach will allow us to face the challenge, both conceptual and empirical, of how to specify the various mechanisms through which peasants and other segments of the capitalism are (or not) articulated, the influence of these interrelationships on the social relations of production that have been established among the peasants and between them and other sectors of society.

The framework and methodology chosen for this thesis reflect my concern, as a social scientist, in analysing the social fact as a totality composed of interrelated parts. Each part has to be understood in its own context before it can be taken as an actual aspect of one single reality. Such an approach applied to the study of the small farming system within the Amazonian frontier implies the need to make close investigation of the peasants as a specific social group, bringing to light its own peculiarities. This will be more clear and understood by studying aspects not yet fully considered by the literature, such as, for example, the process of settlement, the peasants' previous social and economic conditions and their adaptation to new physical and social environment. By confronting such peculiarities to the wider structure, it will then be possible to identify the weight of each part, that is, of the peasants and the wider structure, how one acts on the other and to what extent the interrelationships developed between these two parts might enhance or retard the expansion of the small farming system.
within the Amazonian frontier.

I believe that by applying this theoretical perspective at the empirical level, it will be possible to discover new dimensions of reality that may contribute to a more elaborate social theory regarding the emergence and expansion of small farming systems within a capitalist context. In the case of the Amazonian frontier, such an elaborated theory seems to be very far out of our reach. But if this is so, it may be due to a lack of analysis of the type proposed in this thesis. I do not intend to exhaust the subject, but to go one step further in the process of theorization of this particular and fascinating social phenomenon that the recent occupation of the Brazilian Amazon Region represents.
Notes

1 - A useful analysis of the early studies of peasantry can be found in Ennew, Hirst, Tribe (1977), Roseberry (1976) and Silverman (1979).

2 - As Deere and de Janvry state, "the research effort has demystified many of the concepts that dominated much of the early work on peasants, such as cultural traditionalism, economic backwardness, and the autarky of subsistence production" (Deere and de Janvry-1978-pg.1).

3 - A theory of a "peasant mode of production" is sometimes attributed to A. V. Chayanov, a leader of the "Organization and Production School", which in the 1920's analyzed the rural economy of Russia. However, Chayanov himself did not use the term "mode of production" in The Theory of Peasant Economy (Chayanov-1966). In short, Chayanov’s basic concepts are the family labour farm, the single labour income and the labour-consumer balance. Chayanov claims that the differentiation of the peasantry was primarily due to demographic factors, rather than factors causing farms to become capitalist and proletarianised. Because the family uses its own, instead of hired labour, there is no net profit and therefore it is impossible to apply the capitalist profit calculation to the family farm production. Detailed analysis of Chayanov’s work can be found in Kerblay-1971; Harrison-1975; Hunt-1979; Patnaik-1979; Chibnik-1984).

4 - Marx’s concept of mode of production has been the subject of a great controversy since Marx himself did not make very clear what he meant when he used the term in his preface to A Contribution to the Critique of Political Economy (1970). For some orthodox Marxists, mode of production is defined as the combination of forces of production and relations of production, restricting the concept, therefore, to the economic base (Althusser and Balibar-1970; Godelier-1972). Some other Marxists consider modes to include both base and super-structure, or in more recent terminology, to have (at
The juridico-political, and ideological (Poulantzas-1971; Terray-1972; Cueva-1974; Hindess and Hirst-1977). Such structural levels, according to Hindess and Hirst

"are governed by the determination in the last instance of the economy - that is, the economy determines the character and relations between the levels so that, while the economy is always determinant, the political or cultural level may occupy the place of dominance. The economic level of a mode of production is structured by a definite correspondence of relations and forces of production" (Hindess and Hirst-1977:49).

It is common in recent Marxist literature to draw a formal distinction between mode of production and social formations, although criteria vary from one author or group to another. For some, modes of production are "abstract-formal concepts" or "models", while social formations are concrete societies consisting of a "combination" of modes of production (Cueva-1974). It is unclear, however, how abstractions can be combined to form concrete realities. Without necessarily abandoning the abstract/concrete distinction entirely, authors who restrict modes of production to the economic level place the superstructural levels in the social formation, which is then considered as providing the "conditions of existence" of the mode of production (Poulantzas-1975).

5 - This problem, states Saywer, "becomes acute in the case of the Brazilian Amazon, where peasantries follow and are to some extent a fruit of capitalist expansion" (Saywer-1979:76).

6 - The model generally taken to explain the European agrarian transition based on Lenin's ideas (Lenin-1964, 1972) are summarized by Goodmann and Redclift as:

"the capitalist differentiation of the peasantry proceeds at the expense of the 'middle' peasantry and is distinguished by the formation of a labour market."
A rich peasantry of landlords, the stratum from which a class of capitalist farmers potentially may be formed, purchase labour power on this market. Commodity production differentiates peasant agriculture from 'within', initially establishing a tripartite social structure among the peasantry from which eventually, though not inevitably, two new classes emerge: a class of capitalist farmers drawn from the 'well-to-do peasantry and a rural proletariat' (Goodmann and Rediclift - 1981:95).

7 - Even though Frank and Laclau are more concerned with the debate regarding the dualistic interpretations (presence or not of feudalism or feudalist survivals) of Latin American economies, their arguments can be extended to peasantries as well.

8 - In their criticism Sorj and Zamosc argue that:

"...if the non-capitalist modes of production in what Laclau calls an 'economic system' are subordinated to the laws of movement of the capitalist mode of production, it is not correct to call them modes of production, unless one uses a formal definition of mode of production as a set of empirical variables rather than a totality the reproduction of which determines laws of movement for society as a whole. Sorj and Zamosc would refer to Laclau's modes of production simply as subordinate relations of production corresponding to particular forms of accumulation in peripheral areas. Non-capitalist relation of production in this context are specific types of appropriation of surplus labor and development of forces of production" (Saywer-1979:emphasis in original).

9 - This observation is especially pertinent in areas such as the Amazon, where the locus of production is so far removed from the locus of consumption.

10 - Besides the authors cited in the text, more detailed analysis of the caboclos in more recent times can be found in
11 - Velho (1972) and Sawyer (1979) present a detailed study of the small farm producers who came to the Amazon frontier during the 50's and 60's.

12- Among the publications of the Universidade Federal do Para, consult, especially, Hebette and Acevedo (1979) and Hebette at. al. (1983). Among those published by Cedeplar, see Magno de Carvbalho (1977) and CEDEPLAR (s.d.).

13 - Social formation characterizes historically specific institutional complexes encompassing political and ideological, as well as strictly economic, aspects of social organization. In other words, it means the "social practice" of a given society.
Land Occupation in Brazil and the Expansion of Frontier Areas

In this chapter I attempt to give a brief historical review of the process of land occupation in Brazil and the expansion of frontier areas up to the 1970’s.

With such an investigation I intend to show that: 1) since the colonial era the agrarian policy which has directed the occupation of land in Brazil was developed with a view to favouring the expansion of great estates at the expense of the small units of production; 2) both despite and by virtue of the restrictions they have suffered under this agrarian policy, the small producers have constituted the principal agents in the process of expanding the agricultural frontier and in incorporating new land into productive activities.

This review follows a chronological order and covers the three periods: a) colonial and early imperial times from the discovery of Brazil until the mid-nineteenth century; b) The period which followed the passing of the 1850 Land Law in Imperial Brazil; c) The period from 1930 to 1970 which was characterized by great changes in the Brazilian economy and by an accelerated expansion of the agricultural frontier.

1 - The Colonial Period

For a short period following its discovery in 1500, Brazil was viewed by Portugal mainly as a colony for extractive exploitation, particularly of wood.

However, two factors soon made Portugal change its position and establish a more systematic process of occupation, colonization and exploitation in the new country. The first of these was linked to the necessity of protecting Brazilian territory from the threat of invasion by other European mercantile nations such as France and Holland. The second relates to the crises that Portugal was experiencing in its trade with the Indies. So, aiming to keep its privileged
to introduce the cultivation of sugar to Brazil, hoping to repeat in this new colony the success obtained with the production of sugar in its colony of Cabo Verde. (Graziano da Silva-1978:16).

Since the cultivation of sugar cane in Brazil had been a function of European mercantile interests, the system of production was also determined by this market. In other words, it was implicit that the "latifundio" constituted a technical necessity for the colonial enterprise, based on slave labour and monoculture, to succeed. As a result, the introduction of sugar cane cultivation involved the Portuguese throne in granting vast tracts of land to private entrepreneurs who were prepared to risk and engage in this activity (Werneck Sodre-1967).

The "sesmarias", as these land grants were known, were mainly distributed in the coastal zone, although some were located in other areas, either for some other form of economic exploitation or to establish permanent settlements with a view to safeguarding them against foreign incursions. Although limits on the size of the "sesmarias" had been set - the maximum area to be no more than three leagues (approx. 12 square miles) - those limits were never respected, and in the literature on the subject, there are a number of examples of "sesmarias" of much greater size (Graziano da Silva-1978). As a result, the coastal regions of Brazil were, in a relatively short time, entirely divided into immense "latifundios" which left neither space nor opportunity for the emergence of small landholdings.

The conditions under which the land was occupied consequently came to determine the structure of the society in the colony which at the very beginning consisted of two groups: on the one hand there were the plantation masters or owners of the "sesmarias"; on the other, the workers, consisting of a vast mass of negro slaves (Novaes-1980).

However, with the passage of time a third group arose. It was a group composed of whites who performed non-manual tasks on
liberty and a large number of Indians, mulattos and others of mixed blood. Later, this group also incorporated the European immigrants who had begun to arrive in Brazil.

Without much choice of work to ensure their survival, this group began to occupy small pieces of land beyond the boundaries of the "sesmarias". The agricultural activities which took place on these small plots of land, which were based on family labour power, may be characterized at the beginning as being no more than a subsistence economy. However, as the rest of the population became ever more involved in export production - sugar and, later, mining - these small units of production came to constitute the principal supply of foodstuffs for the population of the colony (Bruno-1967; Mendes Jr. et alii-1976:100).

Although for a long period the illegal occupation of these small pieces of land did not constitute a problem - due to the abundance of unoccupied land - this did not last. Around the beginning of the nineteenth century, there was a great demand for land, primarily due to heavy immigration of European workers. As a result, uncultivated or uncleared land, even when located within the limits of the "sesmarias", began to be occupied on an ever-increasing scale.

It follows that the contingents of "posseiros" (squatters) or "intrusos" (intruders), as these occupiers came to be known, began to exert a great deal of pressure on the owners of large plots of land, finally forcing the authorities to end the system of "sesmarias" or the granting of land as first stipulated by the Portuguese Crown (Cirne Lima-1954)

With the end of the system of "sesmarias" in 1820 and the independence of Brazil in 1822, no new legislation regarding the possession of land was immediately brought into force. This lack of appropriate legislation, combined with the crisis in export production, encouraged a widespread and rapid expansion of small units of production, although based on the illegal occupation of land.

Nevertheless, the economic recovery during the mid-nineteenth
coffee), as well as the new conditions which the development of capitalism in Europe imposed on ex-colonies\(^2\), brought pressure to bear for a redefinition of the land policy in Brazil. This redefinition was embodied in the 1850 Land Law (Graziano da Silva-1978:29).

2 - The 1850 Land Law and the Following Period

Although it was launched in a flood of democratic rhetoric, the 1850 Land Law actually strengthened the system of great "latifundios" and made the expansion of small ownership of production more difficult. The truth of this argument may be easily established by analysing three clauses in the Land Law pointed out by Passos Guimaraes (1968). According to this author, the 1850 law stipulates that 1) the acquisition of land was only possible through purchase (article 1); 2) the price of land be raised; 3) the money that the State would receive by selling public land should be set aside for the attracting of colonist immigrants from Europe (Passos Guimaraes-1968:134).

By establishing that this land could only be acquired through purchase, this law abolished the squatter system. Thus was made illegal the open process of occupying public lands, at that time utilized by a large and impoverished sector of the population for whom such occupation was the principal means of expanding small production.

Regarding the second item mentioned above, the Land Law (article 14) stated that lots of land should be sold at public auction for cash payment, and it fixed minimum prices which were considered higher than those then current in the country. Thus, this Law made the acquisition of small plots of land difficult even for those workers who had somehow acquired some capital and for those immigrants who had brought some capital with them in the hopes of buying their own land.

The State's determination (as established in the third item)
came to reinforce their real intention (already contained in the first two items) of favouring the great estates. To better understand how this happened, it is necessary to place the analyses in a wider context.

First it should be stressed that during this period, the coffee plantations were expanding and they required a great number of labourers. At the same time, the British campaign against the slave trade, which resulted in its total prohibition in 1851, was at its peak. This resulted in a grave crisis for the great coffee plantations of Brazil due to the dearth of labourers. Faced with this, the Brazilian government began a policy of encouraging European immigration, offering the migrants, among other incentives, the opportunity of becoming landowners in Brazil (Browne-1976).

However, once they arrived in Brazil, these migrants encountered a number of difficulties in obtaining land of their own and becoming independent producers. In reality, for many of these migrants there was no alternative but to sell their labour power to the big landowners.

From this it may be concluded that the Government’s campaign to promote migration to Brazil really aimed at relieving the labour shortage on the coffee plantations rather than occupying the land (Martins-1979). Thus, unlike the history of the United States, for example, the principal result of immigration promoted by the State in Brazil was not the expansion of the agricultural frontier based on the peasant or small unit of production, but an increase in the labour force offered to great proprietors and to the production for export. (FASE-1979:78).

In practice, the Land Law represented the closing of a more democratic path to capitalist development, since it impeded - or at least complicated - access to land for vast sectors of the population. Therefore, it was under the sponsorship of the Land Law that capitalist development in Brazil was carried out, and was always to be centered on
However, it may be observed that immediately after the Land Law was passed, the changes in production relations in the country were not sufficient for capital to take possession of the production process and transform it. That is, it was not possible to achieve a complete separation between the direct producer and the means of production since the production process was subordinated to merchant capital (Silva-1976). Consequently there was a diminished development of the productive forces which, allied with Brazil's position in the international division of labour (as exporter of agricultural products), resulted in a very weak development of the internal market. This being so, the cultivation of foodstuffs as an essentially commercial venture could not be consolidated and therefore there was no significant division of labour within the country (Graziano da Silva-1978:30).

Consequently, the 1850 Land Law had little force and did not prevent that part of the population which was not absorbed by the plantations from continuing with the family-based system of agricultural production, as this was the only means by which they could ensure their survival. Curiously enough, a large part of this population had its access to land facilitated by the big landowners themselves. Due to extensive exploitation, the lands were rapidly exhausted, forcing the great producers to be constantly searching for new land where they could maintain their higher level of production. These old lands were then parcelled out, and given to workers who came to develop a system of production based on the "parceria" (sharecropper) and tenant farmer system, or "colonato" as it was called in the south-eastern region (Silva-1976).

Even though this type of access to land produced a fragmentation of production and a considerable increase in the number of small units of production, it did not, however, constitute a fragmentation of ownership of land. The great landowners continued to retain the legal titles to the land besides receiving a rent paid by the workers for the right to
which controlled the system of "colonato" meant that these small producers came to constitute a pool of cheap labour to be used by the landowners when there was demand for labour on the plantations (Martins-1973).

The "colonato", sharecropper and tenant systems were, however, insufficient to absorb the ever-growing mass of rural labourers in search of land to work. As a result, the free or public land beyond the big estates continued to be illegally occupied by poor rural labourers who continued operating an almost exclusively subsistence production, as in the period prior to the Land Law. However, due to the constant incorporation of new lands into the plantations and the expansion of cattle-ranching, these small units of production began to be forced outwards, settling even further in the interior of the country.

Around 1920, the growth of the cities along the coast of Brazil, particularly Sao Paulo, Campinas and Rio de Janeiro, once again raised the question of feeding the urban population. Since the great landowners were involved in producing for export, it fell on the small producers to meet the demands for foodstuffs in the internal market, as it had during the colonial period. As had occurred in the decades immediately prior to this, the expansion of small production that was necessary to meet the internal demands basically took two paths.

The first of these is linked to the successive crises which the export economy suffered from the beginning of the twentieth century onward. These crises caused a large number of big coffee producers in the States of Minas Gerais and Sao Paulo and sugar planters in the northeast to find themselves in grave financial difficulties. To solve these problems the great landowners began to divide their estates up into lots which they gave to their labourers under tenancy (colonato) or share-cropping (parceria) agreements (Prado Jr.-1967:251).

Such agreements offered great advantages to great landowners in crisis. First, they could alleviate their financial
were, in general, very high and hindered the workers from realizing any significant capital accumulation. Second, by retaining legal ownership to the land, the great landowners could return to using the land for export production whenever they wished, since the peasants received no guarantee that they could use the land for a determined period of time. Third, the system generated a dependency on the landowners by the colonists; as a result, these workers came to constitute a reserve of labour to be used by the owner whenever necessary. In this way, land ownership was once again kept intact and the great "latifundios" were able to overcome their financial crises and continue with their system of producing for export.

The other route, which was certainly the major consequence of the increase in the number of small units of production, was through the systematic occupation of public or "free" lands localized in frontier areas (a process usually called frontier expansion) by small producers. This initial stage of occupation of frontier areas by small farmers has come to be referred to as an "expansion front" (Martins-1975).

In contrast to what had previously occurred, when the occupation of public lands by these small producers was made with a view towards developing an almost subsistence production, in this new wave of occupation the small producers sought to produce a surplus for sale on the market (idem-1975).

Nevertheless, these small producers were not able to keep the recently occupied lands for long. In fact, without the support of the State and unable to claim their rights, due to the illegality of their holdings, these small producers were rapidly dislodged from their land by the expansion of the so-called pioneer fronts.

These pioneer fronts, characterized by intensive cattle-raising, capitalist enterprises, commercial expansion, banking, railways, etc., expelled the small producers, appropriated the value which they had incorporated in the new
Martins (1975) notes it is in the passage from the expansion front to the pioneer front that emerge the conflicts, tension and violence which have marked the struggle for land in the frontier areas of Brazil until the present day.

However the outcome of the conflicts experienced in frontier areas during that time did not favour the small producers. As a result these small producers had to either try to integrate themselves to the pioneer front as rural workers or move further on to more remote areas until the pioneer front reached them again and the process repeated itself.

In the 1920's, there was a feeble attempt by the Federal Government at a more direct intervention in the process of occupying public lands. This was principally in the State of Parana where the government gave, or sold at derisory prices, great tracts of public lands to private colonization companies. Officially, these companies were required to organise and create a basic infrastructure to facilitate the occupation of land by small producers. In practice, however, the Government’s decision hindered further access to the land for the migrants who arrived in the area. Demonstrating their essentially capitalistic nature, those companies began a process of land speculation and only sold lots to those small producers whose production could effectively be converted into money to pay their debts. Under this policy, these enterprises excluded from their projects those migrants without the initial capital to buy lots as well as those unable to realize a lucrative short-term production (Fase-1979). In the areas where these companies were located, a large number of migrants were unable to have access to any land what so ever. Actually, the presence of these companies represented a disadvantage by comparison with other areas where the poor rural labourers were at least in a position to realize some form of production, even if only for a short time, that is, until the arrival of the pioneer front.

The government’s weak intervention did not make any significant change in the process of frontier expansion as
characterised by a continuous process of occupation of new lands by small producers, followed by their expulsion by the pioneer fronts, became ever more widespread throughout the interior in different parts of the country in the following decades.

3 - The Occupation of Frontier Areas from 1930 to 1970

After 1930, the frontier expansion process assumed a much more rapid rhythm than in the previous decades. In fact, by 1930, practically all of the public land in the State of Sao Paulo had been occupied. In the 1940s the frontier expansion process which had originated in Sao Paulo reached and occupied a large portion of the free land located in the western part of Parana. At the end of the 1940s and the beginning of the 1950s the northern part of Santa Catarina and the south-east of Parana were occupied by a similar frontier expansion process which had originated in the state of Rio Grande do Sul. By the end of the 1950s these two mentioned processes met and together promoted the occupation of the last free lands located in the north of the State of Parana6. (see Map 1).

To illustrate the dynamics of the frontier expansion process in the State of Parana during this period, one may note that the population of this State grew 71.12% in the period from 1940-50 and 102.21% in the 1950-60 period (IBGE-1960). The city of Londrina, located in the mid-northern part of the State grew from a population of 10,521 in 1940 to 156,670 in 1970 (IBGE-1970).

In addition to these frontier expansion processes located in the Southern Region, three important additional processes were taking place in other parts of the country during the period from 1940-1970. The first, which originated in the north of Sao Paulo and the south of Minas was responsible for the occupation of the "Triangulo Mineiro" region in the State of Minas Gerais, and moved rapidly towards the south of the

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MAP 1

Migratory Movements in Brazil

[Map showing migratory movements in Brazil with labels for regions like North, Northeast, Central, West, South, and major cities or states.

Migratory Movements (1930–1974)
the cocoa cultivation, occupied the available land in the southern part of the State of Bahia; and the third, originating in the northeast region, was launched in the direction of the free lands located in the eastern part of the State of Maranhao.

At the end of the 1950's and during the 1960's, these various frontier expansion processes finally reached the central-western region of the country (Redwood-1979). The arrival of the frontier expansion in the central region of the country coincided with the government's large-scale plan to construct highways and plans were formulated for a new national capital to be located in this area. As a consequence, the occupation of this region was noticeably more rapid than that which had occurred in other regions of the country. Actually, by the beginning of the 1970s very little free land remained to be occupied in the central region of Brazil.

What actually determined the rapid occupation of new lands in the 1930-70 period? A review of the literature on the subject offers three basic explanations frequently used by authors to explain the acceleration of the expansion front process after 1930.

Some authors, such as Normano (1935:2), for example, argue that the new dynamism in the frontier expansion process was due to the growing demand for primary products on the world market, and, as had happened before, this demand was met in Brazil by an increase in production resulting from the incorporation of new lands. In fact, a considerable increase in the incorporation of new lands took place in the State of Sao Paulo, Parana, Minas Gerais and Bahia specifically for the production of coffee and cocoa - the principal export products of this period. Repeating the process already described in the previous section, the occupation of these new lands for export production meant the removal or expulsion of the small producers to areas which had still not been exploited, and
was the increase of external demand for primary products.

A second explanation offered by Foweraker (1982:96) for example, is that the rapid expansion of the frontier after 1930 was due mainly to the rise in the internal demand generated within the national economy itself. This increase in internal demand had its roots in the rapid process of industrialisation which Brazil experienced after 1930. With this industrialisation, the accumulative capacity of the country was no longer concentrated on the profits from the export of primary products, although the exportation of products such as coffee and cocoa continued to be important to the country’s economy. As a result of the industrialisation process, there was a new dynamism in the national economy, followed by a concentration of population in the urban areas and a considerable increase in the demand for foodstuffs.

Foweraker also suggests that the expansion of the industrial production itself contributed to the partial destruction of the small-scale production of foodstuffs (especially those based on handicraft production) located in the oldest settled areas or those close to industrial centres. Thus the increase in the internal demand for foodstuffs and the decrease in the number of small properties in the older regions, according to Foweraker, constituted the principal factors determining the acceleration of the occupation of new lands in the period after 1930 (Foweraker-1982:97).

Finally, there is the argument that the rapid occupation of new lands was due to the huge populational increase that took place during this period. This growth in population was primarily due to the arrival of vast numbers of immigrants from Europe and Japan. According to FASE (1979), although great, the urban-industrial expansion was not able to absorb all of the labour force which had become available with the increase of the population in the country. Therefore, a great number of workers, mainly migrants from the northeast seeking work in the industrial centres, began to make their way to
Although coherent, the arguments described above only partially explain the reasons for the acceleration of the frontier expansion process after 1930. There is no doubt that the growth in the external and internal demand for primary products and foodstuffs had contributed to the expansion of the frontier in this period; nor is there any doubt that population growth should be considered an important factor in this process. However, a more complete understanding of the reasons which determined the rapid expansion of the frontier in this period should necessarily take into account the form in which this expansion took place and the individuals who were involved in the "expansion front" which, as mentioned before, initiated the process of frontier expansion.

According to Mueller (1980), during this period the frontier expansion process was

"to a large extent, linear and spontaneous. Linear since its structural configuration did not change markedly; and spontaneous since the role of government, although far from negligible, tended to be incidental" (Mueller-1980:142).

In fact, the State's involvement in the occupation process in this period, was, principally by means of the construction of roads in areas which were generally already occupied by small producers. This being so, the building of these access routes was aimed, above all, at encouraging the arrival of the pioneer front or the installation of capitalist enterprises. This form of government intervention mainly occurred in the occupation of the central-western region, as previously stated.

Another form of intervention by the State took place at the end of the 1930's with the launching of the Vargas government's "Westward March Program" (Marcha para o Oeste) encouraging the occupation of free lands by small producers in the northwestern regions of the country.

In concrete terms, however, the elementary measures contained
transportation, which would constitute the prerequisites and support for settlement, did not materialize. According to Velho

"the resources the Brazilian State had at its disposal at the time were relatively meagre and the difficulty for analysis is that, in a way, rhetoric sometimes did not reflect State policy but was itself part of it, as a substitute for concrete measures" (Velho 1973:152).

In reality, the government's idea of allowing small producers to occupy empty land in the Interior came about because this process was already occurring "spontaneously".

With regard to the population which composed the "expansion front", it can be established that it consisted basically of three categories of individuals. The first of these - and on a minor scale - were recent immigrants from abroad. A large proportion of this group had been drawn to Brazil by the possibility of becoming landowners or independent agricultural producers. As they were unable to buy land close to the urban centres, however, (for the reasons described in the previous section), they had no alternative but to make their way to the frontier areas and take part in the frontier expansion process.

A second category of individuals consisted of rural labourers, mainly from the Northeastern region or from the plantation areas located in the Southeast of the country. Due to a depression in the sugar economy of the northeast and technical improvements in the production systems of the great estates of the southeast, these labourers had become unnecessary. As a result, they had been forced to quit their native regions and, given the impossibility of finding work in the urban centres, make their way to the frontier regions.

The third category consisted of former small producers who had basically been obliged to sell their lands to the great landowners who wished to extend their area of production. As the money from the sale of their land was insufficient to
these former small proprietors moved to the frontier as this was the only strategy for reestablishing their previous status as independent producers.

Although brief, this explanation of the forms taken by the "expansion front" and the composition of the population which comprised it, permits us to conclude that the real reason for the acceleration of the frontier expansion process in the period 1930-70 was the same as that applied to the process of occupation of new lands in the previous periods. In other words, the frontier expansion process in which the small farm producers had a "pusher" role, was a result of an agrarian policy directed towards the great estates or "latifundios" at the expense of the small ownership of production.

Summary and Conclusions

In this chapter I have tried to trace, albeit briefly, the course of the occupation of land in Brazil up until 1970.

In the first section, which covered the colonial period, it became evident that with the arrival of the Portuguese in Brazil in 1500 up to Brazil's independence in 1822, land was distributed and occupied according to the mercantile interests of the Portuguese Crown. Thus, to serve these interests, coastal lands and the most accessible areas were divided into huge tracts known as "sesmarias" and granted to individuals able to develop a system of production based on the "plantation". This system of huge land grants donated by the Portuguese Crown, the only "legal" way to gain access to land, persisted until Brazil became independent of Portugal in 1822. By this time, however, that part of the population which was not involved in the "plantation" system had begun "illegally" to occupy small plots of land in areas beyond the "sesmarias". As there was no specific law in effect in the period immediately following Independence, there was a huge increase in the occupation of these public lands by small producers. However, this occupation of free land close to the "latifundios" was seen as a threat by the great landowners.
above all in response to the fears of the great landowners that the 1850 Land Law was passed.

In the second section of this chapter I concentrated on the 1850 Land Law and its effects in relation to the occupation of land in the period from 1850 to 1930. With the evident interest of favouring the maintenance of large land ownership in the country, the Land Law established purchase as the only legal means of access to public land. In this way the Law made access to land more difficult or even impossible for the majority of rural labourers who did not have the economic resources to purchase land. On the other hand, the Law facilitated the large and wealthy landowners in extending their estates in the best locations and close to the commercial centres.

In the decades which followed the Land Law, some of those who could not afford to buy land of their own had their access to land facilitated by the establishment of the "colonato" system by the big landowners who periodically faced crises in production for export.

This system, however, was not capable of absorbing a growing population of small producers in search of land to work. As a consequence - and as their only means of survival - those who were not involved in the "colonato" system returned to and intensified the "illegal" occupation of public lands, giving rise to the process known as an "expansion front".

In the third section, I attempted to identify the principal reasons for the rapid acceleration of the frontier expansion process after 1930. To do so, I considered and analysed three basic arguments which are frequently found in the literature. The first argument ties the acceleration of the expansion front to the increase in external demand for primary products. The second identifies the changes in the national economy and the increasing internal demand for foodstuffs as the determining factor for the acceleration of the process of occupying new lands during this period. Finally, the third
growth which was due, above all, to the arrival of large numbers of immigrants from Europe and Japan. Although considered to be consistent, these arguments are seen as being merely partial explanations for the acceleration of the expansion front in this period. A more detailed analysis of the form of the expansion front and the population which took part in it, enables one to conclude that the determining impulse in the occupation of new lands after 1930 may be found in the maintenance and continuation, with the support of the State, of an agrarian policy which favoured large scale landownership to the detriment of small units of production.

It seems pertinent to stress some aspects mentioned in this chapter which are particularly relevant for later comparisons between the process of frontier expansion that took place in Brazil up until 1970 and the one which is still in progress in the Amazonian Region.

The first aspect to remark upon is the near absence of direct participation of the State in the process of occupation of new lands or frontier expansion. When this participation occurred it was basically through legislation and always favouring the large-scale landownership to the detriment of small units of production.

Another interesting aspect to mention is the form in which the frontier expansion process developed; that is, the occupation of new lands was made initially by small farm producers and only afterwards by the "pioneer front" characterized by a more advanced capitalist form of occupation and production. This development in stages by the frontier expansion process permitted first, the existence, at least for short periods, of a certain expansion of the peasantry; second, the existence of relatively calm periods since the reasons that made the conflicts emerge only appeared with the arrival of the "pioneer front".

Two other aspects also deserve to be mentioned. The first
"expansion front" in general developed a kind of activity that absorbed at least part of the expropriated peasants.

The second is that, due to the abundance of free public lands then in existence in the country, once expropriated in one frontier area, the peasants had the opportunity to go further and establish themselves again as small farm producers. It permitted, on the one hand an alleviation of potential conflicts between the "expansion" and "pioneer fronts" and on the other, as previously mentioned, the expansion of the small unit of production, at least for a short period.

As a general conclusion of this chapter I would note the significance of the frontier expansion process in the overall dynamics of the capitalist development of the national society.

First, on the economic plane, the "expansion front" in the form of the small family production unit, represented the providing of the internal market with foodstuffs at relatively low prices. Moreover, the settlement of these small producers in unexplored areas created an infrastructure which served as a launching pad for establishing a capitalist-based agrarian production.

Second, on the political and social planes, the frontier expansion had, on the one hand, a "safety valve" function, dissipating potential social conflicts generated by a retrograde agrarian structure in the long settled areas and on the other hand, it represented practically the only alternative by which the peasants exproprieted from long settled areas could face possibilities for their social reproduction.
1 - About latifundio in L.America see FEDER Ernest (1979); CIDA reports on Land tenure Conditions in several countries; Galeski, Boguslaw (1979); Klein (1977); Laclau (1971); Specifically in Brazil, see: Sampaio (1978); Lopes (1976); CPDA (1978); Goodman and Redclift (1981); Passos Guimaraes (1968).

2 - These conditions basically implied that the "plantation" system should be maintained; that is, great estates and large-scale production.

3 - By frontier areas, I mean those parts of the national territory which have not yet been incorporated to the national economy through productive activities.

4 - The distinction between "expansion front" and "pioneer front" created by Martins has been largely adopted, especially by anthropologists in Brazil. For Martins, "expansion front" which is also called by this author as "peasant front" and "demographic front" is constituted by small producers (or posseiros) whose production is primarily for subsistence, selling only what is left over or surplus. On the other hand "pioneer front" is characterized by the presence of features of the capitalist world: railways, banks, commercial stores, money, capitalist relationships, entrepreneurs, employees, etc. (Martins-1975).

5 - About social conflicts involving peasants in their struggle for land in frontier areas see: Vinhas de Queiroz (1966); Pereira de Queiroz (1957) Monteiro (1974 and 1974a). For social conflicts involving peasants in Brazil as a whole see: Martins (1981); Cunha (1957); Moniz (1978); Pereira de Queiroz (1977); Faco (1965) Moraes (1963) Hobsbawm (1969).

6 - For more information on expansion frontier in this period see: Nicholls (1970); Mandell (1969); Katzman (1977) Sanders (1976); Goodman (1978); Redwood (1972) Foweraker (1982)
Amazonian Historical Background

The Brazilian Amazon, usually called "Amazonia Legal"\(^1\) includes the federal states of Acre, Para, Amazonas, Mato Grosso, Rondônia and the federal territories of Roraima and Amapá; it includes also that part of the federal state of Goias north of the 13th parallel and that part of the federal state of Maranhão west of the 44th meridian. (see Map 2). The Amazonian Region thus delimited covers an area of 5,079,450 square kilometres corresponding to 59.4\% of Brazil's territory. Roughly 4,000,000 square kilometres of this area consists of tropical rain forest but there are also important areas of savanna-like vegetation, especially near the southern and northern limits\(^2\). The population of the Amazon Region in 1980 was 11.19 million inhabitants or 9.2\% of the total population of Brazil (Brazil-Census-1980).

In this chapter I present a brief review of the economic and social background of the Amazonian Region up to 1970. This review, given in chronological order, is divided into three parts: the first focuses on the colonial period, from 1500 to approximately 1850; the second deals with the rubber boom period and the following years up to 1940; the third part, which is characterized by the beginning of a more systematic intervention of the Federal government in the region, covers the period from 1940 to 1970.

1 - Colonial Period

According to the demarcation agreement between Spain and Portugal in the Treaty of Tordesilhas, 1494, Portugal would have had almost none of the Amazon Basin.

However, shortly after the discovery of Brazil, a steady expansion westwards, up the Amazon river, by Portuguese explorers, traders and settlers, led to Portugal's effective seizure of the bulk of the South American continent from the
AMAZONIC REGION

"Amazonia Legal"

As defined according to law nº5173 of October 27, 1966.

Des: J. Alfredo C. de Almeida
been the first Portuguese ever to come to the Amazon delta. His expedition may have reached the Amazon in 1530 after sailing around the North-east to the Amazon, looking for gold.

At this time a widely scattered Amerindian population inhabited the Amazon Basin. Despite the controversy over the number of native people, some authors estimate that the pre-Columbian population in the Amazon was roughly 6,800,000 (Denevan-1976). This population was characterized by small nucleated settlements along riverbanks and by the practice of shifting cultivation. Early chroniclers report that large indigenous settlements maintained stores of maize, manioc, sweet potatoes, dried fish, live turtles, and fowl, together with plantations of pineapples, avocados, guavas, and other fruits (Palmatary-1960; Sweet 1974; Steward and Faron-1959). Their interpersonal relations were governed by kinship (Steward and Faron-1959) and they depended on technological and social organizational adaptations to seasonal fluctuations in water levels. Access to fish, turtles, and mammals varied with the floods. Cultivation had to follow flood cycles as well. This population combined "varzea" (flood plain) cultivation with cultivation and extraction on the terra firme (uplands). (Denevan-1976).

After 1530, besides the Portuguese expeditions which came to the Amazon from the east and the Spanish who came from the west, other colonial peoples began to arrive in this Region. The first were the Dutch and English and then the French. Some of these expeditions, especially those of the Dutch and English, began growing sugar, tobacco, and making rum. However, the main interest of these people in the mouth of the Amazon was mercantile. They were exporting Brazilian dyewood and were more interested in the various natural products which would later be called the "drugs of the Amazon" or "drogas do sertao" on the European market.

As the number of these English, Dutch and other expeditions began to increase, they were perceived by the Portuguese as a
1570 on, a series of small but permanent Portuguese settlements were established to protect Portuguese claims to the river basin (Sweet-1974). These settlements were generally forts surrounded by civilian dwellings. From their forts, the Portuguese not only managed to protect the surrounding areas against foreign invasions, but also sent out troops to capture Indians to serve as slaves in the exploitation of natural resources (Reis-1942; Moran-1974).

At the same time, often distant from Portuguese fortifications, half a dozen different religious orders established "aldeamentos", or missions, in the region. The missionaries, of whom the Jesuits were the most active, claimed that they were converting and protecting the Indians and trying to prevent them from being enslaved by colonists.

In 1616 the well organized Forte do Presepio was built which later became the city of Belem, capital of the modern state of Para. With the construction of this fort the Portuguese attempted a more systematic exploitation of the natural resources and, above all, tried definitively to drive out the foreign economic interests in the Region. Actually, this second aim was achieved in 1623 when the Governor of Belem defeated a combined Anglo-Dutch-French force, destroying their main forts (the Xingu, Orange and Nassau forts). Even though after this defeat there were some attempts by the English and the Dutch to re-establish themselves, their interests in the Amazon, especially those of the English, disappeared due to the success of the Virginian tobacco plantations (Furneaux-1969-51).

Besides the expulsion of the English, Dutch and French, another fact contributed to the Portuguese consolidation of its grip on the Amazonian Region. Between 1580 and 1640 the Portuguese and Spanish crowns were temporarily united. This permitted Portuguese adventurers to push into the upper Amazonian region without protests from Madrid. The most important incursion was a large-scale expedition led by Pedro Teixeira in 1637. Teixeira, who in modern-day Brazil is
Amazon River until he reached Quito, in Equador, and then returned having erected a boundary mark which claimed the entire Amazon valley for Portugal (Bourne-1978-28).

After the expulsion of the other European nationals, the Portuguese Crown realized that it was economically unable to finance both a military presence and a more systematic exploitation of the region. Both civil and military posts were therefore filled by offering prebendal rights over land and labour to individuals (called "donatarios") who could afford economic investment in the region (Bunker-1984). With this move the Portuguese sought to establish plantation-based development in the Amazon as they had done on the northeastern coast of Brazil (Moran-1981-58). Sugar-plantations, however, needed a continuous supply of labour, which in the Northeast was supplied by African slaves; but in the Amazon, the use of African slaves turned out to be too expensive, so the Portuguese settlers had to rely on irregular supplies of Indian slaves for labour.

Even though the Portuguese Crown dissapproved of the use of Indian labour, - by means of an official prohibition of this practice in the Region (Maclachlan-1973), - slave expeditions were conducted under a number of pretexts. The most common of these pretexts was that enslaved Indians had been captured in "just wars" or had been ransomed from other Indians who had enslaved them (Bunker-1984). This systematic enslavement of native peoples led to a chronic state of war between the Portuguese and the Indians, in which the Indians were decimated. The threat of slave raids led many Indians to abandon their own communities and submit to the agricultural-extractive labour regime of the religious missions, where they were at least offered a means of protection against the Portuguese (Ross-1978). The violence of the slave raids and the flight of indigenous populations from the fertile riverbank sites (where they were exposed to attack), initiated the first great reduction of native populations (Nimuendaju-1952; Hemming-1978). Besides this, infectious diseases brought by the Europeans may have
The attempt by the Portuguese to establish a plantation system in the Amazon as they did in the Northeast was unsuccessful because of the difficulty of finding a labour force and because Amazonian sugar could not compete with Northeastern sugar either in quality or in cost of production (Nugent-1982). As a result, the Portuguese settlers tended to concentrate on lucrative extractive forest products such as cloves and cocoa. The overexploitation and depletion of the native spices near colonial settlements, however, forced collecting expeditions to go further afield, and increased their dependence on Indian labor even as European prices fell and local costs rose (Sweet-1974). This situation drove the local economy to stagnation and, except along the main river, few Portuguese settlements were able to establish a permanent hold in the Region.

By contrast, the religious missions were more successful. Even though the missionaries were not able to avoid a large enslavement of the Indian populations, they could establish several Indian communities which were capable of both self-sufficiency and export capacity (Moran-1981).

New Portuguese Policy for the Amazonian Region

After having been "forgotten" for a long period, in 1750 the Amazonian Region again became a focus of interest of the Portuguese Crown. At that time the "de facto" ruler of Portugal, Marquez de Pombal, in response to new economic pressures in Europe, established a new plan for the exploitation and settlement of the Amazonian colony. This new policy, aiming at making the local economy more dynamic, included the exemption of fiscal tax for the settlers, the granting of land (sesmarias) and incentives - such as the distribution of tools - for agricultural production. Besides this, in 1755, the Companhia Geral do Grao Para and Maranhao was created. The Companhia's main business was to export cacao and lumber, both of which required intensive labour
Despite the efforts of the Portuguese Crown to promote a more effective exploitation of the Region, this goal was not reached. Instead of establishing agricultural production, according to Pombal's directives, the settlers preferred more profitable activities such as the extraction of tropical preciousities and trade in Indian slaves. The Region sank back into unrelieved poverty and stagnation, aggravated by political intrigue and frequent epidemics (Bunker-1984).

In 1822, Brazil became independent of Portugal. Up until then, the Amazonian region was an autonomous area in relation to the rest of Brazil from the geographic and socioeconomic point of view.

However, soon after Brazil's independence, some local social groups in the Amazonian Region began a movement aiming at the incorporation of the Region into the new Brazilian empire. This movement resulted in a smouldering rebellion by those who were against such an incorporation, lasting for fifteen years and known as the "Cabanagem" (Reis-1969).

Despite the efforts by the Portuguese Crown to keep the Amazonian Region, it definitely became a part of Brazil in 1840. By this time, the Amazonian Region had a population of approximately half a million inhabitants strung out along the rivers and formed by miscegenation between Portuguese and Indians, with some admixture from African slaves (Reis-1969). The economy was dominated by extractivism and export crops based on large land grants (sesmarias) controlled by Europeans (Moran-1981; Alden-1974). The food crops were produced by natives and half-castes in small agricultural plots according to aboriginal methods, but output figures were close to the minimum needs of the population. (Moran-1981). These food crop producers however, had great
therefore they were unable to establish themselves as an independent peasantry; they constituted, according to Sawyer (1979-10), the proto-peasantry of the Amazonian Region.

2 - The Rubber Boom Period

Commercial exploitation of hevea was spurred by the discovery of the vulcanization process by Charles Goodyear in 1839. Though rubber could be found in various forms throughout the humid tropics, only in the Amazon did various types of trees provide the quantity and quality of the raw material necessary for its industrial use. In 1840, the year following Goodyear’s breakthrough, 388 tons of rubber was collected in the Brazilian Amazon. By 1860, however, this figure had grown to 2,673 tons and it continued to grow as new industrial applications created demand for rubber in many different processes (Furneaux-1969:148).

The growth of the international demand, and consequently its high price, was motivation enough to increase the production of rubber in the Amazonian Region. However, this did not occur immediatly due mainly to the absence of a labour force. Earlier European depredation had left most rural areas of the Amazon devoid of human population. Although Indian groups, which had survived in a few areas of "terra firme", tapped and sold latex, in most areas it was necessary for the "seringalistas" (the putative owners of the extraction areas) to import labour from outside the Amazon (Bunker-1984:1029).

It was only from 1880 on that the "seringalistas" and rubber merchants were able to keep up with world demand. During these years a serious drought in the Northeastern region of Brazil forced thousands of people to leave this region. Having been recruited with the help of intense propaganda about the new "el dourado", a great number of the Northeast drought victims moved to the Amazonian Region. It is calculated that about half a million people from the Northeastern region migrated to the Amazon from 1880 to 1910.
The problem of labour supply having diminished, the production of rubber in the Amazon witnessed a great increase. In 1870 the production was 6,600 tons.; this figure jumped to 27,000 tons in 1900 and the production reached its peak in 1911 with a production of 44,300 tons (Osiris-1962:93). Accompanying this was a great increase in the price of rubber on the international market\(^5\).

From these data, one may ask what happened to the region under such a lucrative activity? To better understand this it is necessary to investigate the kind of production and commercialization networks established during the rubber boom.

The scarcity of labour had a profound effect on the social relations of work in rubber production. The "seringueiros" (tappers), especially those who were imported from the Northeastern region, were kept totally dependent on the "seringalistas" who had recruited, transported, and provisioned them. The obligation to repay the inflated prices of their transport, food, and tools at the very low prices set for their rubber output kept the "seringueiros" in effective debt dependence (Bunker-1984:2031; Weinstein-1980). This dependence was maintained by the threat of violence against tappers who attempted to flee without paying off their accumulated debts.

The "seringueiros"' conditions of work were no less hard as one can deduce from the following report:

"The seringal amazonico took the following shape: the "barracao" usually placed by the river, was the base of the lead-man - the seringalista - and as store-house for food used by the workers - the seringueiros. From this place the seringueiro would take off to the "centre" (seringal) where the "colocacoes" (centre of work) are placed consisting of two or three "estradas" (paths linking the seringueira trees) scattered around all over the Amazon. The native seringal presents an average of ten trees every
so one can see that the Amazon seringal could not escape the "latifundista" form of organization...Starting to work about 4 a.m. the seringueiro takes a hurricane lantern, for it is dark until about 6 a.m., and having provided himself with a 'machadinho', a machete (cutlass), and perhaps a rifle or shot-gun, he sets out for the trees. Visiting each tree in turn he makes a number of incisions in the bark with his 'machadinho'. This is a small blunt, axe-like blade, measuring about 1/2 in. across, of soft iron, fitted to a handle about 3 ft. long. He allows the latex from each incision to flow and leaves it to coagulate, to be collected later, when it is worked into rough balls known as 'sernamby', or scrap. This is repeated two or three times in order to draw the latex to the base of the tree and when this is acquired the 'estradada' is ready for regular tapping" (Woodroffe-1916:101).

A description of the seringueiros' daily tasks is completed by another report

"...after having been collected from the trees the rubber liquid or latex would then be carried into a small conical hut with a hole in the roof. If the seringueiro was married his wife would have gathered nuts from the Urucuri tree to burn in the hut. When the fire reached the right heat, an open cone was put over it to concentrate the smoke. A pole would be revolved where the smoke was thickest and a little latex poured onto it until a base of coagulated rubber had formed. The fire was kept up and the pole revolved for the two or three hours that the smoking would take. By the end, the atmosphere in the hut would be a broad "biscuit" of rubber round the pole. The next day the new latex would be added to it." (Furneaux 1969:149).

Besides the hard work required in the collecting of rubber,
miserable shack would normally have a mud floor and would sometimes even be overrun by the floods in the rainy season. His journey from his old home, his expenses in route, all his equipment, gun, tapping materials, food and clothes were provided by his "patrão" or seringalista and debited to his account. The goods reached the hands of the seringueiro at such high prices that sometimes he couldn't even afford them. He could discharge this debt only by bringing in rubber and receiving in return fifty percent of its value (Furneaux-1969:150). As a result, the seringueiros were, very often, in permanent debt and therefore tied to their patrons.

This tie between seringueiros and seringalistas was just a part of a chain or a closed vertical exchange system, known as "aviamento" developed during the rubber production period in the Amazon Region. At the top of the aviamento system were the export firms, in general subsidiaries of big English, American or German enterprises. These export firms had a monopoly on goods, credit, and access to foreign markets, which therefore enabled them to set internal prices for both merchandise and rubber. Their role in the aviamento system itself begins by providing trade goods and advance loans to the merchants and owners of the so-called "aviamento houses" (Bunker-1984:1030). Even though these houses sometimes dealt directly with the seringalistas, it was more usual to advance loans and trade goods down through a series of intermediaries (aviadores). These aviadores, using big boats (regatoes), went up the rivers supplying other aviadores, who had shops in remote areas, seringalistas and seringueiros, taking as payment rubber which was then transported to Manaus or Belem and sold to the aviamento houses and from there to the export firms (Moran-1981:65). Each level in this chain maintained control, through constant indebtedness, of the next level down. Besides this, it should be pointed out that the collection of rubber was a seasonal business, which came to aggravate even further the condition of indebtedness, especially for the tappers, who could not collect latex during the six months of the rainy season.
Within this system of production and trade of rubber, it was only the *seringueiro* who did not make any profit from it. While they were receiving a maximum of 2 1/2 pence a pound - but more often only 1/2 a pence a pound - for the rubber they collected, the world market price was 20 pence a pound. (Bourne-1978:30).

With such cheap labour, the rubber production generated enormous sums of money, specially for those who were at the top of the *aviamento* system. A great part of this money, however, was sent away to increase the capital of the English, German and American enterprises. The part that was kept by the Brazilians was either invested in means of exchange, boats, docks, and warehouses, or used in extravagant conspicuous consumption by the so-called "rubber barons" or by the local government (Collier-1968). Even though the city of Manaus was earning up to £1.6 million a year from the 20 percent export tax, only a telephone network and luxurious baroque buildings like the Palace of Justice, Teatro Municipal and Opera house remain as testimonials of that period (Bourne-1978:30).

The Amazonian rubber boom began to fade in 1912 with the success of the rubber plantations in Southeast Asia. Within less than a decade, Amazonian rubber fell from supplying nearly 100% of the world demand to supplying only 20% (Santos-1977). To a large extent, the collapse of the Amazonian rubber monopoly can be attributed to the lack of foresight of the rubber barons. There were no efforts to improve the technology and lower the costs of production. As a result, the high price of the Amazonian rubber could no longer compete with the Asian product on the world market.

Although, on the one hand the economic boom generated individual fortunes and proportioned a relative but temporary economic dynamics in cities like Manaus and Belem, on the other hand, it proved to be a setback as it did not generate any parallel economic development in the region (Prado &
Government officials, foreign enterprises and the rubber barons did not consider long-term regional development; businessmen or local elites and foreign enterprises had little, if any, investment tied up in the area from the profits accumulated during the rubber boom. The agricultural sector, which just before the rubber boom showed some signs of improvement, was suffocated during the rubber boom; all the labour available in the region, plus the immigrant force from the Northeast, was recruited for rubber extraction. The tappers were even prohibited by the seringalistas from growing their own food, in order to dedicate themselves totally to the tapping and processing of latex. Therefore, practically all the food consumed during the rubber boom was imported from outside the Amazon. Not only did this provoke periods of food shortages during the rubber boom with drastic consequences for the health of the workers, but also it did not create the necessary infra-structure for a quick development of the agricultural sector in order to supply the local population which became unable to import food immediately after the failure of the rubber economy.

If the rubber boom did not promote any real economic and social development for the Region, it did provoke a great increase in the Amazonian population. From 340,000 inhabitants in 1870, this figure jumped to 700,000 in 1900 and 1,400,000 in 1920 (Cardoso and Muller-1977:29). However, the absence of mobility or complex social division of labour tied to the aviamento system, and the lack of a long term investment in exploring the local resources did not permit the emergence of an internal market which could have led the Region to some kind of long-term development. Thus, by 1920, the Amazonian Region again found itself with a stagnating economy; one part of the population departed for other regions of the country, and another part fell back on the subsistence economy along the big rivers as had existed before the rubber boom.
Even though a great number of the immigrant tappers returned to the Northeast after the end of the Rubber Era bonanza, many stayed on. Together with detribalized Indians and "mesticos" the ex-tappers comprised a population dispersed throughout the Amazon basin, mainly in the riverine communities and dependent on a mixed subsistence and exchange economy. They were known as caboclos and subsisted mainly through the cultivation of manioc, rice, bananas, and fish and game, and through the trade of gathered products such as Brasil nuts, piacava palm, titica vine, a number of other oil-producing nuts and through hunting or trapping turtles, manatees, caimans, jaguars, etc., and fishing. Their primary connection with markets was through a continuation of the aviamento system. Aviadores supplied both food and implements such as fishing nets, gunpowder, tools, as well as goods such as kerosene, salt, matches, textiles, etc., at the beginning of the productive season and took their payment in kind at the end of the season (Sawyer-1979:17; Bunker-1984:1036). Once again, rates of exchange were highly unfavourable for the producers and led to the perpetuation of their indebtedness.

By this time there was a relatively large demand for foodstuffs by the urban population concentrated in some large towns such as Belem and Manaus. However, the passage from a subsistence economy to some kind of petty commodity production, which could respond to this demand, was limited by the difficulties of the peasants in their access to land areas along the rivers (varzea) or closer to the urban centres. All the better located areas were part of big estates given as grants during the colonial period. These big estates, including the varzea areas, were used by the owners either for cattle ranching or parcelled off under the sharecropper system. The conditions established in the sharecropper system however, were not so attractive for the workers. Therefore the caboclos were left the more fragile and less productive areas of terra firme (Ross-1978). Rubber
It should be stressed that there were some isolated and localized initiatives to break this stagnated subsistence economy. The best example lies in the extraction of Brazil nuts in the state of Para. For a period, even though short, the extraction of Brazil nuts gave everyone the impression that this product would put the Amazonian region into a new economic period similar to that of rubber. But this never materialized. The collection of Brazil nuts (castanha do Para) was mainly concentrated around the Tocantins river valley (Rodrigues-1945). Both its system of collection and commercialization was established on the infra-structure left from the rubber period, that is, based on the aviamento system\(^9\). Thus, based on this system which had already proved to be inefficient as a basis for wider development, plus a certain instability in the international demand for the product, this extractive economy frustrated those who expected a new economic boom in the region. Despite this fact the city of Maraba, which became the centre of commercialization of this product, had a period of some economic development, but nothing that could be comparable to that of Manaus or Belem during the rubber boom (Dias-1958).

Attempts to recover the rubber production were also made. In 1926, Henry Ford was given extensive concessions in the Tapajos Valley. There, in an effort to undercut Southeast Asian rubber prices he established at Fordlandia and later at Belterra, a rubber plantation with an area of 10,000 square kilometers and some 800,000 rubber trees. Although the car manufacturer sank large sums of money into the project, problems of blight and faulty grafting, plus difficulties with labour, made the project economically unviable and it was finally closed down shortly after World War II (Moran-1981; Sioli-1973; Bourne-1978).

Besides these efforts - the Brazil nuts and the Ford rubber plantations - other additions to the subsistence economy

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\(^9\) It is important to note that the use of the term "aviamento" refers to the infrastructure and methods used in the rubber industry to facilitate the collection and transportation of rubber trees, which were later adapted for the collection of Brazil nuts.
successful cattle ranching project on Marajo Island and in some areas surrounding the Maraba region, (Oliveira-1941), diamond mining in the Araguaia and Tocantins valleys (Velho-1972), and the introduction of cultivation, by Japanese migrants, of jute and black pepper. These activities, however, did not have economic implications for the region as a whole and therefore were unable to provide any major changes that could revitalise the local economy.

3 -The Beginning of State Intervention - 1940 - 1970

At the beginning of World War II, with the Japanese controlling the areas then supplying rubber for the world market, the Americans looked to the Amazon to meet their demand for rubber. These American interests received their response from the Brazilian government.

In 1940, Getulio Vargas, then the President of Brazil, visited the Amazon (the first Brazilian president to do so) and in a famous speech he pointed out the Amazon natural resources, the need to integrate the region to the national economy, and the government's interest in substantially increasing rubber production (Vargas-1940).

Soon after this visit, the government launched the program called "March to the West" which aimed at attracting labourers, specially from the Northeast, to go to the Amazon. This program also included the creation of several public welfare services, such as education and health programs, in order to provide better conditions for the migrating population (Moran-1981:71). These efforts by the government were relatively successful.

Both because of the government's propaganda efforts and because the Northeastern region was again suffering from severe drought, around 25,000 families moved from the Northeast to the Amazon during the early War years. The production of rubber went from 18,000 tons in 1941 to 32,300 in 1945 (Cardoso and Muller-1977:41/42). The support programs
also achieved some positive results. The Special Health Service (SESP), for example, was able, if only in a modest way, to provide medical assistance to towns and small communities along the rivers. Besides, this special service was able to bring malaria and yellow fever under relative control by the use of DDT and the distribution of anti-malarial medication to the local population (Wagley-1974-290). The Educational Service was also able to establish schools in towns and communities which until then were totally lacking in formal education. Even though the 1940's were not years of brisk economic activity, certain regional improvements were made.

From 1946 on, the Amazon began to benefit from the inflow of federal funds. This enabled the construction in some towns of municipal buildings, schools, central markets, small sawmills, slaughter houses, port facilities, roads and hospitals. (Moran-1981:71).

This rhythm of development, however, met with a setback just after the end of World War II when the United States ceased to be so dependent on rubber from The Amazon and the Brazilian internal market consumed only 50% of the output (Basa-1967). This time, however, unlike the previous period, when the decrease in the demand for rubber threw the local economy into stagnation, the Amazonian region was experiencing a certain diversity in its local economy (Cardoso and Muller-1977:40). Instead of returning, the Northeasterners stayed on, although a great part of this population found itself scattered in small river-towns and along riverbanks in order to guarantee its survival based on the subsistence agricultural production in combination with collection activities. But the cultivation of black pepper and jute, until then monopolised by the small Japanese communities, began to be carried out by the Northeasterners and caboclos and experienced a period of relative economic progress.

In addition to this, an increase in the national and international demand for certain tropical products, such as alligator skins or jaguar hides made exploitation of these
opportunities for some areas of the Amazon during the 50's and part of the 60's. Prices paid to hunters during the period fluctuated around US130 for a top quality jaguar pelt and US40 for an ocelot (Smith-1976 quoted in Moran-1981).

Still, however, the region, then with a population of around 1.8 million inhabitants, was very backward in comparison with other regions of the country. The new Brazilian constitution of 1946 had given some attention to the need for the development and integration of the Amazon region through a document called "Plan of Valorization of the Amazon Region" (Cardoso and Muller-1977:100). However, it was only in 1953 that this plan made effective and a major step was taken by the federal government with a view to bringing some development to the region (Davis-1977). Also in 1953, under the presidency of Getulio Vargas, the federal government established a regional development agency called SPVEA (Superintendency for the Economic Evaluation of the Amazon). This agency was to receive 3 per cent of federal tax funds and 3 per cent of state and municipal tax funds (SPVEA-1955) from the area, since then known as "Amazonia Legal".

Among SPVEA’s priorities was the development of agriculture with an aim to making the region self-sufficient in foodstuffs and of expanding the production of raw materials for export and internal use. These goals were supposed to be accomplished through research, colonization, and various production incentives. Priority was also given to the development of transportation, communications, energy and the solution of the health problems of the region. Other aspects of the plan, ranked by their original budget allocations, were credit and commerce, education and a more effective exploitation of natural resources (Mahar-1979:8; Cardoso and Muller-1977:111).

Unfortunately these rather grandiose objectives were never realized. Reasons given for the failure of the program vary from insufficient knowledge of the region’s socio-economic structure and potential to bureaucratic and political
problems in the administration of the economic resources (Mahar-1970:8; Bouhid-1958). SPVEA lacked the technical capacity to prepare investment projects and was unable to coordinate its activities with existing agencies. (Panagides-249). Limited to expenditures with staff, lack of, or late release of available funds, made planning and execution difficult, if not impossible (Moran-1981:pg.72). In short, as Moran says, the very legislation that created SPVEA tied the hands of the agency, which never had sufficient control over the allocation of its own resources (Moran-1981; Mahar-1979:8). Besides, the federal funds which the agency should have received were not made available or, for various political reasons, were allocated to other programmes or regions. (Ianni-1979; Cedeplar-1980).

Despite all these constraints, SPVEA did achieve some goals, such as supporting to research and surveys on the forest resources and ecology, the creation of the National Institute of Amazonian Research (INPA), and ethnographic studies carried out by researchers at the Museu Goeldi in Belem. These achievements, however, were rather modest in comparison with those originally established by the federal government as the main purpose of SPVEA (Cavalcanti-1967).

New Era for the Amazonian Region

The inauguration of Brazil’s new capital, Brasilia, in 1960 is frequently taken as the beginning of a new era for the Amazonian Region. As a result of its location near the geographical center of the country, the new capital is relatively close to the Amazonian Region and it did provide some influence on the region.

This influence turned out to be especially strong when, under the policy of development and integration then carried out by the Kubitschek government (Skidmore-1967) two important highways linking the new capital to the Amazonian Region were built: one, the Brasilia-Acre highway reaching the westernmost tip of the Amazon, and the other, the Brasilia-Belem highway, reaching the easternmost tip of the
These two highways, especially the Belem-Brasilia highway, contributed to important changes in the pattern of occupation in the Amazon. These roads not only made an increase in the flow of migrants to the area possible but also changed the migration process itself in that, the migrants (principally from the Northeastern region) were now attracted to the Region as a site of lands for permanent settlement and not merely for temporary and extractive exploitation as had been the pattern in the Amazon until then. In addition, the region began to attract migrants from other parts of the country, particularly those interested in extensive cattle-raising.

Although the original intention of the Federal Government was to promote official colonization along the Belem-Brasilia highway, what actually occurred was a "spontaneous" occupation of the area, followed by the plots of small producers being rapidly absorbed by the large cattle ranches (Cedeplar-1982-Vol.III). But in whatever form, the construction of the Belem-Brasilia highway constituted the first stage in the opening of other local roads, making this part of the Amazon an attractive area for migrants (Hebette and Acevedo-1979).

After the Belem-Brasilia highway had been finished, another event that marked the intervention of the State in the Amazon during the sixties was the one referred to as "Operacao Amazonia". This new policy for the Amazon, implemented in 1965, is viewed by many authors as a facet of the geo-political doctrines of the military government that had seized power in 1964 through a coup d'etat (Cardoso and Muller; Ianni-1979).

According to the provisions of "Operacao Amazonia", the future policy for the region would be oriented towards establishing "development poles" and a stable, self-sustaining population (especially in the international border areas), encouraging immigration, providing incentives to private capital, developing infrastructure and research on natural resource potential (Mahar-1979:11).
The economic program of "Operation Amazonia" was based on a model which had been applied, with some success, to the Northeastern region through SUDENE (Superintendencia do Desenvolvimento do Nordeste). Essentially, this model involved the promotion of the substitution of industrialized import goods. Industrialization was to be financed by both foreign and domestic private capital. The latter would emanate from the dynamic industrial centers of the Central-Southern Regions of the country (Cavalcanti-1967).

In order to implement the new policy, SPVEA was replaced in 1966 by SUDAM (Amazon Development Agency) which became part of the Ministry of the Interior. The Credit Bank of Amazonia was also abolished, and in its place the Banco da Amazonia (BASA) was created to serve as the financial arm of SUDAM. Although national funds allocated to SUDAM were cut from 3 percent (as it was during the SPVEA time) to 2 percent of the federal budget, the newly created agency adopted far-reaching fiscal and tax incentive programmes, whose effects on the Amazon far outweighed the impact of its predecessor, SPVEA. These incentives were extremely generous. Any enterprise could have a reduction of 50% in personal or corporate income tax if it were destined for priority projects in the region; full income tax exemption up to 1982 for corporations with approved projects; exemption from import duties on raw materials imported for approved projects; exemption from export duties for a number of products of the region. The enterprises were also given shares in the Amazonian project which, if successful, would start paying dividend after four years (Bourne-1978; Mahar-1979:12; Moran-1981:73).

Funds were also made available through the Bank of Amazonia (BASA) for loans or as equity for approved projects. Originally, the investor had to put up one "cruzeiro" (then the Brazilian currency) for every two received through the fiscal incentive system, but the equity requirement eventually dropped to 25 percent of the total cost of the investment (Katzman-1975).

Besides SUDAM and BASA, the government also created the
envisaging a more extensive development of the region's interior. The basic intention of this free trade zone was to create, through fiscal means, an industrial, commercial, and agricultural centre in Manaus to serve as the "development pole" for western Amazonia. Thus, firms located within the confines of this free zone were to be exempt from import and export duties as well as from the manufacturers' federal sales tax. All goods exported from the Manaus Free Trade Zone to domestic markets were completely free of tax, while goods with a foreign import content were subject to import duties at a reduced rate in proportion to the value added on in the Manaus Free Trade Zone. The overall supervision of this Zone was to be exercised by the Superintendencia da Zona Franca de Manaus (SUFRAMA) an agency not directly linked to SUDAM (Cardoso and Muller-1977; Mahar-1979).

The program of fiscal incentives for the Amazon began to pick up momentum. During the first two years, that is 1967 and 1968, roughly US 317 million were applied to 184 projects approved by SUDAM. Of this sum, 32 per cent had been raised by the firms concerned, 60 per cent was fiscal incentive money, and 8 per cent came from other public sources (Bourne-1978-pg.47). But although the program was intended to help the growth of farming and industry equally, it was clear at this stage that the firms which were most ready to take part were interested in cattle raising and agriculture: 64 per cent of the incentive money was devoted to this kind of activity and this tendency was to endure for the following years.

Despite the fiscal and credit incentives, the Government policy was not able to successfully attract industrial investments to the Amazonian Region. Soon it became clear that the model of industrialization for import substitution borrowed from the Northeast could not be easily transferred to a region with such markedly different social, economic and physical characteristics. Besides, SUDAM tended to favor capital-intensive projects which affect a minimum of the region's population, and whose production was mainly for
example is the cattle projects which were based on an extensive production (due to the cheap value of land) and employed only 2.3 jobs per 1,000 hectares (Moran-1981:73; Kleinpenning-1978:11). In reality SUDAM continued to operate in the same way that had been so ineffective for SPVEA; that is, its failure to deal with the wide discrepancy between the plan’s objectives and the means - both financial and technical - available to achieve them. Although the new fiscal incentive legislation attracted a significant amount of private savings to the region, the technical deficiencies of SUDAM prevented rigorous controls over its sectoral and spatial allocation (Mahar-1979).

In contrast, SUFRAMA, the agency responsible for the Manaus Free Trade Zone, was relatively successful in allocating its resources. The advantage of tax exemptions and easy profits attracted a large number of investors, permitting the establishment of the industrial park of Manaus. These industries, the majority concentrated in textiles and electronics, brought about a rapid increase in the city’s population and improved local employment opportunities. However, the investments made through SUFRAMA were confined, basically, within the city limits, with the region’s interior being excluded from any improvement or benefits eventually proportioned by SUFRAMA’s administration.

It is true that besides the activities carried out by SUDAM and SUFRAMA, a large number of projects in mining, timber and livestock were established in the Amazonian Region during the 1960’s. These large-scale projects however, were capital-intensive with a small absorption of labour and they were, and still are, "enclave" type activities with limited effects and only minor links with the region (Panagides and Magalhaes-1974).

Despite the recognised potential resources of the region and despite all policies and efforts by the government, the Amazon ended the 1960’s without effective integration into the national society and had the lowest level of development
happened to this region was the increase of population from 1.440 million in 1940 to 3 million inhabitants in 1970 (Cardoso and Muller-1977:40). This population had, however, in 1970, an annual per capita income of US 207\textsuperscript{16} while in the rest of the country the average annual income was US 317 (Bourne-1978:41). A more comprehensive picture of the region's welfare in comparison with the Brazilian socioeconomic situation is given in Table 1 below.

TABLE 1
Amazon Socioeconomic Indicators

<table>
<thead>
<tr>
<th></th>
<th>Amazon Region</th>
<th>All Brazil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per capita income of labor force, 1970 (US equivalent)</td>
<td>692.8</td>
<td>832.0</td>
</tr>
<tr>
<td>Per capita KW consumption, 1971</td>
<td>117.0</td>
<td>415.0</td>
</tr>
<tr>
<td>Illiteracy rate, 1970 (% labor force)</td>
<td>62.0</td>
<td>29.7</td>
</tr>
<tr>
<td>Per cent of urban population served by sewage services, 1970</td>
<td>3.0</td>
<td>26.0</td>
</tr>
<tr>
<td>Per cent urban population served with water, 1970</td>
<td>40.0</td>
<td>51.0</td>
</tr>
<tr>
<td>Mortality rate, 1970 *</td>
<td>14.0</td>
<td>9.7a</td>
</tr>
<tr>
<td>Infant mortality rate, 1970 (for children up to one year of age) *</td>
<td>124.0</td>
<td>75.1a</td>
</tr>
<tr>
<td>Life expectancy, 1970 (years of age)</td>
<td>48.0</td>
<td>61.0a</td>
</tr>
<tr>
<td>Availability of medical doctors, 1970**</td>
<td>3.0</td>
<td>7.0</td>
</tr>
<tr>
<td>Hospital beds, 1970*</td>
<td>2.5</td>
<td>4.0</td>
</tr>
</tbody>
</table>

(a) Only Central-Southern Region.
(*) per 1,000 inhabitants.
(**) per 10,000 inhabitants.

The data in Table 1, specially those relative to infant mortality, availability of medical services, and life expectancy demonstrate the level of underdevelopment of the
to 1970. From that year on, however, the Amazonian Region began a new phase in its history with a new and different pattern of occupation, exploitation and a major integration into national society as I shall present in the next chapter.

Summary and Conclusions

The contents of this chapter show that up to 1940 the social history of the Amazonian Region was marked by its being peripheral to the Brazilian national society and by its having an economy based on a cyclical extractive production directed toward, and conditioned by, foreign markets.

It seems that a lack of political interest, first by the Portuguese and later by the Brazilian government, excluded the Region from the central development plans of these governments. Left without significant intervention the local economy then followed the private interests of the dominant class, that is, those groups who had control over the extractive process and the commercialization of the products. The interest of both the foreign enterprises and the local elite was basically to reproduce capital and invest it outside the Region. The pattern of the extractive economy established in the Amazon set limits to the emergence of new forces or modes of production that could take its place during the periods of retraction determined by lower international demand for the local products. The labouring population, basically composed of trappers weakened by the "aviamento" system and by their lack of access to land was not able to establish itself as an independent peasantry as would have been expected. Nor were the landowners and exporters able to create the necessary conditions for the emergence of a proletariat.

From 1940 on, as the Brazilian economy itself became more highly capitalized and with greater administrative capacity, the State started to extend this capacity to the Amazonian Region. State intervention, however, did not lead to the economic and political incorporation of the Amazon into the
to treat the Amazon as an empty frontier from which profits could be rapidly extracted with little regard to long-term development planning for the Region.

In brief this review of the Amazon's historical background brought out certain economic, political and social regional peculiarities and delineated the forces which generated them and which continue to shape them. What is important to take into account from this period on is to what extent such peculiarities will interfere with expansion, particularly that of the peasant farming system, in the new phase of the social history of the Region. This will be analysed in the next chapter.
(1) The term "Amazonia Legal" began to be used in 1966 (Law 5173, October 10) to designate a limited area created for purposes of fiscal incentives and regional development programmes. For the purposes of this chapter, however, the Amazonian Region will be limited to the area which officially corresponds to the Northern Region of the country, that is, the area constituted by the States of Para, Amazonas, Acre, Rondonia and by the Federal Territories of Roraima and Amapa.

(2) The best overall source concerning Amazonian ecosystems is still Meggers' works; see especially Meggers-1971 and Meggers-1974. Useful too is Moran-1981.

(3) Drogas do Sertao, literally "drugs of the backlands", refers to spices collected in the region, which formed the earliest economic base: cocoa, cinnamon, vanilla, cloves, urucu, oily seeds, puxuri, aromatic roots and woods, etc.

(4) For more details on the role of the religious missionaries in the Amazonian Region and their relations with Portuguese settlers and Indians see Furtado-1961 and Ribeiro-1970.

(5) In 1850, the price of rubber on the international market was £45 per ton; in 1860 £118; in 1880 £182; in the 1900’s this price reached £389 per ton. (Cardoso and Muller-1977:26).

(6) The aviamento system has been studied by a large number of authors concerned with the Amazonian history. The best studies, however, can be found in Cunha-1913; Wagley-1953; Santos-1968; Prado and Capelato-1975; Reis-1953.

(7) The term "caboclo" is usually used in Brazil to denote persons living in the backlands or of a lower social status than the speaker. Its use as a cultural type or as a distinctive Amazonian culture can be found in Wangley (1953) and Moran (1974).

(8) A detailed explanation on land tenure and the sharecropper system from colonial times up to 1970 was made by Santos (1981).
Brazil nuts in Para can be found in Velho (1972) and Cardoso and Muller (1977).

(10) The cultivation of jute and black pepper was introduced in the Amazonian region by Japanese migrants in 1930 and 1940, respectively. During the first years, the Japanese communities could break away from the system of aviamento by forming their own marketing cooperatives. By 1950, however, the production of jute and black pepper were very much involved in the aviamento system. (Cardoso and Muller-1977) Bunker-1984.

(11) Actually an agreement was established between the Brazilian government and the Rubber Development Corporation from the U.S.A. in 1942. According to this agreement, the American enterprise was to give financial support to the transference of 50,000 workers from the Northeast to the Amazonian Region. To carry out this transference, a special agency called "Servico Especial de Mobilizacao de Trabalhadores para Amazonia" was created (Cedeplar-1982-Vol.III).

(12) An interesting analysis of the ideological aspects of the Vargas administration related to the occupation of empty spaces in Brazil is made by Esterci (1972). See also Velho (1973) where this author makes a comparison between the theories developed by Turner about the frontier expansion in the U.S.A. and those developed by Ricardo about the frontier expansion in Brazil. In brief, Velho argues that the ideology behind the Vargas approach of frontier expansion is an expression of the Brazilian government’s authoritarianism.

(13) More information about the economic situation of the Amazonian Region during the Second World War can be found in Correa (1967) and BASA (1967).

(14) See note 1 for the meaning of Amazonia Legal.

(15) Further analysis of the role of the Belem-Brasilia highway can be found in Valverde and Dias (1967); Ketteringham (1972) and Hebette and Acevedo (1979).
Para, which was higher than the average then found in the Region as a whole (Bourne-1978).
CHAPTER IV

The Expansion of the Amazonian Frontier

In the second chapter of this thesis I outlined the process of land occupation in Brazil up to 1970. There it was shown that the occupation of new lands progressed from the coast towards the interior in a continuous process in which the "expansion front" (consisting of small producers) was overtaken by the "pioneer front" (characterized by large units of production and the concentration of landownership).

In the third chapter, by means of a historical review of the Amazonian Region, an attempt was made to distinguish the social, economic and geographical factors which ensured that this region played a peculiar role in Brazilian society and, until 1970, remained effectively isolated from the process underlying land occupation and social relations of production that occurred elsewhere in Brazil.

In this chapter I show how the Amazonian Region came to be integrated into the economy and national society and how the process of land occupation has developed in this Region since 1970.

Among other things, I wish to suggest that: 1) given the social, political and economic conditions of Brazil in recent times and given the historical and geographical peculiarities of the Amazonian Region, frontier expansion process in this region differs substantially from those occurring in other parts of the country; 2) given the peculiarities of the Amazonian frontier expansion the future of the agents involved in such a process, particularly that of the small producers, can only be envisaged with a deep and ample empirical investigation of the socio-economic and political realities in which these small producers are inserted. In other words, I argue that it is difficult and scientifically dangerous to predict, a priori, whether the future of the small producers now present in the Amazon will be similar to that of other small producers who participated in other
1 - The Basis of the Frontier Expansion in the Amazon

The expansion of the Amazonian frontier can be linked to a number of changes and factors which began to come to light in Brazilian society during the 1930's.

Following I will consider some of these changes and factors and attempt to show briefly how they either directly or indirectly come to influence the process of frontier expansion in the Amazon.

The first of these factors refers to the process of industrialization which took place in Brazil from 1930. During the subsequent three decades this industrial expansion was principally concentrated on products such as textiles, foodstuffs, beverages, etc. for which the markets - mainly located in the southeastern region - were sufficient to ensure their development. By 1955, however, the great leap in the production of manufactured and durables consumer goods (petro-chemicals, cars, domestic appliances, etc.) required a larger market (Sawyer-1981:11). The expansion of this market would only be possible, according to the ruling class at that moment, with a greater integration between the production centres and the other regions of the country. To achieve this, and even during the time of the Kubitschek Government (1956-1960), a wide-spread program of highway construction was begun. The building of the Belem-Brasilia and Brasilia-Acre highways, which became the principal axes of the first stage of the frontier expansion in the Amazon, was a part of the initial period of this highway program.

The second factor, which is also linked to industrial expansion, was the high level of capital accumulation which the urban industrial sector had achieved by the end of the 1960's. With such an accumulation, this sector began to buy land and make investments in primary activities as a new field of capital valorization. The result was the
in huge tracts of land in frontier areas, especially in the Central-West and in the Amazonian Regions. It seems important to mention here that, in order to develop productive activities in these areas, the capitalist enterprises required special subsidies from the Government (Sorj-1980). Such demand was largely secured in the Amazonian Region through the launching of a programme of fiscal incentives with the creation of SUDAM, as mentioned in the previous chapter and enlarged by the new Government's policy regarding the Amazonian occupation after 1970, as will be shown later in this chapter.

The third factor, relates to the interaction by which agriculture became part of the dynamics of the urban industrial economy. On the one hand, the increased demand for agricultural raw materials and for foodstuffs reinforced the commercial character of small production in the frontier areas and, consequently, its integration into the market economy. On the other hand, the limitations experienced in traditional patterns of expanding agricultural production to meet the demands of the urban-industrial sector, stimulated the modernisation of the forces of production in the country-side - the cause and effect of the expansion of an agro-industrial sector devoted to the production of additives and agricultural machinery.

This modernisation was characterised by technological advances in agricultural production, particularly in the south and south-eastern regions, with consequent changes in the social relations of production. In short, these changes implied an accelerated shedding of the rural labour force, principally that consisting of workers under the share-cropping and tenant systems, as shown by Tables 2 and 3 for the States of Sao Paulo and Parana.
Number of Establishments Operating under the Tenant and Share-cropping systems in 1970 and 1975 - Sao Paulo and Parana.

<table>
<thead>
<tr>
<th>State</th>
<th>1970 Establishments (1000 Ha)</th>
<th>Area (1000 Ha)</th>
<th>1975 Establishments (1000 Ha)</th>
<th>Area (1000 Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sao Paulo</td>
<td>100,074</td>
<td>1,620</td>
<td>65,748</td>
<td>1,496</td>
</tr>
<tr>
<td>Parana</td>
<td>191,678</td>
<td>1,714</td>
<td>134,151</td>
<td>1,392</td>
</tr>
</tbody>
</table>

Source: IBGE-1975

As Table 2 demonstrates, in a period of 5 years, approximately 34,326 families of tenant-sharecroppers in the State of Sao Paulo and 57,527 in the state of Parana have lost access to land to work. In other words, it is possible to state that this represents an increase of 91,853 families making their way to frontier areas in search of land to work.

It should also be emphasized that with the modernisation of agricultural production there was a corresponding growth in the economic power of the rural capitalists who began to buy up the lands of small proprietors. Table 3 below illustrates the decrease in the number of properties in some of the Brazilian states.

Table 3
Number of Agricultural Establishments in 1970 and 1975

<table>
<thead>
<tr>
<th>States</th>
<th>1970</th>
<th>1975</th>
</tr>
</thead>
<tbody>
<tr>
<td>R. G. Sul</td>
<td>512,303</td>
<td>472,328</td>
</tr>
<tr>
<td>Sta. Catarina</td>
<td>207,218</td>
<td>206,908</td>
</tr>
<tr>
<td>Parana</td>
<td>554,488</td>
<td>478,857</td>
</tr>
<tr>
<td>Sao Paulo</td>
<td>326,780</td>
<td>278,959</td>
</tr>
<tr>
<td>Rio de Janeiro</td>
<td>77,428</td>
<td>76,646</td>
</tr>
<tr>
<td>Esp. Santo</td>
<td>70,712</td>
<td>60,648</td>
</tr>
<tr>
<td>Pernambuco</td>
<td>331,409</td>
<td>317,739</td>
</tr>
<tr>
<td>Piaui</td>
<td>217,886</td>
<td>216,860</td>
</tr>
</tbody>
</table>

Source: IBGE-1975.
us to conclude that the modernisation of agricultural production not only resulted in the shedding of non-landowning rural labourers but also in the loss of a peasantry composed of small producers. As will be shown later in this study, a large portion of these peasants moved to frontier areas in an attempt to recover their condition as small producers.

The fifth factor which is also linked to the shedding of the rural labour force may be identified in the promulgation of the Statute of Rural Labour in 1963 (Russomano-1969; Sampaio-1972). In an attempt to quell the growing social unrest in the countryside, the Federal Government sought to extend the legal rights already accorded to the urban proletariat, by statute, to rural labourers. However, by legally obliging employers to pay a minimum wage, holidays, sickpay, etc. this statute, rather than guaranteeing work to rural labourers, in fact provoked mass dismissals (D’Incao e Melo-1976). Without any qualifications for absorption by the urban sector, these rural labourers had no alternative but to go to frontier areas in order to survive.

The sixth and probably most influential factor in the development of the Amazonian frontier expansion can be attributed to the continuation of an agrarian structure policy favouring concentration of landownership.

Shortly after the 1964 military coup, the Land Statute was passed in a clear attempt by the Government to stifle potential social conflicts in the rural sphere. This Statute, which was presented in part as an agrarian reform, promised the disappropriation of great unproductive estates or latifundios and the creation of incentives to small producers to settle in the frontier regions. However, as became evident in the years that followed, in practice the Statute had very little effect. Although it protected private land-ownership, the Land Statute met strong opposition from the most conservative sectors of society which supported the military government. As a result, the Act was only partially applied and only in those areas where social tension was most
stressed that a more effective application of this Statute was restrained by the military government itself through a firm and systematic repression of any movement towards a more radical transformation of the country's agrarian structure. The truth is that the military coup of 1964 gave more, not less, power to those social groups which were opposed to agrarian reform. The result, as shown in Table 3 above and Table 4 below, was an accelerated concentration of landownership.

Table 4
Size of Establishments and Total Area Occupied by Them in 1970 and 1975 - Brazil

<table>
<thead>
<tr>
<th>Size of Establishment</th>
<th>Total Area 1970 (1000 Ha)</th>
<th>Total Area 1975 (1000 Ha)</th>
<th>Difference (1000 Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 10</td>
<td>9,083</td>
<td>9,001</td>
<td>- 83</td>
</tr>
<tr>
<td>10 - 99</td>
<td>690,070</td>
<td>60,106</td>
<td>36</td>
</tr>
<tr>
<td>100 - 999</td>
<td>108,743</td>
<td>115,907</td>
<td>7,146</td>
</tr>
<tr>
<td>1,000 - 9,999</td>
<td>80,059</td>
<td>91,261</td>
<td>11,202</td>
</tr>
<tr>
<td>10,000 and over</td>
<td>36,190</td>
<td>46,346</td>
<td>10,156</td>
</tr>
</tbody>
</table>

Source: IBGE-1975.

A more detailed analysis of the 1975 Agricultural Census shows that approximately 52% of the rural properties had areas of less than 10 hectares and accounted for only 2.8% of the total occupied area in the country. At the same time 0.8% of these properties had areas of more than 1,000 hectares and comprised 43% of the total land area (Martins-1981:142).

In addition it is interesting to note that this tendency towards the concentration of landownership has also intensified in the frontier or most recently occupied regions. Of the new lands occupied during the 1950's, 84.6% were taken by establishments of less than 100 hectares and only 15.4% by those of more than 100 hectares. In the 1960's, 35.3% were occupied by establishments of less than 100 hectares.
for the 1970-75 period, only 0.2% of the properties were under 100 hectares while the other 99.8% were equal to, or bigger than, 100 hectares (Martins-1982:81).

As a result of the concentration of landownership, a large part of the rural population had to migrate to urban centers or, as a large number of people did, move to those frontier areas where it was still possible to obtain free or cheap land.

The seventh factor relates to the chaotic socio-political situation in which the nation found itself in 1970. The military government in power since 1964 had been unable to make any improvement in living conditions for the majority of the population. On the contrary, because of promises made to the dominant classes which had supported it, the government had pursued social and economic policies which favoured these classes alone, reducing a large part of the population to extreme poverty, especially in the rural areas.

By 1970, discontent had reached a point where not even the travesty of the "economic miracle" (in the rhetoric of the government) or police repression could stifle rebellion. Thus, the Government's sudden and surprising change of policy in spearheading the occupation of the Amazon, as I shall argue shortly, was above all based on motives of security and served as a safety valve for social problems throughout the nation (Ianni-1979; Schmink-1981).

Finally, and in addition to the above factors the Amazonian expansion front was also stimulated by the large amount of free or unclaimed land available in the area. As was described in Chapter III, the natural cycle of the extractive economy, which had characterized the region until 1970, had not produced an effective occupation of the area; thus, even by 1970, the Amazon contained various stretches of land which had not been exploited economically. According to Graziano da Silva, all of the states in the region showed occupation rates of less than 25% in 1970. (Graziano da Silva-1981:121). From this it must be concluded that, discounting the urban
2 - The Process of Amazonian Occupation

The occupation of the Amazonian Region since 1970 has basically happened by means of three social agents: 1) the State, whose participation will from now on be referred to as being "government policy", "official intervention" and/or "State participation"; 2) capitalist enterprises and large landowners; 3) a mass of migrants or landless rural workers who came and settled in the Region on their own and whose participation I will henceforward refer to as "spontaneous colonization".

In the following sections I provide an account of what has been the role of these three agents in the process of land occupation and colonization of the Amazonian Region.

A - The State and "Official" Participation

The participation of the Federal Government in the occupation of the Amazon after 1970 took two routes: a) The ratification and reinforcement of a policy, already operating through SUDAM, of fiscal incentives for private enterprises to invest in the area. b) The launching of PIN (Program of National Integration). PIN had two basic priorities: 1) the construction of a vast network of new roads through remote areas of the Amazon; 2) distribution of land to the landless (particularly those from the Northeast region) through a special program of directed colonization to be carried out by the government itself.

According to the rhetoric of the Government, the primary motive for State intervention in the Amazonian occupation process was "social". In the words of President Medici, the colonization program was intended "to give men without land a land without men" (Moran-1981:75). Actually, the scheme proposed by the Government was hailed by many sectors of
"a solution to the underemployment and overpopulation of northeast Brazil, as a solution to the inequities in access to land elsewhere in Brazil, and as a reasonable way to use the legendary wealth of the Amazon" (Moran-1985:92).

This shift of State frontier policy from *laissez-faire* to an agressive posture - manifested concretely in PIN - soon came under criticism, especially from the political left and from social scientists. For many scholars, the motive behind this new government policy for the Amazon was a concern for relieving social and economic tensions in the overcrowded Northeast by transferring the excess population to the relatively empty Amazon (Schmink-1977:4). This argument makes sense, since the government was really very concerned with the level that social and political tension had reached in the Northeast as a result of organized peasant activities prior to the 1964 military takeover (Forman-1971; Moraes-1970; Schmink-1977). In this sense, the colonization plan for the Amazon was perceived by these scholars as a "counter-land-reform" which avoided radical reforms in the agrarian structure while giving the impression that the government was responding to the needs of the poor peasants (Schmink-1981:7; Ianni-1979).

The Government plan was also criticized for having mainly geopolitical goals. This criticism actually was largely accepted by some sectors of the Government, especially within the military, where it was admitted that the occupation of the Amazon was necessary in order to safeguard it from international interests. Actually, for a long time, some "nationalist" sectors of the Brazilian society were concerned with rumours, mainly from the USA about the "internationalization of the Amazonian Region" (Reis-1950). This concern increased, stimulated in 1968 by a plan drawn up by the American Hudson Institute, headed by Herman Kahn. This plan called for the formation of an immense lake in the Amazon, through the damming of the Amazon River. This would cause an enormous area of the region to disappear (precisely
...potential for electric power, plus easier communication with mineral-rich areas (Velho-1973:235). All this would be developed using modern technology and international cooperation. (Cardoso and Muller-1977:192; Sanders-1973). So, for the most nationalistic sectors of the Government, a rapid occupation of the Amazonian Region was needed to safeguard it from becoming an "international area".

Whether it was for political, demographic or national security motives, the fact is that in 1970 the Government initiated its programme for the Amazonian Region.

Policies of fiscal incentives began to attract large private corporate enterprises to the region and encourage them to invest heavily in the area. Large land concessions were granted to both Brazilian and foreign business groups. The interests of these private groups were principally focused on timber extraction and cattle ranching (Moran-1981:76; Cardoso and Muller-1977:155).

Road-building plans were immediately put into action with the construction of the Transamazon Highway, whose 5,000 km would cross the continent from Paraiba, in the Northeast of Brazil, to Peru, traversing the centre of the Amazonian Region. Simultaneously, several other road projects were announced: the paving of the Belem-Brasilia highway, support for the 866 km state highway, already begun, connecting Manaus to the Brasilia-Acre highway, and the building of a road almost perpendicular to the Transamazon from Cuiaba to Santarem on the Amazon river. At the same time the Federal Government announced what became the most controversial and criticized intervention of the State in the process of expansion and occupation of the Amazonian Region: the Directed Colonization Program. In the following section a detailed description of this program is given as well as its impact on the process of frontier expansion in Amazonia.
As a first step in carrying out the colonisation program, in July 1970, the Government decided that a 100 km strip of land on each side of the Transamazon and Cuiaba-Santarem highways would pass over into public domain, and be distributed for settlement in two forms. Directed Colonization was reserved for the first 10 km, which were set aside for small farmers, who would receive 100 hectare plots (about 250 acres) for agricultural purposes. The remaining 90 kilometers would be sold in national auctions to investors interested in livestock production. Sections of extremely poor soil would be set aside as forest reserves, and other large areas away from the roads were reserved for Indians (Wood and Schmink-1976:6). Shortly after this announcement, however, the Decree of April 1st, 1971 (no. 1164), declared that all public or State lands (terras devolutas) in Amazonia Legal situated a distance of up to 100 km along both sides of all existing or proposed roads would be considered as indispensible for national security and national development, that is, they were now to come under direct government control (Kleinpenning-1975:91).

The National Institute for Colonization and Agrarian Reform (INCRA), an agency linked to the Ministry of Agriculture, was created as a result of administrative reorganisation in this Ministry. To INCRA was given control over these newly acquired federal lands with the responsibility of classifying tenure, surveying, selling or colonising, and issuing title to them. Another of INCRA's tasks was to legalise the spontaneous occupation which had occurred in various parts of the country. The bulk of INCRA's activities and budget from 1970 to 1974, however, were mainly concerned with the colonisation plans for small-hold peasants along the Transamazon and Cuiaba-Santarem highways.

It was claimed by the Federal Government that PIN would settle some 100,000 low-income families in the Amazonian Region during the period of the Medici administration (1970-1974), and 1,000,000 families by 1980. Although these
resettlement of such a large number of colonists would clearly have a major impact on the total landless rural population in the country, estimated at over 2.7 million people in 1980 (Martins-1980:84).

Promoting the Settlement

The scheme for the settlement of small farmers along the Transamazon and Cuiaba-Santarem highways was developed by government planners in Brasilia and had an impressive modular approach and design. A network of geometrically-disposed planned communities, located at fixed intervals along the highways and differentially equipped with basic services according to their size, was projected. (Camargo-1973). Three types of communities were envisaged. The agrovila was to be the basic unit of the modular rural-urban scheme and was to be a residential area occupied by 50 to 60 families. It would be provided with a primary school, a shop for daily needs and a small building where a doctor could occasionally hold consultations. Each colonist would receive, in addition to a rural lot of 100 hectares, a residential plot or lote urbano in the agrovila of between 1,500 and 3,000 square metres. The area around the dwelling could be regarded as an allotment offering scope for the raising of small-sized livestock and small-scale gardening (Kleinpenning-1975:102). This system presupposed the following division of labour: the wife and younger children would care for the residential or urban lot while the husband and older sons would go to work daily on the rural lot (Turchi-1979:82).

Next came the agropolis, which would have an initial population of 1,500 to 3,000 and which would perform a service function for some 10 to 20 agrovilas. Apart from a number of government offices, it would include a small hospital, other permanent medical facilities, co-operative buildings, bank and post office (Kleinpenning-1975:104). The maximum distance between the agropolis would be 40 to 50 km.

Finally, there would be the ruropolis, the largest unit,
population of about 20,000 and would serve as a major service center, would be the site of an airport, hospital, and technical center, as well as contain supportive industries such as plants to process cotton, rice and sugar (Wood and Schmink-1978:7).

According to the original plans, incoming colonists would be provided with 100 hectare lots. Of the 100 hectares, only half could be reclaimed; the other half was to remain as "forest reserve". It was also laid down that the reclamation of land had to take place in such a way that the remaining forest would form a continuous area. Map 3 shows the way in which this was attempted.

The Brazilian government originally took the view that the colonists should not receive land free, but should pay for it. As Kleinpenning says

"this seemed better from the educational point of view, while the obligation to repay a portion of the costs might lead to a stronger tie with the holding, thereby reducing the tendency to move away as soon as there is any set-back... a further important advantage of the requirement to repay is that the government receives money from which further colonisation can be financed" (Kleinpenning-1975:116).

The colonists had to pay approximately 4 to 7 cruzeiros (around US 1) per month for the land they received from INCRA over a maximum period of 20 years, beginning after the third year. At the time of his settlement, the colonist would receive a document called "declaration of authorisation", which would give him the status of legal occupier. After two years he would sign a deed of conveyance for the house and land. (Contini-1976).

An attractive package of benefits would also be offered the farmers. All colonists would be guaranteed financing by the Bank of Brazil, according to the size of the area cleared and
In addition, the colonists would receive a set of implements from the INCRA including hoes, axes, machetes, a scythe and a dibber, the equivalent in value of 153 cruzeiros (around US 30) (Moran-1981:79; Kleinpenning-1975:117). Household subsidies, in the form of a six-month minimum salary would be paid by the Colonisation Agency to each family head to help tide the family over until the first crops were harvested. This payment was unlike welfare, in that each colonist was expected to pay back these initial salaries and food subsidies within three years beginning after 12 months. In 1971, the colonists received 204 cruzeiros per month (US 35) plus food subsidies, but these food subsidies were eliminated after the first six months, the salary was then increased to 308 cruzeiros (US 50), and covered a period of eight months.6 Regarding the selection of the colonists the colonisation effort was to place emphasis on the settlement of landless farmers from the Northeast Region (75 per cent) (Ministerio da Agricultura-1972a, 1972b). The other 25 percent were programmed to come from the South, whose farmers were to serve as a "demonstration effect" for the "technologically backward" Northeasterners (Ministerio da Agricultura-1972a:23). In addition, a number of other variables were worked into a candidate's application. The colonists had to satisfy, among others, the following conditions:
- they must be at least 18 years old, but no older than 60;
- they must have done their military service;
- they must not have any serious physical disabilities or illnesses;
- they must be of good character;
- they must have farming experience;
- they must not enjoy considerable sources of private income;

Preference would be given to applicants between twenty-five and forty-five, who were married, and had large families and with wide agricultural experience. Illiterates would not be excluded, although the ability to read and write would
initial capital would not be a prerequisite (Ministerio da Agricultura-1972b).

A battery of government agencies was charged with carrying out the colonisation program scheme:

A) The INCRA was charged with choosing the colonists, bringing them to the Amazon, processing them on arrival, assigning them lots and house sites, surveying the agricultural areas and guaranteeing that their land rights would be protected, and furnishing education and health care until the appropriate ministries would be able to take over these tasks.

B) Technical assistance in agricultural matters was the function of ACAR (Associacao de Credito e Assistencia Rural). It was charged with supervising the labour of the farmers, facilitating the colonists' bank loans, giving technical aid for the modernization of farm practices. A contingent of female social workers from ACAR were expected to give classes in hygiene, cooking, and vegetable gardening to the women in the farm communities.

C) The Bank of Brazil was to provide credit at low interest rates, that is, 7% p/a while the rate of inflation was about 15% p/a (Moran-1985:92).

D) CIBRAZEM (Companhia Brasileira de Armazenamento) would buy rice at the established price and store it. CIBRAZEM would operate in consortium with COBAL (Companhia Brasileira de Alimentos) a food distribution agency, designed to provide food to the colonists at low prices.

E) SESP (Servico Especial de Saude Publica) and SUCAM (Superintendencia do Controle da Malaria) would be responsible for operating mobile medical care units and for controlling malaria, respectively.

F) In education, the Ministry of Education (MEC) and the State Department of Education (SEDUC) would give a salary bonus to encourage teachers to accept "hardship" posts in
G) To finance these activities, 30% of all fiscal incentives to be granted to the Amazonian Region would be transferred to the National Integration Program for the period 1971-1974 (Katzman-1976:456; Wood and Schmink-1978:8).

Even though emphasis was given to the social goals in the settlement scheme, there were underlying agricultural and economic assumptions. It was projected that the colonists would grow mainly rice, beans, manioc and maize during the first two years as these crops are able to provide the colonists' primary subsistence requirements and would provide them with some income quickly. After this initial period, each year the colonists would plant more of their land in permanent or more commercial crops, such as sugar cane, pepper, soya, cocoa, tobacco, etc. (Ministerio da Agricultura-1972a). The Government also claimed that the colonist could expect to enjoy an income of 12 - 15,000 cruzeiros within a year, considerably more than the official minimum wage (Kleinpenning-1975:129).

By mid-1972, the three planned projects (Maraba, Altamira and Itaituba) had already been established along the Transamazon and Cuiaba-Santarem highways.

In view of the great speed with which roads began to be built, villages constructed, and farmers and civil servants mobilized, it seemed that the colonization program would be a success. This promise, however, was not fulfilled as will be shown in the next section.

The "failure" of the Directed Colonization Program

Despite its appearing reasonable in its objectives, coherent in its form and having the presence of more than 51 government agencies, the actual implementation of the colonization program, as conceived, was not very successful.

By the end of 1972, the colonization scheme was already having trouble coping with the settlement of less than ten per cent of the number of colonists projected. Besides, as
trouble coping, but so were the colonists themselves (Moran-1981). By mid-1973, just three years after the announcement of PIN, official statements began to announce the "failure" of the directed colonization effort (Wood and Schmink-1978).

A number of reasons have been listed by many scholars as being responsible for the failure of the colonization program. These reasons, as I will show, are related basically to problems of planning, technical assistance, marketing, bureaucratic constraints and lack of an adequate social infra-structure.

Regarding planning, the impressive appearance of the programme at the outset, was soon overcome by a series of mistakes that appeared during the execution phase. One of these mistakes was very well considered by Martine. According to him:

"no attempt was made to systematize existing information, or to generate additional data, in order to form a comprehensive overview of the regions' potentialities, to identify those areas most apt for colonisation and to orient the tracing of the highways in accordance with such information". As a result, concludes Martine,

"construction of the roads was initiated at top speed without the realization of prior economic feasibility studies or cost-benefit analyses and, hence, the road did not even go through the most fertile or accessible terrains" (Martine-1980:85).

The problems related to the building of roads went much further than that. According to Moran, the cost of building the Transamazon Highway proved to be at least three times the amount budgeted and led to the decision to reduce the construction of the all-important feeder and all-weather roads connecting farms to the main trunk. As a result, there was isolation and even more significant loss of production.
production rotted on the farms due to lack of facilities for transporting it to market (Moran-1985:94).

From the beginning technical assistance given to the settlers was insufficient and far from efficient. According to the technical orientation of the projects, the colonists were to give first priority to the so-called "temporary" or subsistence crops. This, somehow, coincided with the colonists' own objectives of guaranteeing their survival during the first period in the Region. However, these crops require suitable soils, and tests for soil compatibility were not forthcoming, owing to the scant technical assistance available to the colonists.

In addition, access to agricultural inputs was not easily accessible to most farmers. By and large, only limited amounts of fertilisers and insecticides were available, and colonists faced the many pests and diseases of crops with little expertise. This, allied to the colonists unfamilarity with the climate and physical environment of the Region, led to the low agricultural yields obtained by the colonists. Thus, the idea that the migrants with the most modern techniques (as those from the southern regions of the country were supposed to be) would serve as "models" for the others was not fulfilled. The process of modernisation of the agricultural sector did not proceed as scheduled by the INCRA (Dias-n/d). The original plan indicated that by the second year the farmers should be starting on "industrial" and/or permanent crops, such as rubber, cocoa and pepper. However, those farmers who sought to transform their operation generally could not obtain the seeds for these perennial crops and continued planting manioc, rice, beans and corn instead. Not surprisingly, these agricultural failures were attributed by the Government to the "lack of experience, inefficiency and 'traditionalism of the colonists'" and not to the technical guidance (where it existed) of the project management and to the failure of the agencies to deliver promised seeds and other inputs (Moran-1985:96).
colonists had to face. Besides the lack of transportation facilities, as mentioned above, storage capacity was limited and the infra-structure of commercialization served by COBAL-CIBRAZEM was extremely deficient. As a result, the farmers had to sell their crops to middlemen at lower prices. The sluggishness of the INCRA's bureaucracy in dealing with the promised land titles caused great constraint on the colonists' performance (Bunker-1980:582). The delay in receiving registered title or other similar documents produced a sense of insecurity among the colonists regarding their effective appropriation of the lot where they had settled. This insecurity further increased when large-scale agro-pastoral enterprises - attracted by fiscal incentives and credit facilities offered by the government - began to establish themselves in areas close to the projects. These enterprises, situated beyond the limits of the colonisation project, began to pressure the colonists in order to buy their lots and gain direct and easier access to the highways. Without documents that could assure the colonists of their rights within the project, many plots were actually sold, despite the illegality of the transactions, to these enterprises. The bureaucracy also made access to credit by the colonists very difficult (Bunker-1980:583). Besides the restrictions faced by many colonists due to the lack of land title, the bureaucratic costs of obtaining credit was a separate problem. In a study carried out in the area, Wood and Schmink present the following report:

"a colonist can spend anywhere from 17 to 30 man-days in formulating a credit plan, having it approved, and in travelling back and forth to collect the six payments and to repay the loan, a process which in the end, may cost about half of the amount borrowed in the first place. This is equivalent to paying 33 to 55 percent interest on a bank loan, with only half of it left for farm purposes" (Wood-Schmink-1978:15).

Besides this, if the colonists were not able to repay the
problems with commercialization, which very often, happened, they were charged additional interest and were refused further credit until their debts were repaid.

The social infrastructure support fell far short of original goals. The projected agrovila/agropolis/ruropolis structure failed to emerge as planned and even the more localized agrovila proved inappropriate for farmers' dwellings where lots were often distant from these residential centres. By 1973, a large number of the houses in the agrovilas had been abandoned as colonists moved their residence to their agricultural sites in order to avoid long separations from their families or prolonged travel time back and forth (Wood and Schmink-1978).

Most houses, contrary to what was promised by INCRA, were not yet built when the farmers arrived, and it meant that they had to go and live in "tapiris". In a study made in mid-1973, Kleinpeinning reported that a number of colonist families were living in primitive accommodation, some of them along small jungle tracks (Kleinpeinning-1975:124).

The promised six-month wages were given only to colonists who arrived in the first year and there was no extra subsidy allowance made for the number of large families which had been enlisted.

Medical and educational services were pitifully inadequate and limited mostly to the inhabitants near the main trunk of the Transamazon Highway. (Carvalho et al.-n/d)

Despite the hardships faced in the projects, the number of colonists who left their plots was relatively low (see Table 5 below) which proves that the colonists tried to hold tenaciously to their desire to establish themselves in the projects. Although low, the number of drop-outs was later used by the Government in its attempt to blame the colonists for the failure of the Directed Colonization Program.

As a result of the obstacles described above and of others not considered in this study, it is clear that the
the colonists nor did it fulfill the explicit official objectives of the Government.

Table 5

No. of Colonists Settled and no. of Drop-outs of Lots in the Transamazon and Cuiaba-Santarem Projects—1974

<table>
<thead>
<tr>
<th>Projects</th>
<th>Colonists Settled</th>
<th>Drop outs</th>
<th>Remaining Colonists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maraba</td>
<td>1,612</td>
<td>192</td>
<td>1,422</td>
</tr>
<tr>
<td>Altamira</td>
<td>3,760</td>
<td>665</td>
<td>3,095</td>
</tr>
<tr>
<td>Itaituba</td>
<td>1,267</td>
<td>65</td>
<td>1,200</td>
</tr>
<tr>
<td>Total</td>
<td>6,639</td>
<td>922</td>
<td>5,717</td>
</tr>
</tbody>
</table>

Source: Contini-1976.

By 1974, the three projects of the Transamazon and Cuiaba-Santarem Highways had settled only 5,717 families out of the 10,000 first projected by the Government. Besides this, the Northeasterners (nordestinos) who, according to the Government, should have priority in the process of settlement, had in 1974, accounted for only 40% of the effectively settled colonists, that is, little more than half of what had originally been planned by the Government.

The patent lack of interest, in practice, in absorbing Northeastern colonists (seen by the INCRA’s officials as having poor management skills) is a visible refutation of the government rhetoric of the social goals of the colonization program and its role as a means of integrating the landless from the Northeast into the Amazonian Region.

Actually, this contradiction was engendered in the concept of what colonisation should have been, within Incra’s techno-bureaucracy. For some officials of the agency, colonisation was to take the form of an enterprise. Implicit in this stance was the idea that the colonization program should generate economic returns, and not be defined by social goals. Actually, it was this capitalist approach that prevailed during the operational phase of the projects.
policies at the national level. As Martine says: "the launching of a major government programme centred on small farmers and geared primarily to the needs of the poorer segments of the rural population was certainly not a characteristic move in Brazil's concentrative model of growth which, in 1970, was reaching the height of its 'economic miracle'; indeed, it can convincingly be argued that PIN constitutes a historical anomaly within the context of the predominant Brazilian model" (Martine-1980:86).

The anomaly or incongruousness that PIN, including the colonization programmes, represented at that moment, did not endure for long. Indeed, in 1974, far too soon for a realistic evaluation of the colonisation program's long-term viability, the government, blaming the colonists for the failure of the colonisation programme, decided to change its policy regarding the occupation of the Amazonian Region.


Even though there was general support for the Government-sponsored initiatives in the Amazon Region through PIN, from different sectors of society, this stand was far from unanimous. Apart from the intellectuals, as mentioned before, there was also strong, though discrete, opposition to the Government programmes from some of its own officials and businessmen, especially those linked to the Amazonian Association of Agriculture and Ranching Entrepreneurs, who had direct access to various ministries and the direct support of the powerful Minister of Planning (Pompermayer-1979). These last two opposition groups argued that the most rational way to occupy the Amazon was to stimulate and encourage private enterprises to invest in the area. This argument took the form of strong criticism and pressure as the road-building programmes began to open up
migrants began to constitute a potential labor force, land values soared and private industrialists began to show increasing interest in investing in the Region.

The resulting pressure on government authorities, together with the apparent failure of ongoing attempts at small-farm settlements, in 1973 led the Minister of Planning to affirm that:

"Until now, the Transamazon (project) has emphasized colonization by small farmers, but the need to prevent a predatory occupation and its consequent process of deforestation and the need to promote the maintenance of the ecological balance has led us to invite large companies to assume the task of developing the area" (Quoted in Cardoso and Muller-1977:158).

This new approach by the Government, however, came under attack from some groups within the government itself which always favoured colonization of the Amazonian Region based on the small farmers. One example of these criticisms was the one made by the former president of INCRA, Moura Cavalcanti, who warned that with the new policy "the government runs the risk of transplanting to the Amazon the agrarian structure of the Northeast by encouraging large enterprises" (Cavalcanti-1974).

Despite this warning, the changing views of senior Government officials were soon put into effect in a concrete form.

The new priorities with respect to the occupation of the Amazon were embodied in the Amazonian Agricultural and Mineral Poles (POLAMAZONIA) - a more selective regional strategy for growth. These, in connection with a programme of fiscal incentives, served the purpose of concentrating public and private investment in ranching, agricultural and mineral concerns (Mahar-1978). Fifteen growth poles were selected based on the comparative advantages of different parts of the region, and emphasis was turned away from colonization to overall agricultural development (Bourne-1978).
small farmers was formalized in the II Plan for the Development of the Amazon which states that:

"The object of occupying the Amazon region through the absorption of relative surpluses of Northeastern population, in spite of the efforts which were made, is in conflict with the purpose of accelerating regional growth and does not link, as it should, the elevation of living standards to the expansion of productive employment... On the other hand, the areas cannot offer settlers the fertile soils which they dreamt of possessing, in necessary quantities. Thus, the mass of spontaneous settlers to the region undertakes the only and dangerous activity which it knows: the destruction of the forest and the depletion of the soil through the practice of planting extremely poor subsistence crops, using unsuitable methods of itinerant agriculture" (SUDAM, II Plano de Desenvolvimento da Amazonia: Detalhamento do II Plano Nacional de Desenvolvimento (1975-79). MINTER/SUDAM, April, 1975, pp. 19-20).

This official statement made clear that the socially-motivated goals of the colonisation programmes were replaced by one in which economic concerns prevailed (Martine-1980:87). With the renewed emphasis on the role of private enterprises in Amazonian development the second PDA established a series of concessions to large-scale capitalist enterprises, primarily by restoring and extending fiscal subsidies and relaxing land-tenure size restrictions to favour large-scale ranching, lumbering and mining operations oriented toward the export market (Santos-1979). In addition the second PDA decreased the colonisation budget from 17.5% to 1.8% of SUDAM’s investment expenditures and allocated 15.4% to mining, which had received nothing in the first PDA (Mahar-1979:15). Public expenditure in the form of road-building and other infrastructure guaranteed considerable increase in the value of land granted to private
modern technology and with the help of capital provided by fiscal incentives.

Even though the official colonisation projects were not totally abandoned, the INCRA’s activities in these projects was practically limited to the function of demarcating and distributing the remaining agricultural lots. From this moment, the INCRA’s main aim was to "emancipate" these projects, that is, to remove them from the INCRA tutalege, as early as possible (Bunker-1984).

However, the large-scale land sale and land registration activities of the INCRA increased rapidly. These forms of institutional modernization in the Amazon, moreover, as I show later, have been directly associated with the expulsion of migrants or posseiros (squatters) from the land.

A more detailed evaluation of the role of these enterprises as "spear-heads" for the occupation, colonisation and exploitation of the Amazonian Region will be given later in this chapter. At the moment, however, I wish to point out that since the very beginning, this new government policy of support for private initiative did not fulfill the government's plans for rapid development of the Region. Many of the companies which had received fiscal incentives never seriously undertook any form of productive activity, thereby revealing that their latent interests had been in land speculation all long. The few productive activities undertaken by big business were capital-intensive and the number of jobs created per hectare of land area were insignificant (Martins-1982:55)\(^{10}\). Besides this, due to the huge tracts of land granted the companies, the spontaneous migrants started to be brutally pushed off the land, giving rise to violent conflicts. (Martine-1980:87).

In accordance with the new government policy, private colonisation was given a more clearly delineated role in the Amazonian occupation. In 1976 INCRA was authorized to approve sales to private investors of up to 500,000 hectares in certain priority areas, to be subdivided and sold to small
of the 1970's, 25 projects had been authorized in northern Mato Grosso and southern Para (Schmink-1981:10). However, endorsement of the objective of profit maximization and a selective control of colonists, access to private colonization has been restricted to a few small farm migrants; that is, only those migrants who arrive in the Region with a considerable amount of money, are able to buy a lot in these private projects (Ianni-1979).

It is clear that the new government policy of 1974 towards the Amazonian occupation tried to eliminate the small farmer from any role in the future occupation or development plans for the Amazon. Nevertheless, the flow of migrants from all over the country to the Amazonian region did not stop. Indifferent to the change of government policy thousands and thousands of landless migrants continued to arrive in the region trying to settle the land by themselves in a process called "spontaneous colonization". The role of the spontaneous colonization in the Amazonian frontier will be analysed after the next section, which focuses on the presence of capitalist enterprise in the Amazonian occupation process.

B - Capitalist Enterprise in the Amazonian Frontier

Despite all the government incentives, the great economic cartels and private enterprises had done very little in the way of establishing what might be termed "capitalist development" in the region.

Even those enterprises which had initially intended to set up some form of production in the region had consistantly admitted that their projects had failed. The projects for perishable food products and tropical crops collapsed, as did the reforestation projects, of which the Jari Project is the best example of a fiasco; and, contrary to all initial expectations, the cattle-ranching projects are failing, too. Many technical and economic reasons have been offered as
...the main problem in this kind of activity is loss of soil fertility after an initial increase caused by burning forest cover. After a few years, pasture does not have the nutritive value needed to fatten large herds, and the costs of fertilization and correcting pH are prohibitive. Invasion of the pasture by weeds and toxic plants as well as insects constitutes another basic problem. The high cost of clearing the land makes it economically imperative to overgraze, which exacerbates degradation of the pasture" (Sawyer-1982:8).

Clear evidence of the problems of cattle ranching can be seen in the area surrounding the town of Paragominas where there is a high concentration of ranching projects. According to Sawyer's report, this area turned into an ecological wasteland and a financial disaster (...) and the ranchers are mostly biding their time, hoping that the government will provide new incentives and that technological breakthroughs such as new grasses and legumes will make their projects viable" (Sawyer-1982:8). New incentives seem to be difficult, since, as a result of poor performance by ranching projects, SUDAM has been cutting back on incentives and restricting new projects related to this activity.

Although each activity has specific problems in its productive process, one general reason can be found for the failure of all these activities; that is: following a developmental model drawn up by the government, the productive activities established by the enterprises in the Amazonian Region are generally based on modern and sophisticated technology with massive use of machinery, energy and inputs. However, this technology has not worked due mainly to the following reasons:

- lack of infra-structure in transportation and communication. The thousands of kilometers of roads built
impassable during much of the rainy season and dangerous to drive on during the dry season. As a result, the projects suffer constraints in terms of supplies of equipment, inputs, etc.

- lack of electrification, so that the enterprises have to operate using petroleum products. Since points of sale for petroleum products are few and far between, large quantities must be purchased, transported and stored, making the cost of this extremely high.

- lack of a distribution network or adequate infra-structure for modern equipment and inputs. Thus, the heavy equipment and inputs of agricultural origin - seeds, cuttings, breeding, feed, etc. - and chemical inputs, such as fertilizers, lime, pesticides, etc. have to be bought in the south and transported to the region.

- lack of financial and technical services. There is no means of repairing or replacing equipment in time to avoid interruption of the production process; technical agricultural assistance provided for by the government agency (Emater) suffers from lack of staff and materials; the banking service network is too small, so that the majority of the enterprises are hundreds of kilometers away from the nearest bank.

- deficient social infra-structure. Lack of health assistance, schools, supermarkets, etc. constitutes a constant strain for administrators and trained personnel, bookkeepers, operators of sophisticated equipment, etc. accustomed to middle-class living conditions in their places of origin.

- For those enterprises that opt for the use of wage labour instead of advanced technology, problems are still great. Most labour has to be recruited from other regions, incurring high cost of transportation, housing, food, etc. Furthermore because of poor living conditions in the area, enterprises frequently have problems with workers who de-camp in debt or simply leave work without any advance warning.
By virtue of all these reasons the profitability of investment in production appears very low even for those whose capital came mainly from government incentives. Therefore, entrepreneurs rapidly perceive that the most important area for the valorization of capital in the Amazon lies not in the productive sphere, but in the ambit of land speculation, and it is in this activity that the entrepreneurs have been concentrating their businesses. As a result, capitalist enterprises in the Amazon actually function as a "speculative front" rather than a "capitalist front" (Sawyer-1982).

B - Spontaneous Colonization

I consider spontaneous colonisation to be the settlement and occupation of land without any direct intervention on the part of the State. In the Amazon, in recent times, this process has been carried out by migrants from other parts of the country and the lands which are being occupied are, in the great majority, unclaimed or public lands (terras devolutas) or in the migrants' terminology, "free lands".

Even though an ample definition of spontaneous colonization should include a diversity of agents such as medium and large-scale farmers, businessmen, land speculators, etc. in the Amazon, the great majority of agents involved in this process is comprised by ex-small landowners evicted in their regions of origin and landless rural workers who have come to the region in search of land to work. It is this majority, from now on referred to as posseiros, peasants or simply migrants who constitute the focus of my subsequent analysis.

This recent and systematic influx of migrants in the direction of the Amazonian Region had its origins in the 1950's. At that time there was a steady migration of Northeasterners, mainly from the States of Piaui and Ceara, towards the border area between the States of Maranhao and Para (Velho-1972). With the opening of the Belem-Brasilia highway in 1960, the influx of migrants increased
It was after 1970, however, that the migration to the Amazonian region reached an unprecedented level.

As was pointed out at the beginning of this Chapter, there are several reasons which determined the recent migration to the Amazonian Region. Undoubtedly, however, the intervention of the Government in the occupation process - through the opening of new roads and propaganda supporting the official colonization projects - greatly contributed to the increase in the migratory flow to the Amazon during the last 15 years.

The migration process towards the Amazonian Region is actually composed of several streams, following different routes and settling in different parts of the Region. The magnitude of some of these streams, allows them to be easily identified. First, there is the influx from the Northeast Region. The migrants coming from this Region make their way through the state of Maranhao, principally towards the west and southeast of Para (Becker-1982). A second influx, composed of migrants from the states of Minas, Bahia, Espirito Santo and the mid-south of Goias make their way, principally along the Belem-Brasilia highway, to the north of Goias and the south of Para (Hebette and Acevedo-1979). A third influx consists of migrants from the south of the country travelling through the state of Mato Grosso do Sul to the southwest of Para, the north of Mato Grosso, and the states of Rondonia and Acre (Martins-1982:84). Finally, there is a considerable influx of migrants from different parts of the country towards the areas around the Directed Colonization Projects located along the Transamazon highway.

In general, the migrants come to this area in the hope of being selected and settled in one of these official colonisation projects. According to Martine, by 1974, there were some 25,000 families precariously installed near the official projects of Maraba and Itaituba, waiting to be
Official information or detailed and reliable data on the number of migrants involved in these movements into the Amazonian Region are scarce or not available at all. Some demographic data contained in the 1980 census, however, reveals that the population growth of the region, in particular in the states of Rondonia and Para during the 1970's, was far greater than the median for Brazil or the predicted population based on natural growth. A more specific study made by Becker, reveals that those areas where the greatest influx of migrants has occurred, had an increase in population of 43.38% during the 1960-1970 period and 116% from 1970 to 1980 (Becker-1982:185). According to Kleinpenning and Volbeda (1982), about half of this population growth can be attributed to migration.

The Land Occupation Process within the Spontaneous Colonization

The main attraction of the Amazon for the migrants or the landless is the myth or promise of abundant free land (*terras devolutas*). According to the law, *"terras devolutas"* means unclaimed or waste land that is not the property of private persons; it belongs to one of the federative states or, in certain cases, to the Federal Government. Large parts of the Amazon's primeval forest belong to this category (Poelhekke-1982; Arruda-1978). For the migrants, *terras devolutas* means "unused lands" and therefore, "free lands"; free to be occupied by anybody. It follows that the most common mode of appropriation of land by the migrants is via the simple occupation of land which is not under production and which supposedly has no private owner. Those who use this process of appropriation of land, that is, without any title, deed or legally recognized and registered document which defines them as the owners of the land, are classified as occupiers or squatters, or in every day language, as "posseiros"; and, the piece of land that they occupy is called "posse".
Brazilian Law, that is, the *posseiro* can gain ownership of his "posse" after a certain period of time of occupancy. In order for this, however, various conditions must be fulfilled. In the case of public lands, the *posseiro* has the right of ownership to a plot of land of up to a maximum of a "module", the standard area for a family farm, which in most parts of the Amazonia area amounts to 100 hectares, after one year. In cases of privately owned, but unclaimed lands, the *posseiro* has the right to possession if the actual occupation and working of the land has existed for ten years uninterruptedly and there being no other claims to the ownership of the land (Inda-1965). In both cases, it must be shown that the "posseiro" and his family is indeed capable of bringing the land under cultivation.

In general, few posseiros in the Amazonian Region attempt to regularize their posses, offering various reasons in justification. The first is, that having fulfilled the conditions established by the Law, the *posseiros*, actually, obtain just a provisional document called Occupation License (*Licenca de Ocupacao*) which rectifies the legality of the "occupation". To obtain definite title of ownership is another matter; not only does it take a long time, but the complicated government bureaucracy makes it difficult, if not impossible, for the *posseiros*.

In practice, however, the only advantage that the *Licenca de Ocupacao* brings, is the possibility for the *posseiro* to receive limited bank credit. In most cases, however, the "posseiros" lack the material conditions to afford bank credit.

Besides this, to obtain the *Licenca de Ocupacao* the *posseiros* have to pay for the costs of land demarcation and the use of bureaucratic services. Due to their precarious economic circumstances, the *posseiros* are generally unable to afford such expenditures. Furthermore, the "regularization" of the *posse* subjects the *posseiro* to certain legal conditions, such as not selling or otherwise transferring the *posse* to any other person. The existence of this provision in particular
In the context of occupying public or free lands, it is only the "rocado" (the part of the land used for agriculture) and some improvements such as a house, fence, etc. that constitute the market value and is therefore suitable or liable for sale/purchase. That is, it is the work incorporated or value added which make the commercial transaction of the land possible among the posseiros. It is not uncommon for this transaction to take the form of bartering without the mediation of money. The posse might, for example, be exchanged for livestock, radios, bicycles, etc. or simply be sold in order to cover expenditures with medicine and so on. Thus, if the regularization of the claim renders the land non-transferable and non-negotiable, it is not difficult to understand the posseiros' reluctance to obtain this regularization.

In fact, it was apparent that for the majority of the posseiros, regularization of their claims was not only disadvantageous but was considered to be irrelevant.

On arrival in the Amazon, the migrants tend to go inland where the free or unoccupied lands are supposed to be located. In addition to this, the migrants' preference for the interior has developed from the belief that the best soils are not to be found close to the big rivers. This mode of occupation is radically new in the Amazonian Region since, as was seen in the previous chapter, all former settlements in the area have traditionally been concentrated all along the axis of the big rivers (Velho-1973).

Once having reached the unoccupied lands, the migrants demarcate their claim with reference to some natural landmark, such as a particular tree. The presence of a watercourse and easier access to an urban centre are also highly-valued factors for the migrants in choosing the land to be worked (Hebette et al.-1983).

As can be seen in more detail in the second part of this thesis, the locating of unoccupied land, in general, is aided by friends or relatives of the migrants who are already
settled in the area. A tendency was observed for groups of families to establish themselves close to others with whom they had already shared a degree of solidarity in their native regions. This concentration of a number of families in a certain area has very frequently constituted the nucleus of a settlement or village. I will later return to a more detailed discussion of settlement formation.

The size of a claim varies according to the unoccupied land available and to the labour power available to the family. In general, the families with the greatest number of able-bodied workers mark out the largest areas. Nevertheless, these claims almost never exceed an area of 100 hectares.

Land Conflicts

In the preceding discussion of spontaneous colonization I focused on small farmers; however, it must be remembered that this process, as mentioned before, also includes other social agents whose inclusion in the analyses is particularly important when dealing with the question of the struggle for land in the Amazonian Region.

These other social agents, usually referred to by the small farmers and several authors (Martins-1982; Ianni-1979) as "capitalists", can be identified as being medium and large scale cattle-breeders, farmers, entrepreneurs or businessmen, commercial enterprises, large national and foreign economic groups, land speculators and "grileiros" (roughly, land grabbers). Land conflicts in the region generally involve, on the one hand the "capitalists", and on the other the small farmers or posseiros. It should also be stressed that there are many conflicts involving the Indigenous population. This will be commented on later in more detail.

For a better understanding of the nature of the land conflict in the Region, it is first necessary to analyse the nature and objectives of these two factions - posseiros and capitalists - in the frontier expansion process.

As we have seen, the important issue for the posseiro is
access to land in order to work it. His goal is direct control over the means of production. His economic orientation is primarily towards the production of family subsistence, and secondarily towards the sale of surplus produce. (Schmink-1977:8; Martins-1980) Thus, for the posseiro, access to land is defined not in terms of juridical property rights but in terms of actually working the land. This concept of "use value" of land is therefore predominant (Hebette et al.-1983). Even when the posseiros sell their posse, a phenomenon referred to as "industria da posse" (squatter's rights industry) (Foweraker-1982:156; Schmink-1982), this should not be seen in terms of commoditization in the capitalist sense. Specifically, what is sold and bought is the work embodied in the land, that is, the work embodied in clearing the forest, constructing the dwelling, planting the crops and not the land itself. Often, selling part of his posse is for the posseiro the only way to survive or to afford extra expenditures, for example in the case of illness.

On the other hand, the capitalists are motivated by the search for profit and the diversification of their investment portfolios (Schmink-1982:347). They are attracted to the Amazonian region by a generous program of fiscal incentives and by the prospect of obtaining land as a hedge against inflation. While some of these capitalists may view land as a means of direct production, this is generally secondary to its function as a reserve of value and as a means of access to other forms of wealth associated with land in the Amazonian Region such as lumber, minerals, cheap credit, and tax benefits (Schmink-1982:347; Graziano da Silva-1980). Therefore, the capitalists are not concerned with the rights to usage, but rather with the legal rights of land. As Martins says, for the capitalists, land is not occupied; it is bought (Martins-1981). For them, "free land" is land without a legal owner or without title (Wagner and Mourao-1976:47).

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The purchase of land may take place through the official government agencies, or between individuals. Some of these individuals may be investors who negotiate honestly, taking advantage of rising land prices to make a profit. However, most of these individuals are "grileiros". These "grileiros" can be individuals acting by themselves or on behalf of enterprises whose main occupation is fraudulent business in land. The following report gives a clear description of the kind of transactions made by "grileiros".

"...for this practice all sorts of fraud are used, from false documents that look like old title-deeds to certificates giving definite proof of the purchase of state land that are also false...The transactions are awarded the symbolic value of 10 cruzeiros (Ca. 4 dollars in 1968), whereby it is not necessary to report them to the public register of real estate, and the sale takes place privately. It even happens that blank pages are stolen from old church registers for the fabrication of "old" title-deeds" (Garrido Filha-1980:89-quoted in Poelhekke-1982).

Usually, the grileiro schemes also include the selling of the same piece of land several times over (so that it is said to have different floors - "andares" - of titles) and the selling of titles to a different piece of land than that promised (Schmink-1977:13; Carvalho et alii-1977:522).

The official land control authorities in the region are overwhelmed by the variety of irregularities in the land purchase process, and the enormous number of transactions taking place. As a result, nearly all land transactions take place without the land being surveyed to see if it is already occupied by someone else. It is also difficult to distinguish between a grileiro and a more or less "bona fide" estate agent (entrepreneur), who is also mainly concerned with speculation. The difference, as Poelhekke says, lies in the method, not in the object (Poelhekke-1982).
Thus, direct land conflicts arise when land that is purchased is already occupied. In these cases, the entrepreneur, in order to retain legal ownership, and the grileiros in order to sell the land more easily are faced with the problem of "limpando a terra" (clearing the land of occupants or posseiros).

Among honest purchasers, the removal of the posseiros is, generally, first undertaken in a legal way. That is, the purchasers apply to the local judge to obtain an eviction order (ordem de despejo) as well as for assistance from the police to have the injunction carried out. In such cases, the posseiros have the right to a fair compensation for the improvements (benefeitórias) made by them. That is, clearing the land, bringing it under cultivation, planting crops and building any structures on it.

However, in the majority of cases, the removal of the posseiro takes place outside the legal or official system. This is especially true in those cases where the validity of the ownership is open to question by the official authorities.

Illegal removal of the posseiros may take a variety of nonviolent and violent forms. The nonviolent methods involve a proposal by the purchaser or grileiro to pay for the improvements on the land. The valuation of proper indemnification for land improvements, however, is a constant source of tension, since the parties rarely agree (Schmink-1977:15). If, however, the posseiros are reluctant to sell their posse they are often "forced" to do so through various threats of violence. Under the threat of violence the posseiros may accept the initial proposal and many of them may be actually forced to leave without indemnification. Some posseiros, however, prefer to stay, even though they may be subjected to considerable pressure. The violence employed includes a variety of tactics.

Many of the purchasers and grileiros have their own private guards or hired gunmen (known as "jaguncos") to protect the boundaries of the claimed territory and to prevent any posseiro from trespassing. Not only do the "jaguncos" guard
the posseiros in a brutal manner. Such brutality includes the fencing off of houses and watering places with barbed wire, setting fire to houses, the removal of the posseiros' household goods, the destruction of crops, sowing grass or letting cattle loose in arable fields, etc. The posseiros have very few ways and means of resisting this. The general feeling is that "to resist is to die" (Carvalho et alii-1977:526; Martins-1980; Poelhekke-1982). So the posseiros have no other option than to leave their posses and try to find another piece of land to begin the whole process anew.

Institutional Mediation

Some of these land conflicts, especially where the posseiros have resisted all violence, are brought up for mediation by different government bureaucratic agencies. These include local judges with the support of the police force, Federal (Incra) and state level land agencies and, sometimes, the army.

However, given the variety and enormous number of conflicts, these agencies are generally overburdened and therefore unable to arrive at a fair decision. These institutions are faced with the problems of lack of staff and lack of precise information about the boundaries of private property or of the validity of certain titles to land, particularly when they are of an earlier date. These issues are generally beyond the capacity of local judges who often have little experience in agrarian litigation. Moreover, these agencies often have to work in situations of great social tension and open conflict, and the civil servants carrying out the work receive vague and conflicting instructions from their superiors. It is also common for the police force, and even the judges, to be accused of corruption.

In addition to these unfavourable working conditions, the civil servants are charged with the protection of private property; that is, to rule in favour of those who have
title-deeds. In this situation it is hardly surprising that in the majority of cases which reach institutional arbitration, the decision always favours the purchaser or grileiro who in general has a false title. The only chance for the posseiro to win a decision in his favour, is to hire a lawyer; this however, involves an outlay which the posseiro is unable to meet, as he is often unable to pay for his own trip to the city where the case is to be tried.

In some cases however, institutional mediation has ruled in favour of the posseiros, particularly when a fairly large group of posseiros acts together to jointly oppose one or more of the purchasers or grileiros. In this situation the authorities speak of the existence of a "social problem" causing tension in the area concerned and forming a "threat to national security". In these cases, the authorities, generally the INCRA, can and should invert the normal order of the law (which protects private property) and expropriate the parcel of land concerned and give it to the posseiros. This expropriation can be made based on "social benefit" according to the Land Statute or because the titles of the purchaser or grileiros are considered to be false (Carvalho et al.-1977:540; Poelhekke-1982). For all that, such solutions to a conflict must be considered exceptional and they do not offer any lasting security for the posseiros, since they must subsequently legitimize their own claims to the land against the government.

When land conflicts reach the level of "national security" the army is called on to intervene. The active presence of the Army in the Amazon Region can be related to the earlier guerilla movements that existed in southeastern Para in 1973-74 and which were subjugated by a massive military operation. As far as problems over land are concerned, the army has the task of maintaining order and protecting the government officials who are carrying out their duties in the field. The feeling among the posseiros is that the army plays a more impartial role in the conflicts and that "things improve" when the army arrives. The army, however, accepts the solution to the conflicts handed down by the "judiciary".
Without fair protection from official agencies, the posseiros' only hope rests in gaining some support from non-governmental institutions such as labour unions and the "progressive" church\textsuperscript{14}.

The unions, however, do not have much power; with the leaders under constant surveillance by the army which tends to label them as "subversive", this institution is practically restricted to providing medical assistance or simply some guidance to their members. Even with such limited action the labour union has been subjected to several attacks. Many of their members and leaders have been murdered for their protection of the posseiros in the struggle for land\textsuperscript{15}.

The "progressive" church has been more active in supporting the posseiros. Its presence in the area has been very important in publicising the conflicts that can no longer be kept secret. Besides giving open moral support in several areas where there are serious conflicts, the church has also proceeded to establish pastoral land commissions (Comissao Pastoral da Terra - CPT). These commissions are staffed by priests, religious and pastoral workers and lawyers. Their main objective is, on the one hand, to advise the posseiros and make them aware of their legal rights and, on the other to give them legal aid in the event of a conflict, so that they too can legalise their rights (Poelhekke-1982). Like the labour unions, the church and, particularly the CPT staff, have very often been accused of inciting the posseiros to activities that are "subversive and dangerous to the state". As a consequence, members of the CPT have been murdered, jailed and tortured and foreign priests have been expelled from the country.

\textbf{Land conflicts involving Indians}

Since the arrival of the "white man" in Brazil, the Indigenous population has declined from an estimated between 2.5 and 5 million Indians to approximately 150,000 (Davis-1977). Most of this residual population now live in
that live in tribes and are therefore not acculturated (integrados or emancipados) are not regarded as independent citizens and are placed under government protection. FUNAI is the body that acts as their "guardian". There is also the Indian Statute (Estatuto do Indio) which says that the territory of the Indigenous tribes is inviolable, and consequently may not be utilized for any other economic activity or settlement. The state can intervene in these reservations only in cases of tribal warfare, epidemics, etc., or to exploit minerals or construct infrastructural works that are of national importance.

These principles, however, have not been fulfilled in practice; the demarcation of the boundaries of the reservations has, to a large extent, taken place only on paper. Therefore, the Indian territory in the Amazon has been systematically appropriated by both capitalist interests and posseiros who consider it as being "free land" and it has been occupied or invaded (Davis-1977; Ramos-1980).

In the case of the posseiros, this occupation of Indian land is understandable, if not acceptable, since the posseiro, in general, has no knowledge of the legislation. However, it is not acceptable when big enterprises supported by the Government, engage in clearing operations of a piece of jungle or primeval forest that is the habitat of an Indigenous group. Such situations should not legitimately occur, since Indian territory cannot be sold to private persons.

One of the conditions of sale or transfer of public lands to private persons is a declaration from FUNAI (through a document called certidao negativa) saying that these lands are unoccupied by Indians. However, like the other official institutions cited before, FUNAI has issued this document without knowing whether there were Indians living in an area or not.

FUNAI has also been accused of being slow in responding to events; that is, only when the occupations have already taken place and conflicts have flared up, does it attempt to
Several authors provide examples of the invasion of Indian land and even of the massacre of the Indian population. (Martins-1980; Seiler-Baidinger-1969; Araujo Oliveira-1977).

The church, through CIMI (Conselho Indigenista Missionario), has also frequently accused FUNAI of inadequately safeguarding the interests of the Indians over those of government bodies and private persons. But, as Martins says, "apparently, government agencies have not made any effort to prevent the invasions from continuing, and there have been dead and wounded on both sides in this dispute, without any prospect of its being resolved" (Martins-1980:97).

The Situation in the Amazon at Present

In the 1980's the occupation of the Amazonian frontier continued without any major alterations in the pattern established during the mid-1970's. On the one hand, government policy continued to favour the incursion of private capital into the area, particularly through the granting of huge tracts of land to both Brazilian and foreign companies. On the other hand, the influx of landless migrants remained intense while their exclusion from any government plan for the region meant that access to land became increasingly difficult for them.

In this section I present a general description of some aspects and results of the occupation process established during the last decade and an analysis of the social, economic and political situation of the Amazonian region at the present time.

At the end of the 1970's, direct participation by the State in the settlement of the Amazon was restricted to the largely invisible or insignificant actions of the INCRA. With an extremely small budget, the INCRA was limited to the simple distribution of the lots still vacant within the area set
aside for directed colonization and concentrated a large part of its resources on the distribution of lots of 500 to 3000 hectares for cattle-ranching. It should also be pointed out that the INCRA continued with its program of settling small producers in the state of Rondonia. In this State, although far from the initial goals, the directed colonization program was relatively successful compared with the projects located along the Transamazon and Cuiaba-Santarem Highways in the State of Para (Martine-1980; Perpetuo-1983:198).

Nevertheless, the State continued to be heavily involved, even though indirectly, in the Amazonian occupation process. This involvement was particularly great with regard to the juridical regularization of the extensive areas conceded to private colonizing enterprises and major economic groups which proposed to develop productive activities in the region. However, as mentioned before, despite the massive support from the State, these capitalist enterprises have turned their activities to land speculation and have been acquiring even more land, not only in the recently occupied regions, but also in areas of "free lands" far in advance of the small farmers or migrants. As a result, the area of "free land" which should be opened to the landless arriving in the region is rapidly shrinking, a phenomenon referred to by some authors as the "closing frontier" (Graziano da Silva-1981; Martins-1982; Schmink-1981).

Now let us consider in more detail the picture which the current situation of "closing frontier" in the Amazonian Region presents to the migrants or landless rural workers who are still coming to the Amazon in search of land to work.

The "Closing Frontier Process" and the Newly Arriving Migrants

Although the policy adopted by the Government since the mid-seventies has excluded the small farmers from its plans for occupying the region, the influx of migrants to the Amazon has continued to accelerate; it could not be otherwise, as there has been no change in the country's
In addition to the reasons which have already been thoroughly discussed for the migratory influx into the Amazon yet another emerged in the 1980's. This was the discovery of gold fields, particularly those located in the Serra Pelada, at Cumaru in the southeastern region of Para and the Rio Tapajos region in the west of Para. The opening of mines attracted thousands of labourers from other parts of the country, who hoped to make quick and easy wealth. It was calculated that in the gold field of Serra Pelada alone there were some 100,000 prospectors in 1982. However, a large part of these prospectors were migrants who, even though working in the mines, had actually arrived in the area with the primary objective of gaining access to land (Schmink-1983; Pinto-1982).

It might have appeared that the departure of these migrants in search of gold would represent a decline in the migrant’s pressure for access to land. However, this did not happen. Prospecting activities are restricted to men, which means that a migrant, even if prospecting, must obtain a piece of land where he can leave his family during his absence and where the family can cultivate some crops to ensure their immediate survival. The same thing happens to posseiros who are already established but who eventually go prospecting. These posseiros generally leave relatives or others on their land in order to retain their rights, even if they have failed to plant crops that season (Schmink-1983:24). Furthermore, prospecting is a short-term occupation and causes a rapid decline in health, obliging workers to return to agriculture and their struggle for land after a short period of time at the mines (Esterci-1982).

The growing number of landless who arrived in the region found a constant reduction in the free lands due, as we have seen, to: a) an increasing interest, on the part of private enterprises and grileiros, in the acquisition of land for speculative ends; b) greater vigour on the part of government
agencies in regularizing land holdings in favour of these enterprises or of the grileiros (Perpetuo-1983:56).

Besides this, a further problem made access to land by the migrants yet more difficult. At the end of the 1970's the road building program was cancelled, representing an almost total halt to the construction of the great highways. As a result, one of the principal elements responsible for dissipating social tension in the process of occupation was removed. Actually, it had been these great highways which had enabled recently-arrived migrants or those expelled from their posses to make their way to more distant areas where there were still opportunities for access to unoccupied land. Thus the paralysis of road construction confirmed the "outer limits" (areas limites) of the frontier. It defined those areas where occupation was halted by a lack of alternatives, and by the absolute impomssibility of penetrating further into the forest (Perpetuo-1983:57).

At the same time, it is in these "outer limits" that the expelled posseiros and newly arrived migrants have been concentrating and they have became points of departure for new attempts to reach the "free land" areas. So, these "areas limites" are therefore characterized by a high degree of social tension which gives rise to violent conflicts.

It is also within these "areas limites" that another important aspect of the current process of occupation in the Amazonian Region is to be observed, that is, one increasing urban concentration. (Volbeda-1982). As was stated above, once expelled from their posses and/or unable to find free land, the posseiros and incoming migrants were installed in small settlements or urban centres located in these "areas limites" hoping for some possibility of access to land. As a result, accelerated population growth has been verified in these urban centres, whose economies are pre-eminently primary and which have a very small urban labour market. Cities such as Imperatriz, Maraba and Itaituba, which can be placed within these "areas limites" have trebled their population in the last 10 years without, however, having made
any parallel improvement in their economy or in the living conditions of their inhabitants (Becker-1982:221; Perpetuo-1983:22; Volbeda-1982).

Furthermore, the migrants who are forced to settle in these urban centres came to the Amazon precisely to escape urban proletarization. Nor is urban life in remote townships, which generally lack the basic services and infra-structure, a situation which they are prepared to accept finally or passively. Thus, it is not surprising that due to the very fact that they have had to concentrate in these urban centres, the migrants have been encouraged to react and not accept their condition passively. The concentration of migrants in these urban centres has indeed permitted a greater exchange of experiences among themselves, which helps to forge a strong consciousness of their common plight. As a result, popular organizations, with a view toward protecting posseiros and incoming migrants, become more viable and active, especially those guided by the Church and by the National Workers’ Confederation (CONTAG).

New Interventionist Policy by the Government

The early 1980’s in the Amazon have revealed a picture of social tension and violent conflicts in various parts of the Region. Such situation can be attributed to, on the one hand, a government policy frankly favourable to private enterprises, reduction in the land available for occupation, and on the other hand to an increase in the influx of migrants and an incipient, but already strong, organisation of migrants.

Faced with this social unrest, the Government introduced some changes in its policy for the Region. Arguing the need to preserve "national security", it mobilised military power to support some new "administrative measures" in an attempt to ease social pressures (Schmink-1982:352). These measures or administrative solutions, are noted for the difference in treatment given to the various groups of rural workers in the
areas where social unrest has been most intense, according to the degree of popular and political mobilisation attained. Among these "administrative measures", the creation in 1980 of GETAT (Executive Group of the Araguaia/Tocantins Lands), should be emphasized.

GETAT

In February 1980, the Executive Group of the Araguaia-Tocantins Lands (GETAT), was set up under the direct control of the President of the Republic and the National Security Council.

Taking over the INCRA's personnel and resources, this new body has as its operational territory the extremely conflict-ridden regions of the southeast of Para, the extreme north of Goias and small parts of Maranhao, covering an area of approximately 450,000 Km$^2$, which was declared an "area of national security" (see Map 4).

GETAT has extensive executive powers and can to carry out its task, subordinate all the other government bodies in the area, including the INCRA itself.

Its official objective is to proceed rapidly, and without the long bureaucratic procedure of the INCRA, to demarcate the parcels of private land, including the assignment of state land to posseiros and eventually to expropriate private land as a matter of "social interest". In addition to this, GETAT was granted special power to assign titles of up to 500 ha (which formerly had to be approved in Brasilia). Current legal proceedings were to be short-circuited by the issue of definitive titles to the properties (Perpetuo-1983).

The first results of GETAT's work were impressive. In less than a year and a half, GETAT had already settled 8,000 families (Schmink-1982:353) although the total number of posseiros or small farmers with precarious regularization of land is estimated to be about half a million (Poelhekke-1982).
Despite this impressive number of settlements for migrant
Actually, many aspects of GETAT's work do not offer a solution for the plight of the posseiros in the region, as can be seen from the following comments.

One of the measures taken by GETAT was to settle migrants in plots of 50 ha, that is, half the officially established minimum module for the region. This clearly represents a failure on the part of GETAT to create the minimum conditions necessary for the settlement of rural workers in the long run. Taking into account that legally 50% of the plot has to be kept as a natural reservation and also that this specific area has soils of lower fertility (Perpetuo-1983) it is probable that in a short time, the migrants settled on these small plots will not be able to produce enough for their sustenance.

The reduction of the module from 100 to 50 ha. can be seen as an expedient to settle more people on less land in the short term. In other words, utilizing the lands already occupied by posseiros for the settlement of migrants evades the potential necessity of appropriating the holdings of the large landowners or removing the major proprietors.

Another aspect strongly criticized in GETAT's work is its policy of relocating posseiros from one area of claimed land (in general that same land which was also being contested by big capitalist enterprises) to government lands, in a process referred to by GETAT itself as a "permuta" (exchange). In this "permuta" the posseiros always get the worst part; besides not getting fair indemnization for the improvements made to the older posses, the new lots given to them are smaller and located in remote areas. During the field work, I was able to observe a case in Sao Pedro da Agua Branca (near the PA-70 road) where those posseiros who did not accept the distant plots offered by GETAT had to be content with plots of 2 or 5 ha. located near the Vila of Sao Pedro da Agua Branca. With such small plots, naturally, the posseiros could not produce enough for the survival of their
families. However, as all the power lies with GETAT, these posseiros were left without any possibilities for further claims.

As I have stated before, the GETAT approach does not represent a solution for the plight of the posseiros in the region, but, as Schmink says, "a mopping-up" operation in the continued absence of such a solution at the planning level" (Schmink-1982:353). Besides this, despite the agency's power and strong collaborative links with the armed forces, it has been unable to contain the violence involved in land conflicts in its area of activity. Cases of murders of workers' leaders, torture and expulsion of posseiros continued to be related by the national press every day.

Finally, it should be stressed that the creation of GETAT can also be linked to other plans the Government had for the Region. The reason why GETAT was set up for this particular area alone (and not elsewhere with yet more serious conflicts over land) can be explained by the fact that it borders and partly coincides with the region of Serra do Carajas, where very large scale development plans called "The Great Carajas Projects" have been projected, since 1979. In the following I give a brief summary of the Carajas Project and its significance within the scope of the Government's Plans for the Region.

The Great Carajas Project

The "great Carajas" project which came to public notice in 1980, is a wide-range development program to be carried out as a joint venture between the Brazilian government and private enterprises and American and Japanese multinationals. The program consists of a number of sub-projects, namely: the project Ferro Carajas (iron and steel); the Tucurui hydro-electric scheme; Projetos Trombetas and Alumar (aluminium production) and others about which information is not yet available. Also linked to these major projects are a number of parallel projects which are considered to be part
of the infra-structure being undertaken, such as the Tucurui hydro-electric scheme, Carajas-Sao Luiz railway and various agrarian and forestry projects.

Initial estimates envisaged an overall investment of 30 to 60 billion dollars, generating approximately a million jobs (Perpetuo-1983:115). There is considerable controversy over the realism of these figures and a yet greater one in respect to the income to be expected from production which is primarily aimed at the foreign market. Furthermore, the targets planned for each of the Program's sub-divisions have suffered constant modifications and a number of proposed projects are still undergoing feasibility studies, as in the case of the agricultural, cattle-ranching and forestry projects (Maia Filho-1982).

The reality is that by 1983, the date of this field work, not only had the program failed to offer the number of jobs originally promised but the situation of the new migrants and those already settled in the area had materially worsened. To take one example, the construction of the dam for the Tucurui hydro-electric project involved the dislodging of thousands of families, many of whom had been settled there for more than a generation. In "recompense" these families were offered smaller lots of poor quality in remote areas with no infra-structure (Hebette et. al.-1983). There are also cases of families who after two years have still not received a new parcel of land in place of the one they had to abandon. Furthermore, it had been planned to set up the cattle-ranching projects in which it was suggested that it might be possible to settle small producers in areas which according to GETAT, had already been officially recognised as in general, being the "legal" property of large corporations; that is, either the government would have to shoulder the costs of disappropriation or the small farmers would have to pay for access to this land. Bearing in mind the government's position until then on the occupation of the Amazon, there was, on the one hand, no hope that it would support a policy of disappropriation and, on the other hand, the migrants that arrive in the Amazon are not in any position to buy land
which probably will be over-valued due to the presence of the Great Carajas program itself. In short, the small producers and the landless migrants are once again excluded from the development plans for the region.

Thus, at the time of writing, the "Great Carajas" project should be seen more as a policy intent on attracting large amounts of foreign capital to the eastern part of the Amazon and as a means of channelling foreign resources into the country, than as a finished and concrete plan for real economic and social development in the Region.

Summary and Conclusions

This chapter has attempted to give a description, although brief, of the frontier expansion in the Amazon since 1970. For this reason, in the first section, I have focused on those factors that most strongly triggered off the expansion of the Amazonian frontier such as, among others, the expansion of the national highway system and the maintenance by the government of an agrarian policy characterized by the concentration of landownership.

In the following sections I concentrated my analysis on the role of the main social agents involved in the process of frontier expansion in the Amazon, that is, the State, the capitalist enterprises and the landless migrants.

About the participation of the State I focused mainly on the policy of fiscal incentives to private enterprises, the construction of highways and the programs of directed colonization along the Transamazon and Cuiaba-Santarem Highways. The role played by the capitalist enterprises is mainly evaluated by an analysis of the constraints they faced in the Region and their choice of more profitable activities such as land speculation. Regarding the landless migrants, I have given an account of how these social agents have arrived at the frontier and how they have managed to get access to land and settle on their own in the Amazonian Region.
The subsequent section contains an analysis of the land conflicts in the Region. In it I tried to point out the reasons for the development of these conflicts, the strategies used by the parties involved and the role played by the Government agencies as "mediators" in these conflicts.

Finally, the last section gives an account of the social, economic and political situation of the Amazonian Region at the present time. Here, I analyse the situation of the newly arriving migrants who are facing the process of the "closing frontier" and the most recent policies adopted by the Government for the Region in order to reduce the increasing social tension in the area.

Two basic conclusions emerge from the description and analyses contained in this Chapter in relation to the two previous ones.

The first is that the dynamics of the frontier expansion in the Amazon exhibits certain characteristics which distinguish it from earlier experiences of frontier expansion processes in other parts of Brazil. In short, such characteristics are:

a) The rapid pace with which the process is taking place. Indeed, while in other parts of the country the process of expansion lasted for three or even four generations, in the case of the Amazon, besides having covered a much larger area, the "closing frontier" appears before the expansion process has completed two decades. Such speed, to a large extent, can be attributed to the Government which, by maintaining a retrograde agrarian policy (based on concentration of landownership), has encouraged and practically forced a great influx of landless rural workers to migrate to the Amazonian Region in search of land.

b) The predominant presence of the State in the expansion process which occurs either by indirect intervention through a policy of fiscal incentives for the establishment of private enterprises or by direct intervention through the Directed Colonization Program. The presence of the State has not only accelerated the occupation process but it has also
changed the historical pattern of the frontier expansion in Brazil. As it was shown in Chapter II, the process of frontier expansion in other regions of the country was firstly carried out by the small farmers who were later partly replaced or expropriated by large enterprises, the so-called "pioneer front". With this expropriation, however, these small farmers were not necessarily transformed into landless workers because the pattern of expansion then permitted them to move into the next expanding area. In the case of the Amazon, on the other hand, the existence of fiscal incentives has meant that the "pioneer front" has arrived at the same time or immediately after the small farmers, thus shortening the time between the first arrival and subsequent displacement.

c) The high level of land speculation. Despite all the fiscal incentives and the appropriation of huge tracts of land, the enterprises did not create productive activities capable of generating jobs. Instead, they began to take part in land speculation on a massive scale. Such speculation has not only produced a tremendous increase in the price of land, thereby removing any possibility for the migrants to gain access to land by purchase, but it has also implied a massive eviction of posseiros who were already settled in the Region. This massive eviction of posseiros, as considered before, has had the support of the Government, which, violating its own principles established in the Land Statute, has favoured the enterprises, giving them legal ownership of the expropriated lands. Furthermore, with the development of land speculation, these enterprises have taken the still remaining "free lands" in advance of the small farmers giving rise to what is called the "closing frontier". As a result, once the small farmers are expropriated by the "pioneer front", they have no chance of obtaining a new piece of land to work and, to the newly arriving landless migrants are also denied access to land. It seems pertinent to note that by concentrating their business on land speculation instead of productive activities, the presence of the enterprises bring to the Amazon one of the fundamental contradictions inherent in the development model.
practiced in Brazil in the last few decades; that is, the creation of vast hordes of expropriated workers without creating the conditions for their final proletarization (Perpetuo-1983:22).

The second conclusion, which is a consequence of the first, is the unprecedented level of social unrest and the higher number of conflicts over land. Although the process of land occupation or frontier expansion in Brazil has always been marked by conflicts, none of them can be compared with what has happened in the Amazonian Region. However, despite the growing number of conflicts and heightened social tension, a great number of migrants is still arriving in the Amazonian Region. It clearly demonstrates the small farmers' and landless migrants' intention to resist and continue their struggle for access to land to work.

The main expression of this resistance is the existence of relatively rapid and well-organized action on the part of the posseiros or small farmers. Under the guidance of the most progressive sectors of society such as the church, the rural trade unions and civil groups, the small farmers no longer fight in isolation, but collectively, demonstrating a strength without precedent in the history of the struggle for land in Brazil or in any former expansion front process. As a result, the frontier expansion in the Amazon, unlike those in other parts of the country, does not constitute a safety valve for social tension. On the contrary, in itself it actually constitutes the main focus for social tension in the country until today.

The above conclusions reinforce the importance of the main issues in the Amazonian Region that were pointed out in the Introduction of this thesis; in other words, is the development of the frontier expansion in Amazonia leading, at least partially, to the formation of a small farming system? or, does the process of frontier expansion in the Amazon embody the reproduction of the same phenomena typical of other processes occurred early in the country? In this latter
case, after the pioneering period, the peasants were either expropriated from their lands or engaged in a process of social differentiation with the result that many had to move away and only a few could actually keep their lands and their position as independent agricultural producers. Besides these two points a further question also emerged from the contents of this chapter, namely: is the recent Government policy for the frontier areas of the Amazon leading to the end of social conflicts over land in that Region?

As proposed in the framework elaborated in Chapter I, any attempt to answer these questions has necessarily to take into account the characteristics of, as well as the interrelations among, the following aspects: 1) the social formation or wider political, economic and social structure of which the process of frontier expansion now occurring in the Amazon is part; 2) the particularities of this process in relation to those which occurred previously in the country; 3) the characteristics of the small farmers and their own internal dynamics as well as their strategies upon which a viable small farming system and social stability in the Region also depend.

The first two aspects have been extensively considered so far. Chapter II gave a lengthy description of the process of land occupation in Brazil, the agrarian policy adopted by the State in different historical and social moments and, in a more detailed way, the role played by the small farmers in the process of frontier expansion in other regions of the country. Chapter III provided an ample account of the social, economic and political history of the Amazonian Region, giving the necessary background to understanding why and how the Region is now facing a process of frontier expansion. Following this, Chapter IV focused on the pattern taken by the frontier expansion process in the Amazon showing the groups whose actions have the most far-reaching and decisive impact. Further account of the relevance of these two aspects, as well as the interrelations between them on
The expansion of the small farming system and social conflicts over land in the Region, will be given in the final section of this thesis. For the moment, however, it is important to keep in mind that, although presenting its own particularities, the process of frontier expansion in Amazonia cannot be dissociated or analysed separately from the national system of agrarian policy, the process of land occupation that occurred in the country, and from the previous social, political and economic history of the Amazonian Region itself.

The third remaining aspect mentioned in the framework is considered in Parts II and III of this thesis. There, besides the small farmers’ own characteristics, and the internal dynamics and strategies employed by them in the running of the small farming system, I will also investigate to what extent the economic performance and the social organization of the small farmers influences the level of social conflicts.

To carry out the analysis of this third aspect, I have developed an anthropological investigation using the ethnographic method of two small farm settlements. For the development of such investigation I took as points of departure two further hypotheses:

a) The internal dynamics and the economic and social performance of the small farmers in the Amazonian frontier is greatly conditioned by the families’ background, their ability to adapt themselves to the physical and social environment, their own decisions regarding the organization of production and the pattern of social relations that have been established among the small farmers themselves and between them and outside social groups.

The formulation of such a hypothesis takes into account the discussion carried out in the theoretical review and it is also based partly on my own previous studies on the area (Botelho-1981) and partly on studies made by other authors (Moran-1981; Schmink-1977; Wood & Schmink-1978; Smith-1982;
etc.). In this thesis, however, I have attempted to give a new analytical treatment to the elements under investigation.

b) There is an assumption made by the Government that the administrative/palliative measures, taken recently, will create hopes or expectations of stability regarding conflicts over land and social mobility among the migrants. In other words, with such measures, the Government, implicitly, awaits the emergence of a process of economic differentiation among the migrants which would create increased social expectations among the families settled in the Region. Such way of thinking is based on the concept of social mobility whose eminently individualistic character is an inhibiting factor in the rural workers' forms of social organisation. According to the Government's officials, an inhibition of the rural workers' forms of social organisation in the Amazonian Frontier could lead to the end of the social conflicts.

In my point of view however, such an assumption lacks both theoretical and empirical basis. Limiting ourselves, for the moment, to the most empirical aspect, it seems clear that such Government's measures are not accompanied by economic changes which would support or create a significant social differentiation capable of weakening or undermining the small farmers' potential for united action. Based on it then I argue that the level of stratification or social differentiation that may emerge among the small farmers is not a sufficient factor to end the social unrest in the Region.

The following investigation will not only present a major empirical base for an evaluation of the future situation in the Amazon should the present government's policy be maintained, but will also provide support and guidance should there be a political decision (as appears probable with the change to civil rule) to assist the settlement of small farmers in the Region. It was from this perspective that the case-study was developed and is presented in the second and third parts of this thesis.
Notes

1 - Table 3 makes no distinction between landowners and non-owners (tenants and sharecroppers) since its objective is to give an overview of the loss of access to land experienced by small producers.

2 - Regarding movements of peasants during this time, see: Sigaud (1979); Carvalho (1978); Forman (1979); Aued (1980); Camargo (1973); Farias de Azevedo (1980).

3 - Another interesting facet revealed by the 1975 Census is the form in which this occupied land was being utilized. Of the area planted with crops that is generally foodstuffs destined for consumption in the countryside and towns, 65% in 1975 was on properties of less than 10 hectares. The great "fazendas" with more than 1,000 hectares used only 3% of their area for growing these crops in 1975. According to more recent data from the Production Finance Committee of the Ministry of Agriculture, it was calculated that between 60% and 70% of the foodstuffs destined for supplying the country came from the production of small producers (Martins-1982:115). From this it may be concluded that the growth of large landownership to the detriment of small producers not only reduces work opportunities for the peasants and rural labourers but also reduces the foodstuffs on offer to the urban market (Martins-1982:39-40).

4 - For more information on the highway system in the Amazon see Wozniewicz (1974); Galey (1977); Mueller (1975).

5 - Unofficially the INCRA announced at the beginning of its work that it would not have the conditions to settle more than 11,200 families in the first two years of the program in the Transamazon and Cuiaba-Santarem Highways. (Fonseca do Vale-1982:49).

6 - Below a list is given of some of the colonists' obligations towards the INCRA and some of the INCRA's obligations towards the colonists.

Obligations of the Colonist towards INCRA
- To reside with his family on the lot...
- To cultivate the lot with his family
- To observe the rules of the Project
- To reforest damaged areas
- To maintain personal life insurance
- To pay the INCRA for services and improvements provided by this agency
- Not to turn over, rent or mortgage the lot for at least 5 years
- To pay the loans provided punctually
- Not to divide the property, even for the sake of inheritance
- Not to change the purpose of the property
- Not to become a disturbing influence on the Project

**Obligations of the INCRA with the Colonists:**
- To provide a sale/resale contract in 20 years
- To provide a definitive title to the property on payment of the amount owed
- To provide assistance to begin the agricultural work
- To guarantee free exercise of agrarian activities
- The INCRA may cancel all terms of the agreements if the colonist does not meet its terms

(Source: quoted in Moran-1985:93).

7 - The selling of the plot was an illegal act because at the time of settlement, the colonists signed an agreement with the INCRA that they would not negotiate their plots without the INCRA's permission. Nevertheless, according to many statements made by colonists during my fieldwork, such negotiations took place in an obscure and indirect manner or even, on occasion, with the full knowledge of the INCRA.

8 - *Tapiri* is a kind of canopy constructed of wood, leaves and branches of trees.

9 - The Table below gives a clearer vision of the agrarian structure of the Amazonian Region during the period 1972-76. During the period 72-76 the agricultural area increased 75% while the number of establishments increased only 53%. This means that the appropriation of land was made essentially by large proprietors whose number had an increase of approximately 80% during this period.
TABLE 6
Changes in the Amazon Agrarian Structure during the Period 1972-1976

<table>
<thead>
<tr>
<th>Size of Establishments (ha)</th>
<th>Increase (%)</th>
<th>No. of Establishments</th>
<th>Total Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 100</td>
<td></td>
<td>45,1</td>
<td>48,0</td>
</tr>
<tr>
<td>100 to 1,000</td>
<td></td>
<td>65,7</td>
<td>63,4</td>
</tr>
<tr>
<td>Over 1,000</td>
<td>77,8</td>
<td></td>
<td>78,0</td>
</tr>
</tbody>
</table>

Source: Estatisticas cadastrais/1 and 4, Incra; quoted in Graziano da Silva (1981)

10 - According to Hebette and Acevedo (1979b) the ranching farms in the Amazon employ just one worker for each 788 ha. This area, says Martins, could be used by 8 families (taking the Amazon module of 100 ha.) or for 15 to 30 families taking the family farm module utilized in other regions of the country (Martins-1981:123).

11 - Other aspects related to the process of spontaneous colonisation, such as the use of land, the emergence of populational centres, etc. will be given in the second part of this work.


13 - About the guerilla movement in the Amazon see: Doria, P. et al. (n/d); Portela, F. (1979); Pomar, W. (1980); Casaldaliga, D. P. (1973).

14 - The "Progressive Church" is the term used to denote the group of Catholic priests who follow the "liberation theology". In the Amazon, the work of these priests is mainly concerned with the situation of the posseiros in their struggle
for land. A more detailed analysis of the Progressive Church in the Amazon can be found in CEDI (s/d); Martins (1982c); CNBB-1980.

15 - Between January-1979 and July-1981, 7 labour union leaders and 3 Indian leaders were murdered for their involvement in land conflicts in the Amazon.

16 - A detailed study about the official goals of GETAT can be found in Perpetuo (1981); About the results of GETAT's activities see Breno de Almeida (1980) and Hebette et. al. (1983).

17 - Although scant attention to this assumption has been given by the authors, (for an exception, see Perpetuo-1981), it is largely cited by officials encharged with the Government policy for the Amazon.
This second Part of the thesis is dedicated to a case study of two groups of peasants who arrived in the Amazonian Region after 1970. One group was settled under Government sponsorship through its programme of directed colonization. The other was composed of families who came and settled in the Region on their own in a process called "spontaneous colonization".

The purpose of this case study is to give an ethnographic account of these newly formed rural communities in the Amazonian frontier. Although the occupation of the Amazonian frontier has been the subject of studies by many authors, very few of them have actually been concerned with the ethnographic aspect of this process of occupation. Consequently, there is a lack of information about the social, cultural and economic characteristics of this population that has been settling in the Amazonian Region during the last twenty years. The main goal of the following chapters is to make up for this deficiency and show the importance of anthropological knowledge in the understanding of the occupation process dynamics of the frontier.

The first section of PART TWO deals with a description of how the fieldwork was undertaken, including the methodology employed in the choice of the two groups to be studied, the collecting data process and some comments on the difficulties I had to face during the fieldwork.

In Chapter V I bring a brief historical, geographic and economic description of the Amazonian micro-regions where the two groups of peasants are located, as well as the way in which the peasants developed their settling process in its initial stage.

Chapter VI carries out an inventory of the peasants' background including their geographic and cultural origins, previous employment, migration history and their particular reasons for emigrating to the Amazonian Region.

In attempting to throw some light on how these newly arrived
peasants have been coping with the physical and social environment of the rain forest. Chapter VII focuses on their housing, diet and the impact of tropical disease on their daily lives.

To investigate possible changes due to the migration process in the peasants' institutional and social way of life is the concern of Chapter VIII. Here I examine some aspects of their family structure, kinship system, social interaction and conflicts that may have emerged within these newly formed communities. I am also interested in peasants' forms of entertainment, access to formal education, the role of religion in their daily lives and participation in trade union movements.

Fieldwork

Although I have very often worked and visited the Amazonian Region since 1973, the major part of the empirical data contained in this present work was obtained with a view to the specific objectives of this thesis.

1 - Choice of Area

As was noted in Chapter IV, the settling of small farm producers in the Amazonian frontier has been established mainly through two forms: settlement under the Government sponsorship and the spontaneous settlement in which there is no direct Government interference. For the purposes of this case study I decided to cover the two types of settlement. For the first type I decided to choose the Colonization Project of Itaituba (PIC) which is one of the three major official settlements established in the Region by the Government. This Project is located in the Western part of the State of Para in the area surrounding the junction of the two most important highways in the Region: the Cuiaba-Santarem and the Transamazon (see Map 5). My own previous research experience in this area plus the fact that this project had been studied very little, have influenced my
For the second type of settlement, I chose the settlement located in an area known as "PA-70 Region", in the south-east part of the State of Para, close to the Belem-Brasilia highway which links the State of Para with the southern regions of the country (see Map 6). The "PA-70 Region" has been frequently referred to in regional and national newspapers as the site of innumerable violent social conflicts relating to land ownership. However, according to my bibliographical research there have been very few academic studies of the situation in this Region.

In both cases my choice was also led by careful observation and by exchange of ideas with social scientists who have been working in the Amazonian Region for years and who assured me that the two settlements chosen were sufficiently representative of the problematic I intended to study and therefore, it could justify more generalised conclusions.

2 - Data Collection
Data were collected in both settlements at different times. The first field-study, carried out in 1978, was basically concentrated on Itaituba Project (PIC). At this time, as a member of a team working on an economic evaluation of the Project, I was able to incorporate a series of relevant questions relevant to this thesis into the basic questionnaire used in that survey. The questionnaire was answered by 262 families out of a total of roughly 1,800 then living in the Project's area. These 262 families were chosen by selecting every fifth family living along the two highways. Living in this community for 6 months with the families I had great opportunities to develop participant observation and discussion with them about the topics covered by this thesis.

The second research phase took place in 1983, when I stayed in the Project area for 3 months and undertook a survey of 110 families, 100 of whom had taken part in the previous study and who, according to my previous knowledge, could give
me detailed information. The other 10 families were randomly chosen, partly from among those families who, for any reason, could not be reached by the first survey and partly among those families who had arrived in the Project area after 1978. In this second phase, besides a new questionnaire the survey involved taped interviews, informal visits, participant observation, etc. Even though in most cases it was the husband who answered the questionnaire and was interviewed, other members of the family were frequently asked to help me with more precise information. I also reconstructed genealogies and "compadrio" patterns for the community, attended and recorded most community meetings, masses, and other social events. Informal interactions in the nearby market places and visits to the towns around the Project area added to the better understanding of the settlement.

Data regarding the PA-70 Region were collected from June to October 1983. There, the basis of my fieldwork was primarily informal and opened interviews with members of more than 150 households. These interviews usually lasted 2 or 3 hours and in some cases they continued on two or three different afternoons. Many of these interviews were recorded, while in others notes were made of the information given.

Besides these open interviews I also administered a questionnaire to 100 families. Even though these 100 families were randomly selected, I was very careful to avoid "biases" that could distort the survey. For example, I excluded from the sample those families with very close kinship link to another that had already been included, as in the case of father and son or sometimes brothers. The choice of the sample is explained in a more detailed way in Chapter V. Being a guest of several families for two, three and sometimes more days, I had an opportunity to be involved in the communities' social events and in the families' daily living activities. This allowed me to get closer and talk to different members of the families, especially the women, and to take note of detailed aspects (usually absent from the
more formal interviews) of the peasants' life in that region.

Although I was living in local families' houses and had the support of community leaders, my work was extremely difficult due to the social and political tensions existing in the region. A great deal of caution was necessary in contacting some families and moving from one place to another due to the hostility towards "strangers" or people involved in social research who are very often taken by peasants as being police or government spies.

In both settlements direct measurements were made of agricultural patterns, including field sizes, yields, labour input, etc. and peasants (in particular those who answered the questionnaire) were asked to reconstruct all the costs and benefits from their land use in the previous year.

In gathering detailed economic data on landownership, income, credit use, value of the harvest, etc. my agreement with the peasants was that these data would be used only in the aggregate, so that no one individual could be identified from the figures. To further safeguard the anonymity of informants, the names of individuals are all omitted or have been replace by fictitious ones. I have tried, however, to transcribe the peasants' statements as faithfully as possible.

Finally, the sources of data also include published and unpublished bibliography, and information collected from government agencies in the Amazonian Region itself as well as in other regions of the country.
CHAPTER V

Description of the Area and the Settlement Process

In the first section of this chapter, entitled "Description of the Area", I consider some aspects of the physical and geological constitution of the area where the two groups being studied have settled, together with their precise geographical location in the Amazonian Region.

With regard to their geographical locations, I will also attempt to show the position of these settlements in relation to regional and national economic centres. The object of this is to highlight those aspects which might serve as a starting point for an evaluation of the two groups' possibilities in terms of their social and economic relationship with the national society.

The second section, entitled "Settlement Process" is primarily concerned with detailing the actual process of arrival and acquisition of land in the area as experienced by the members of the two groups. This will, on the one hand, show the methods employed by the government agency in selecting families to settle in PIC and the means by which lots were distributed; and, on the other hand, the conflicts and confrontations which have marked the migration and the acquisition of land by the peasants of PA-70.

This section will also include some information on the physical distribution of the families within each settlement as well as the differences between the two groups in the founding and development of the "vilas" or rural communities.
1. Project of Itaituba (PIC)

The Colonization Project of Itaituba (PIC) started in the middle of 1972. It is located in the area around the point where the two great highways of the Amazonian Region, the Transamazon and the Cuiaba-Santarem, cross (see Map 5). The Project’s total area reserved for the settlement of small farmers is estimated to be approximately 715,524.48 ha divided into plots of 100 ha. each, situated on 10 kilometer strips of land along the two mentioned highways (Contini-1976).

For a better understanding of its geographical limits and location, the Project of Itaituba is usually divided into the following three parts:

a) Northern Branch - the area situated along the northern part of the Cuiaba-Santarem highway (that is: that part of the highway between the Ruropolis Presidente Medici and Santarem) covering a length of approximately 90 kilometers.

b) Transamazon Branch - that part of the project located along the Transamazon highway between the Agropolis Miritituba and the Ruropolis Presidente Medici;

c) Southern Branch - situated on the southern part of the Cuiaba-Santarem highway bounded on the north by the Transamazon highway and on the south by the Jamanxim River with a length of approximately 150 kilometers.

The plots of 100 ha. are located along each side of the highways (except that part on the right side of the northern part of the Cuiaba-Santarem which is designated for the Tapajos forest reserve) with a length of 500 metres and a depth of 2,000 metres and along the side roads whose length is not more than 10 kilometers.

The sample for this study was selected from families living in all three parts of the Project.

The area where the Itaituba project is situated is basically
integrated into a regional and national society by means of two towns: Santarem and Itaituba.

The town of Santarem, located on the banks of the Amazon river and at the northern end of the Cuiaba-Santarem highway has had a rapidly growing population. From approximately 60,000 inhabitants in 1960 (IBGE-1980) the town now has more than 100,000 people living within the urban zone, making it the second most important town in the state of Para. Despite a huge expansion in the cattle-breeding and mineral extraction sectors, crop-farming is still the most important sector in the economy of this town.

Agriculture is primarily based on the cultivation of the following products: jute, malva, maize, beans, manioc and rice. The last of these is the most important, having contributed 30.99% to the gross product in 1970 (IBGE-1970). With a population of over 100,000, Santarem is an important consumer center, having a significant urban middle-class and an increasing demand for agricultural products. This middle-class has expanded in the last two decades, principally because of the expansion of the banking network and public investments such as the construction of the Cuiaba-Santarem highway, the Curua-Una hydro-electric project, the new river port and airport. Despite the importance of the Cuiaba-Santarem highway, the principal means of access to Santarem is still the Amazon river which links the town to Belem, capital of the State of Para, and Manaus, capital of the State of Amazonas.

Itaituba, located on the banks of the Tapajos river, is a few kilometers distant from the Transamazon highway and 40 kilometers from PIC. This town is also characterized by a rapidly growing population but with no parallel development or improvement in its urban infra-structure. Nevertheless, with a population of around 80,000 (IBGE-1980) the town of Itaituba constitutes a significant producer and consumer center of agricultural products. In recent years, Itaituba has become the major center of trading of gold extracted from the Tapajos' River Region mines. As a result,
local commerce based on shops, hotels and bars has had a huge boost, in addition to a great expansion of the service sector. Apart from the Tapajos river, which connects Santarem, Belem and Manaus, Itaituba is also linked to the other regions of the country by the Transamazon and Cuiaba-Santarem highways.

Besides Santarem and Itaituba the Ruropolis Presidente Medici on the Transamazon highway also represents an important urban centre for the inhabitants of PIC. The INCRA headquarters (the government agency responsible for the administration of PIC) are located here and therefore it is in the Ruropolis Presidente Medici where all the transactions involved in the administration of PIC are carried out. Furthermore, with a population of around 10,000, Ruropolis also constitutes an alternative market for the inhabitants of PIC, both for sale of small quantities of their own products and for purchase of consumer goods, principally those of basic needs.

Within the project area itself, specially in the Southern Branch, some small villages (agropolis) have been emerging as alternative commercial centres and social meeting points for the colonists. A more detailed description of these villages, however, will be made later in this chapter.

The colonists of PIC have access to these three urban centers via the Transamazon and Cuiaba-Santarem highways. There are regular bus routes on both of these highways, allowing the colonists daily access to the three towns cited above and to Belem, the State capital. With the roads improvement, travel (principally by bus) is possible even during the rainy season.

Additional lines of communication between the inhabitants of PIC and regional or national society are provided by telephone, radio, television and the postal services available in the Ruropolis Presidente Medici or in the towns of Santarem and Itaituba.

Regarding the physical environment of the area the very few
available studies show that the area can be characterized by a generally undulating topography with a variety of types of upland forest, such as mature upland forest and vine forest (mata de cipo).

Edaphological studies or more precise analysis concerning the quality of the soil in the Amazonian Region are still also very scarce. According to the wide-region maps which include the area of PIC, (Radam-1974) the most frequently soil type found – covering probably more than 70% of the Region – are the Oxisols and Ultisols of very low native fertility (Alvim, 1980). Nevertheless, more recent and localized studies on the Transamazon highway surroundings, reveal a great variety of types of soils with its native fertility and relief changing almost from kilometer to kilomenter with some of these types being of high fertility. (Razani, 1978; Smith 1976).

The available information on the previous inhabitants of the area where the PIC is located are also limited. However this area, as is true for the entire Amazonian Region, had previously been occupied by a great number of Indian Nations. According to some authors, no less than 161 tribes, or more than 90% of the total number of Indian groups in Amazonia, have been or will be directly affected by the highway program launched in 1970. (Ramos:1980; Goodland and Irwin:1975). Heelas says that the Kreen-Akarore tribe was hit by the effects of the Cuiaba-Santarem highway and in less then 20 months their estimated population of 400 was reduced to 79 (Heelas-1978:25-27). A similar situation occurred with the death of 45% of the Parakana Indian groups in 12 months during the construction of the Transamazon highway (Bourne:1978:233). The decimation of the native inhabitants in the area of PIC seems to have been so strong that, nowadays, very few signs of this population can be found in the area.
The PA-70 Region is located in the area limited by the town of Maraba in the east and by the Belem-Brasilia highway in the west (see Map 6). The name "PA-70 Region" arose with the opening in 1970 of a road linking the above two points covering a length of 180 kilometers.

The town of Maraba is considered to be the third town in the State of Para with a population of around 100,000 inhabitants.

At the beginning of this century, Maraba was an important commercial centre for rubber and Brazil nuts (Velho-1972), but in recent decades, cattle raising has become the principal economic activity in the surrounding area. Most recently, with the discovery of gold in the region, particularly the deposits of the "Serra Pelada", the town of Maraba has become a centre for the commercialization of gold and other activities linked to its production.

To the west of the PA-70 Region, some thirty kilometers from the junction of the PA-70 road and the Belem-Brasilia highway, is located the town of Imperatriz. This town is the most important urban centre on the stretch of the Belem-Brasilia highway that passes through the Amazonian Region. With 100% increase in population in the period from 1970 to 1975, Imperatriz now has approximately 80,000 inhabitants (IBGE-1980). This town is also the first stopping point for migrants approaching the Amazonian Region from the southern and south-central regions of the country. Imperatriz is also the principal centre for the commercialization of rice produced in the State of Maranhao (one of the major centres of production in the country) and a distribution point for this product to different parts of the country.

Along the PA-70 road itself, there are four urban centres, all of them having emerged with the opening of the PA-70 road. The largest and most important of these is Rondon do Para, situated thirty kilometers from the Belem-Brasilia highway and with a population of around 20,000 inhabitants.
Although not very well organized, Rondon do Para already possesses a basic infra-structure providing services such as electricity, water, hospitals, banks and a reasonable commercial centre.

The other three urban centres or "villages" have some of the basic services of an urban infra-structure although their population number less than 6,000 inhabitants each. These are Vila Abel Figueredo at Km 92, Vila Bom Jesus at Km 66 and Morada Nova, thirty kilometers from Maraba (see Map 7). Besides these three villages, fifteen kilometers to the north of the PA-70 road is Vila Sao Joao da Agua Branca, a settlement of some 3,000 families but with a much worse infra-structure than the other villages located along the PA-70 road. A more detailed description of one of these villages located along the PA-70 road will be made later in this chapter.

The PA-70 road also crosses the Indian Reservation of Mae Maria. Within this reservation there are concentrated various tribes of the Gavioes Indians who, up until the early 1970s had been scattered throughout the entire region that is today divided by the PA-70 road. Like the townships, the Reservation is also a post 1970 development.

Although the PA-70 road is unpaved, it provides good travelling conditions during the entire year. Various bus lines operate daily along the road, allowing the population of the Region relatively easy access to either the town of Maraba or to the Belem-Brasilia highway. In addition, as the PA-70 is the only road linking Maraba to the south and centre of the country, there is a great deal of haulage traffic.

The area chosen for this study is located between the Mae Maria Reservation and the town of Rondon do Para, with a length of 90 kilometers and with a depth that in some cases reached 150 kilometers from the PA-70 road.

According to the maps produced by RADAM (1981) this area, which hereinafter will be referred to as the PA-70 region, displays a certain homogenity. It is a region of dense
equatorial forest covering a broken terrain of plains and plateaus which rise to "semi-mountainous" areas in the south and the high plains of Maranhao in the east. The soil is predominantly yellow clay with scattered areas of yellow-red "podzolico".

In terms of potential land use, this region has been found to be inadequate for an intensive extractive economy and to have a low or mediocre potential for agriculture and cattle raising. Only the extraction of timber is considered particularly viable. 2

Despite the aquatic stereotype associated with Amazonia there is relatively little water in the PA-70 Region, which is only served by two small rivers and a few streams. This region is also subject to frequent droughts, such as that of 1980 when the almost entire agricultural production was lost.

Regarding the previous occupation of this area, it must be pointed out that recent studies of the history of Amazonia have all confirmed the fact that this region has never been the "immense empty space" sometimes referred to. The authors of this expression forget that the concept of the "occupation of space" varies according to the social organization and modes of production employed by the human groups that inhabit the region. The area east of the river Tocantins in which the PA-70 Region is included, is no exception. Studies such as those of Arnoud (1975) and reports of explorers such as Castelneau (Laraia and Matta:1978) demonstrate that this area has never been "empty". On the contrary, it has been the stage for incessant and violent battles for the right to use the land and, more recently, as will be seen later, for the rights of use and possession of land.

Some three or four decades ago, the PA-70 Region became a place of refuge for the Gavioes Indians who had been living in the entire eastern Tocantins Region. The concentration of several groups of the Gavioes Indians in this area came about as a result of the oppression that they were experiencing in several parts of the Tocantins Region from the Brazil-nut exploiters. The scarcity of nuts in the PA-70 Region meant
that in this area, at least for a while, the Indians were free from the assaults of the white people. However, this respite came to an end in the fifties with the arrival of the peasants from the Northeastern Region who made this region a provisional stopping-place on the way to the Maraba Region.

Although the arrival of the first peasants from the Northeast posed a threat to the Indians, it did not provoke an immediate violent reaction on their part. It is possible to observe from some statements made by old residents in the Region\(^3\) that this peaceable attitude on the part of the Indians has as its root an equally peaceable attitude on the part of the peasants. The behaviour of the peasants can be explained by the relatively small space required to develop their agricultural production characterized by a subsistence economy. Cultivating small patches of rice and manioc, the amount of land which the peasants occupied did not disturb the Indians. Furthermore, the peasants, knowing the Indians' probable reactions should they feel threatened, acted cautiously in not approaching the territory where the Indian villages were located.

However, this peaceful coexistence between Indians and peasants began to deteriorate at the end of the sixties. By this time the difficulties in obtaining land in the Maraba Region, which was undergoing an increase in cattle-raising, forced many peasants to stay longer in the PA-70 Region, and therefore to use larger extensions of land. Besides this, the number of families who used this Region as a temporary stopping place increased with the incorporation of migrants who were attracted to the Region by the opening of the first part of the PA-70 road. With the increase of migrant families in the Region, together with their lack of knowledge of Indian behaviour, the earlier caution in not penetrating Indian territory was put aside.

In 1968 the Gavioes' territory was so diminished that they began to attempt a drastic and violent reaction against the peasants. The imminence of a conflict of major proportions finally alerted the authorities. Through the action of FUNAI and the Presidential Decree no. 63,515 on 10.31.68 it was
decided that the area bounded by the Tocantins River, the route of the future PA-70 road and the meridian 48’20’ should belong to the Indians and therefore be prohibited for occupation by peasant families (Arnoud-1975). This measure, however, had little effect on the newly arriving migrants who continued to occupy Indian lands. As a result, in the middle of 1969, the Indians attacked the occupants of an area in the vicinity of Km 40 on the PA-70 road. There were several deaths, houses were burnt and the existing crop fields destroyed. The frightened occupants, some 600 peasant families fled to the camp of a company then building the PA-70 road where the town of Rondon do Para stands today. This episode made FUNAI increase its efforts to convince the Indians involved in the conflict to move to the area now called Mae Maria and to join other Indian groups already living there in an attempt to avoid similar conflicts in the future. With the Government decision in 1970 to transform this area into the Mae Maria Indian Reservation, implying protection of the Indians by the Federal Authorities, the conflicts between the native population and the peasants came to an end in the PA-70 Region.

By 1970 few of these northeastern peasant families remained in the Region. They were dispersed either by the conflicts with the Indians or by the new flow of migrants who, coming from the southern regions of the country started a new and more systematic occupation of the Region. It is this new flow of migrants that constitutes hereinafter the subject of my study in the PA-70 Region.
II - THE SETTLEMENT PROCESS

1 - Project of Itaituba (PIC)

The settlement of colonists in PIC began at the end of 1972. Initially the families occupied those lots located along the Transamazion Branch and the Northern Branch of the Cuiaba-Santarem highway. The occupation of lots in the South Branch and those located along the side roads (vicinais) began in 1977. Table 7 shows the evolution of the settlement up to 1983.

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Settled Families</th>
</tr>
</thead>
<tbody>
<tr>
<td>1972 to 1974</td>
<td>1,263</td>
</tr>
<tr>
<td>1975</td>
<td>1,637</td>
</tr>
<tr>
<td>1976</td>
<td>2,035</td>
</tr>
<tr>
<td>1977</td>
<td>2,229</td>
</tr>
<tr>
<td>1978</td>
<td>2,302</td>
</tr>
<tr>
<td>1979</td>
<td>2,337</td>
</tr>
<tr>
<td>1980</td>
<td>2,874</td>
</tr>
<tr>
<td>1981</td>
<td>3,246</td>
</tr>
<tr>
<td>1982</td>
<td>6,214</td>
</tr>
<tr>
<td>1983</td>
<td>8,000 (estimated)</td>
</tr>
</tbody>
</table>


Up to 1974, the majority of the settled families were brought directly from their native regions to PIC and the government covered all of the costs of moving. During this initial period, Incra adopted some of the rules established in the official plans for the selection of the colonists and preference was given to families with a higher number of members of working age, with farming experience, without
other sources of income. Colonists under 50 years of age and with some level of schooling also had better chances of being selected and settled in PIC. After 1974, however, INCRA began to settle families who had "spontaneously" migrated to the region and established themselves in one of the towns close to PIC in the hope of acquiring an agricultural lot in PIC.

Following I will point out some significant aspects found in the pattern of settlement developed in PIC and to what extent it actually followed INCRA'S original plans as described in Chapter IV.

All the families received lots of 100 ha. with a document (Licença de Ocupação) which gives them the status of legal occupiers of the lots. Few, and these only from among the first colonists to be settled, had the chance to choose the lot they were to occupy. The others actually were forced to accept whatever Incra offered. As a result many families could not avoid receiving lots that had poor soil or problems with the water supply. Many families are still complaining that for not having been able to choose their lots they could not establish a neighbourhood with their friends or relatives, a factor mentioned by them as being of great importance especially during the first years of settlement. The significance of neighbourhood relationship within the project will more fully analyzed in Chapter VIII.

Only few colonists, more precisely those who arrived first, received the promised benefits such as legal minimum wage during the first months, basic tools for work or some kind of support for the construction of their dwelling places. In reality, the majority of the families were left at the entrance of their lots and they had no alternative but to try to find by themselves a way to overcome the natural difficulties and problems that exist in such an environment.

The lots assigned to the colonists were virgin forest. According to the colonists very few families were able to clear a larger extension of land than that necessary for the building of the house and the planting of some crops for
Those who could produce an agricultural surplus were those with a large number of members able to work or those who came with some money which permitted them to acquire the necessary tools to clear the forest and to hire labourers. In the case of those families with less than four members available to work and without money, the production of agricultural surplus only came after the fourth year of settlement.

Very often cited by the colonists were the problems of transport which affected even those families settled in lots located along the highways. Many families lost their first surplus production because it could not be taken to the market. The problem of transport turned out to be yet worse for those families settled after 1974. For by this time INCRA's chief priority was to settle as many families as possible. So, a great number of colonists were assigned lots in the Southern-Branch or along the side-roads even before these roads had been built. Besides transport, a lack of an infrastructure of commercialisation also weighed negatively on the colonists' economic performance during the first years of settlement. Aside from all this, the colonists also faced great difficulties due to lack of knowledge about the physical and climatic environment. Most of these cited problems will be focalized on again further on in this thesis. For the time being, however, it is important to keep in mind that such problems greatly reduced the possibility of many colonists to develop all their potentialities as family providers. As a result, very few families could actually produce more than they needed for their own subsistence and make some kind of significant capital savings during the first years of settlement.

It seems interesting to point out that, in spite of the adverse conditions faced by the colonists until 1974, no more than 15% of them decided to abandon the project. Although such a rate is usually taken as being very high by analysts of the project, including the Incra officials, it is actually low compared with similar projects in other countries.
Formation of Villages

After 10 years of settlement, contrary to what had been envisaged in the original INCRA plans (construction of agrovilas at ten-kilometer intervals and agropolis at every 40 kilometers), very few villages have actually emerged in the PIC area. In the Northern Branch, which covers a stretch of 90 kilometers, only two of the lots reserved for the construction of agrovilas are occupied by a church and a school. Although the presence of a church or school may occasionally constitute a meeting point for the colonists, it does not act as a focus for the construction of commercial or residential houses as, according to the original plan, should have occurred. The small shops that exist in the Northern Branch are scattered along the highway on private lots that were originally obtained for agricultural exploitation. The owners of such establishments are, in general, colonists who combine the functions of agricultural producer and trader.

The plans regarding the construction of agropolis were also not fulfilled as none actually emerged in this part of the Project. The commercial and social activities that should have been located in the agropolis are developed by the colonists in Santarem or in Ruropolis Presidente Medici.

A similar scheme is found in the Transamazon Branch. Here also few of the lots reserved for the agrovilas have been occupied by schools or churches, and none of them have been used for the construction of residences by the colonists. Only two of these lots have been used for some kind of commercial and social activity but at low expedience level and far from what should be an agropolis. Since it is relatively easy to travel along the Transamazon highway, the colonists of this Branch concentrate their social and commercial activities in Ruropolis Presidente Medici or Itaituba.

In the Southern Branch, however, mainly due to the greater
difficulties of access to the nearest urban centre (Itaituba), several villages have emerged, even though these do not always follow the INCRA plans regarding their location and basic functions. In a stretch of 150 kilometers, six villages already exist, even though two of them do not have a school and other basic services originally planned for the agrovilas and agropolis. The largest of these villages, and the one that most resembles an agropolis, is Trairao located along the Cuiaba-Santarem highway and 80 kilometers from the Transamazon highway. In 1983, Trairao had around 100 houses, various commercial establishments, clubs, bars, a school with some 100 pupils, a pharmacy, etc. Although the majority of the houses line the highway, which is also the village’s main street, there are also two roads which run parallel to it and four which cross it. Among the inhabitants of these villages, approximately 10% are neither colonists nor agricultural producers, but concentrate their activities on commerce. In general, these traders are either ex-colonists who have given up agricultural activity and sold out their holdings, preferring to concentrate in the commercial field, or people from other regions who were attracted to PIC with the sole objective of developing commercial activities and have no direct link with agricultural production. The other 90% of the population is composed of families with lots in the vicinity but who prefer to live in the village.

The villages of the Southern Branch have developed rapidly although, in fact, only two of them started with the building of a school or other public service set up by the INCRA. Generally, the villages emerged with the arrival of an "outsider" or non-colonist trader. This trader would acquire one or two lots (not always located in the space reserved for agrovilas or agropolis) and construct a combined restaurant and store which, in most cases, also had rooms for rent to travellers. This commercial centre rapidly became a stopping point for buses and a meeting place for the colonists living in the vicinity. Then other houses began to be built near it by the colonists, attracting traders with the consequent opening of new shops. By the time that 10 or 12 houses
appeared the colonists had already begun to refer to the site as a "village" or "community" and had begun to press for the establishment of schools and other basic services.

The INCRA continued as the official agency responsible for these communities up until 1984; that is, responsible for the granting of lots, the appointment of a community representative chosen by the inhabitants and the installation of public services such as schools. However, with the decline in the services offered by the INCRA, this role has been reduced to the granting of lots and the appointment of representatives. On their part, the role of the representatives has been restricted to checking that houses are being built on the correct lots, the choice of site for the church, and other smaller and less significant functions.

In short, it may be concluded from the manner in which these villages have been developed, that apart from the granting of plots still under INCRA control, these population centres have actually developed spontaneously without significant interference from the State or the official administration regarding their urban planning or provision of basic public services. Actually, the presence of the INCRA has been seen by the colonists as an impediment to the development of the villages. The colonists argue that, being nominally under the administration of INCRA, these villages do not fall within the scope of municipal (municipality) authorities which could provide them with a great range of basic public services. Since the INCRA is unable to supply these services, the villages are denied a more dynamic development.

Living in the Villages

Not all the colonists who have settled in PIC have been enjoying their right to have an "urban plot" and establish their residence there. Some reasons for this can be underlined. One is that some of the colonists have actually been denied such a right by the INCRA which argues that in some villages there are no more empty urban plots. Indeed, as...
mentioned before, around 10% of the inhabitants of the villages are not colonists. It implies that they are living on plots that, according to the original INCRA plans, should have been occupied by colonists. Many of this 10% are comprised by former colonists who have decided to sell their agricultural plots but have kept on living on their urban plots. The legality of this behaviour is not clear even for the Incra officials. Although the INCRA rules establish that the urban plot should be occupied by colonists, there is nothing saying that once a colonist sells out his agricultural plot he necessarily has to get rid of his urban plot. Some 10% of the population, however, never were, and are still not, agricultural producers. They just came to the project, bought an urban plot from a colonist and started to develop their different activities without any commitment with Incra. So, when Incra argues that there are no more urban plots to assign to colonists, it is probably true. What Incra does not make clear is, that if this 10% of the population has a legal right to live in the villages, why then does Incra not reserve new plots to attend the demands of the colonists who want to live in the villages?

Another reason for a great number of colonists not to be living in the Villages, and being excluded therefore from some basic public services such as schools, has economic roots. Many colonists said that by moving to the village, the family production immediately lost the labour of women and young children on the agricultural plot. As it will be made clearer later on in this thesis, the family labour force is an important factor in its production system, and to lose one of its workers can, for most families, mean a threat to their economic stability.

Another disadvantage pointed out by the colonists for living in the villages is the loss of domestic production. As will also be shown later, this domestic production (provided basically by female labour in cultivating garden products and raising domestic animals) is an important element in the composition of the family income. However, once the family takes up residence in a village, this source of income
disappears since the size of the lots in the village does not allow the female labour force to establish a scheme of production similar to that possible on the agricultural lot. One more disadvantage stressed by the colonists is that while the family income diminishes with the move to the villages, expenditures tend to increase. With the absence of the female labour force from the agricultural plot, it becomes necessary for the family to buy a number of products (such as manioc flour, vegetables, eggs, etc.) since the male labour force is not used to providing such products.

Finally, the colonists argue that when the family lives in the villages, the male labour force itself tends to become less productive as the agricultural plot is not always close to the village and the trip between the village and the agricultural plot is usually made on foot. Some families have attempted to offset this loss of productivity by keeping their labour force (basically the husband and the older sons) on the agricultural plot during the week and only returning to the village on weekends. This strategy, however, implies that the family has to face an increase in its household expenses in order to supply and maintain two residences.

Despite all the disadvantages cited above, a significant number of colonists still prefer to live in the villages. This is the case, for example, of those for whom the hiring out of labour is an important element in the family income. According to them, being in the villages gives them a better opportunity to sell their labour power or to engage in different activities that generate monetary income sometimes higher than that provided by their agricultural plot. Other colonists emphasize that by living in the villages they have better knowledge of the market, better access to credit and also easier access to agricultural expertise.

Although those families who live on their agricultural plot in general were found to be in a better economic situation, during the fieldwork it was observed that it is not only the economic aspect that determines whether or not a family lives
in the village. Despite the evident economic drawbacks, several families, especially those with an urban background, demonstrated no wish to live on their agricultural plots, arguing that they could not cope with the "rural isolation" and lack of frequent social contact.

2 - PA-70 Region

The systematic occupation of the area chosen for this study, that is, of the lands between the Mae Maria Indian Reservation and the town of Rondon do Para, coincided with the opening of the PA-70 highway at the end of 1969 and the beginning of 1970.

As was said earlier in this chapter, this area had previously been exploited by both the indigenous groups who were later moved to the Mae Maria Reservation and some peasant families from the Northeast. For these peasants, however, the area merely constituted a temporary stopping place in their migration towards the Maraba region (Velho-1972). So that it was only from 1970 onward that this area became the target for a definite occupation by migrants from other parts of the country.

The first migrant groups to arrive in the area consisted of families who had been unable to acquire land close to the Belem-Brasilia highway (most particularly in the area known as Gleba Azul) and some recently-arrived families who had been living temporarily in the town of Imperatriz.

Generally, a group of these migrants, consisting of 5 to 10 families would hire a lorry to transport themselves and their possessions as far as the PA-70 road had reached. On arrival at these sites, called by the peasants as "way stations or stopping places" (pontos de parada) they built temporary shelters for their families and began to reconnoitre the area for the demarcation of their lots or "claims".

The process of choosing and marking out a lot took place by common consent among the migrants; any small disagreements which arose would be settled by one of the migrants who had
generally emerged as leader of the group even before they arrived in the area.

Two basic principles guided this initial process of occupation. The first was that the migrants should restrict the area of their claims to no more than 100 hectares, since they already knew that this was the legal extent of the lot which each family (according to the existing law) might appropriate on unclaimed or public land. In obeying this law, the aim of the families was to avoid problems later on, particularly with regard to eventual official regularization of their ownership.

The second principle that guided the initial process of occupation was that, once the lot had been marked out, it was no longer to be considered as "free" for occupation by families who would arrive later, even if the family who had marked it out had had no time or means to begin exploitation of the lot for the subsequent two or three years.

In general, the demarcation of claims entailed simply blazing trees to indicate the boundaries of the lot, and building a camp and felling some other trees to show the presence of a family on the lot.

The first lots to be marked out were those located along the highway and those with the best access to water or those with better quality soil.

Those families who arrived after the land free for occupation and close to a stopping place had been taken, had either to settle on those so called "deep" lots, that is, far away from the highway, or set up a new stopping place further along the road, where they would repeat the same pattern of settlement.

Once the lot had been marked, the migrant's next concern was to clear a small area with good access to water to build a house. Following this, and after his family had been transferred from the stopping place to the lot, the migrant would immediately begin to clear an area for cultivating crops with a view to guaranteeing his family's own subsistence during the subsequent year. In general, during
the first year of settlement, the family was only able to clear land to grow manioc and rice, but in such small quantities that in some cases, these crops were insufficient to satisfy the family’s needs. As a result, many families had to leave the area even before the end of the first year of settlement.

Already in this initial period of settlement some families were placed in a better position regarding their chances of survival and firmly establishing themselves in the area. Among these families there were those who had migrated to the region as part of kindred groups. The ties of kinship favoured the forming of systems of mutual solidarity and support within these groups, which were fundamental for these related families to be able to clear enough land to cultivate sufficient crops to meet their immediate needs during the first years of settlement. Besides this, given the migrants’ lack of knowledge regarding jungle environment, many families felt unable to face, on their own, the dangers of the forest, particularly those of attack by Indians or wild animals. So women and children felt much safer with the company of relatives when left at home while the men cleared the land or hunted game for their current needs, also in groups of relatives. A more detailed analysis of the important role of kindred groups among the peasants settled in PA-70 will be given later in this thesis.

Another important factor for the family’s survival which also placed some families in a better position than others during this initial stage of settlement, was the number of members who were able to work. According to the peasants, during the first two years, the labour of at least four members (that is, four members over 11 years of age) was necessary to clear enough land which could guarantee the survival of the family. Up until 1973, the advantages for a family with a large number of adult members was similar to those enjoyed by a family belonging to one of the kindred groups. Besides that, as will be seen later in this chapter, after 1973, the size of a family also determined the size of the lot
Finally there was the advantage enjoyed by those families who arrived in the region with a certain amount of ready cash or "initial capital". This money enabled these families to acquire foodstuffs to ensure their survival until the first harvest, allowing them to buy better tools and even, in some cases, to make use of hired labour in clearing their land. However, very few of the families who arrived in the region before 1973 had sufficient initial capital to give them any great advantage over the others. In general terms, the first families to arrive in the region had very similar economic backgrounds; that is, almost all of them arrived without any or with very little initial capital.

In the first years of settlement, most of the families concentrated exclusively on the cultivation of products for their own consumption. There were two reasons for this: first, the families had no material means to expand their level of production beyond that necessary for their own survival, and secondly, the commercialization of a fortuitous surplus was almost impossible due to the difficulty experienced in transporting it to the nearest urban centres. So, by mid-1974, the majority of the peasants in PA-70 Region were committed to a system of production very close to the so-called "subsistence production". Other basic needs for their survival, such as clothes, salt, kerosene and medicine were provided by using the money they had acquired through occasionally having worked as hired hands, either for the company building the road or for one of the forestry companies operating in the region. The sale of eggs, chickens and even pigs also helped some families to satisfy their financial needs during the first years of settlement.

With the completion of the PA-70 highway in 1974, the families then began to expand their crops and cultivate enough beans, maize, potatoes, rice, manioc and vegetables for commercialization. Some families also started to cultivate small fields of perennial crops such as coffee, and fruits such as oranges, bananas and paw-pans.
Land Conflicts

By 1974, all of the lots along the PA-70 road had already been occupied and those migrants who still arrived in the Region had no alternative but to try to find "free" land even if it were located far away from the highway. It was also by 1974 that a series of violent conflicts arose over the possession of land in the PA-70 Region.

In verifying the initial causes of these conflicts it should first be stressed that due to a substantial increase in the number of migrants arriving in the area (in great part due to the completion of the PA-70 road) those two principles that underlay the process of settlement during the first 3 years had practically ceased to exist. Due to the huge demand for land, it became almost impossible for each family to demarcate a 100 hectare lot without coming into conflict with another family with the same objective. The principle of respecting areas already marked out (even if not being exploited) also came to be disregarded by newly arrived migrants who were desperate for a plot of land, however small, to support their families. For these migrants, unexploited lots were considered as "free" land, that is, free to be occupied. As a result a number of conflicts arose between these newly-arrived migrants and those who had previously marked out their land despite not having yet exploited it but nevertheless still claiming their rights over such land based on those principles present at the beginning of the settlement. The problem was aggravated by the lack of a common leader who could act as a mediator between the involved parties and by the total absence of government authorities in finding a solution for such problems in this region.

Besides this, some of the larger families began to lay claim to far more than 100 hectares of land in an attempt to guarantee land for all their members in the future. This attitude, as with the existence of unexploited lots, enraged the more recent arrivals whose only objective was to have
sufficient land to assure their families' survival.

The completion of the PA-70 road also attracted people with money who began to buy up the holdings of peasants who were already settled, with the result that estates covering 300 or 400 hectares of land began to appear in the region. The owners of these big estates were not necessarily living in the Region and their staked-out lands became the target of constant invasions by newly-arriving migrants.

It was, however, with the arrival of the "grileiros" (land-grabbers) that the struggle for land in the region became extremely violent. The "grileiros" were individuals armed with false documents who claimed vast tracts of land already occupied by various families. These grileiros used every type of pressure, frequently including physical violence, to evict the families occupying the land they said was theirs and which, in general, had been promised or sold by these grileiros themselves to big landowners and enterprises.

Whenever the government authorities were asked to intervene, they always favoured the grileiros, who used dubious means such as bribery, to obtain the official papers (or title deeds) which enabled them to convince the judges that they were the true owners of the disputed lands.

Feeling themselves powerless in face of the grileiro threats of violence and the government's failure to protect them, some peasant families abandoned their lots immediately and migrated to other parts of the Amazonian region. However, other families continued to resist the efforts of the grileiros for a longer period and in some cases, they could actually keep their land by an eventually favorable intervention of the Government authorities. This was, for example, what happened in one of the conflicts near the Vila Sao Pedro de Agua Branca. In this case, after having resisted the grileiro violence for more than 3 years, around 300 families finally got the protection of the Government who sent Army agents to the area to drive out the hired men of the grileiros. This decision taken by the Government,
However, only came after the peasants had had 3 of their members shot dead and then threatened violent revenge if they did not rapidly receive the guarantee that they would be able to keep their lands.

The prospect of stronger and more violent action by the peasants was not always taken into account by the Government authorities, as is well illustrated by the conflict which took place in an area called Fazenda Capaz. This area of 103,000 hectares was already occupied by no less than 250 families when an American family arrived claiming their legal ownership of the area and requiring an immediate withdrawal of the peasants. The majority of the peasants then living in this area had, shortly before, suffered a similar experience which had ended badly for themselves; so this time they tried a more pacific means to solve the conflict. For this reason, they made many attempts to convince the American family to start some kind of negotiation with them; they also notified the government authorities about their determination not to lose their lands without some kind of indemnization; and finally, they let the American family and the authorities know that they would not leave the area even under the threat of massacre made by the American family. Their warnings, however, were not taken into account by either the American family or by the Government authorities. So, shortly before the hired men and the police arrived to drive them away, a group of peasants invaded the American family’s house and killed the head of the family and two of his sons. After that, some peasants, afraid of being prosecuted for their crimes, decided to leave the area; others, however, remained there until they obtained official recognition of their rights to the lands they had been working, rights which did not materialise until 6 years later. On their part, the members of the American family could only keep a small part of the area which they had first claimed as theirs.

Although the direct, and particularly military, intervention of the Government offers some protection of peasant rights, this intervention still occurs only occasionally when the conflict has reached a high level of violence. Many crimes
against the peasants have remained unpunished except when the
degree of violence generates a sufficiently strong reaction
throughout the region. One example of this was the crime
committed by two grileiros who, besides killing 6 peasants,
decapitated two of them with a chain-saw. This crime provoked
such a strong reaction on the part of the local population
that the police authorities of Maraba were asked by the
Federal authorities to imprison the perpetrators.

When the conflicts began to spread throughout the region,
those peasants who had not yet been threatened by the
grileiros, began to appeal to the government in a desperate
attempt to legalise and guarantee their claims. However, they
were frustrated in their attempts by the bureaucracy and the
inefficiency of the Government agencies and by the
difficulties in getting through to the state authorities.
Despite this, some peasants did manage to get at least a
document "Licenca de Ocupacao" from the INCRA, stating that
they had been occupying the lot with official authorization.
The majority of families, however, could not afford to go to
town and wait, sometimes for days, in order to get this
document.

At the same time, the possible security that any kind of
document could give the peasants made them demand a receipt
bearing the seller's signature when buying another's plot, a
transaction until then confirmed only by verbal contracts
between the parties. This bill later became for many families
the only proof that could be shown to the State
representative to obtain legal regularization of their lands.
However, those occupants who had not bought their land, but
had simply settled it, and who could not get the "Licenca de
Ocupacao", as was the case of the majority, did not possess
any document at all. It was precisely against these peasants
without any documents that the action of the grileiros was
most intense, as they knew that in any judicial dispute the
peasants had nothing to confirm their rights to the lands
they worked.

By 1978 the land dispute situation in the Region was so tense
that the Government authorities decided to take some steps in order to avoid a more generalized conflict. The Government decisions, however, were very sluggish and hesitant. In the words of one government agent, a decision favouring the grileiros could generate a revolt by the peasants with unforeseeable consequences. On the other hand, a decision favorable to the peasants could unleash an invasion or re-appropriation by those who had already been dislodged by the grileiros.

The legislation in force at that time, drawn up by the government authorities to put an end to the conflicts, stipulated that the occupants of a maximum of 100 hectares who had been working the land for a period of a year and a day, had the right to claim ownership. But those so called "medium occupants" that is, those occupying an area of between 100 and 600 hectares could only get ownership rights if they could prove uninterrupted occupancy of at least 10 years. At the same time, legislation favoured the rapid regularization of claims up to 60,000 hectares since, as pointed out by one of the government agents, "the actual investment was considered of such relevance that once paralysed it could bring about a delay in the economic development of the country".

The application of this legislation actually caused the local population more annoyance. Small occupants, who at first appeared to gain some advantage, in fact, could not obtain legal and official title to their lands unless they were able to overcome the administration's bureaucracy. Medium occupants were infuriated, as few of them were able to comply with the requirement of 10 years on the occupied land. And finally, favoured were the big estates or enterprises such as the Javez and Jacunda Industrial Companies, whose claimed areas covered many thousands of hectares. The legislation actually favoured the game played by the grileiros, since it was they who sold these lands to the enterprises when the area had already been occupied by hundreds of peasant families. By giving the right of ownership of these lands to the enterprises, the legislation actually forced hundreds of
families to leave their plots, plots, which in many cases, the families had been occupying and living on for many years. The complexity of the situation, therefore, required that each case should be studied individually, culminating in a solution based, above all, on honest attitudes on the part of the mediators. This, however, was asking too much of the corrupt and inefficient Government agencies. Not even confirmation that the majority of the title deeds displayed by the grileiros were false or that companies such as Javez or Jacunda Industrial Companies, after dislodging various families, had not made any investment in the area, could induce the authorities to make any provision to ensure that the title to the properties was given to those who really should have had this right.

From 1980 on, with a more active presence of the Government authorities in the area, especially through the INCRA, the conflicts became less desperate, although a great number of peasants were still threatened with the loss of their plots. At the end of 1981, the government created GETAT - The Executive Group for the Lands of Araguaia/Tocantins, citing the need for an urgent solution to the social conflicts in the area in which the PA-70 Region was included. This agency, which consisted basically of military members and had ample powers, was to replace the INCRA in the area and give maximum priority to solving land disputes involving peasants or small producers. However, when this field study was undertaken in 1983, a large number of families had not yet had their situation defined by GETAT; thus the climate of insecurity regarding the possession of the land had not totally disappeared for many of the families that happen to have been included in my sampling.

This period of violent conflict over the possession of land (which lasted until 1981) left a strong and negative socio-economic mark on the PA-70 Region. According to an estimate made by older residents in the Region, probably more than one thousand poor families were forced to move to
another part of the Amazonian Region after losing their plots and all the work they had put into them. Besides this, the insecurity regarding the possession of the land greatly influenced the system of production in the Region. Having no guarantee that they would be able to keep their plots in the following year, many families had no incentive to utilize all their potential labour force and material resources to expand their production. So, during practically this entire period, the great majority of families limited their production to their own consumption and a small surplus for commercialization to acquire other basic necessities for their survival.

From 1980 on, however, with new promises from the Government to end the land conflicts in the Region, many families attempted to clear (or more precisely, fell the trees on) the greatest possible extent of their lots as this was considered evidence of land improvement and eventually also considered in their favour by the authorities presiding over the legal disputes with the grileiros.

It was only in 1982, with the hope that the GETAT would guarantee the peasant's rights to their lands and with the opening of some side-roads, that the families started to substantially increase their level of production.

The emergence of villages in the PA-70 Region

Two types of population centres have developed in the PA-70 Region. One is composed of villages (vilas) which appeared along the PA-70 highway. The other is composed of the so-called rural communities (comunidades rurais) which have developed more recently and are placed generally far way from the PA-70 road (see Map 7). I will first comment on the appearance of the villages.

There are three villages located along the PA-70 road within the limits chosen for this study; they are: Vila Abel Figueredo at Km 92, Vila Bom Jesus at Km 62, and Vila Sao Raimundo at Km 40. As the emergence and development of these
villages is somewhat similar, I will concentrate my description on Vila Abel Figueredo which I had the opportunity to get more information about.

Vila Abel Figueredo was, at first, a stopping place for those migrants who could not find free land around Vila Rondon do Para then, the last stopping place on the PA-70 road.

The first group of migrants to reach Km 92 in 1970, where Vila Abel Figueredo is now, was composed of 5 families linked by ties of kindship, coming from the State of Minas Gerais. As these families could demarcate their plots of land nearby, they built their permanent dwellings at the stopping place. One of these migrants, Sr. Onorato, who was leader of this group took the initiative of organizing and orienting the newly arriving migrants regarding the building of provisional shelters and the finding of free land for occupation.

As the number of new migrants and the difficulties in finding free land nearby was rapidly increasing, several families began to stay on for a longer, time or even permanently, at the stopping place. According to Sr. Onorato, at the beginning of 1973, the stopping place at Km 92 already had 30 permanent dwellings and approximately 120 provisional shelters with families awaiting an opportunity to move to their own plots. By this time, one of the 5 original families had opened a small shop containing a variety of goods such as foodstuffs, medicine, kerozene, salt, clothes, etc. in small quantities.

By 1974, with the definite opening of the PA-70 road, a great number of migrants who could not find free land and traders began to establish themselves permanently at the stopping place. Realising that the stopping place would become a permanent population centre, and trying to avoid future problems regarding the building of new residences, Sr. Onorato decided that some kind of rules should be made for the occupation of the area. Using his empirical urban planning knowledge, obtained at his previous employment in Minas Gerais, Sr. Onorato drew a map of how the future village should develop. He also established rules regarding
the size of the plots to be occupied by the residences, the space reserved for public services such as church, market, schools, squares, etc.

Even though Sr. Onorato was not an official representative in this emerging village, his suggestions and the rules he created regarding the development of the village were taken into account by the residents until 1978 when the village began to have a Government representative.

By 1983, Vila Abel Figueredo had approximately 600 residences, a central market, many shops and bars, three churches, a cinema, primary and secondary schools, a private hospital and so on. There was also a movement among the local population to transform the vila, then under the administration of Sao Joao do Araguaia municipality, into a municipality in its own right with its own administration.

The emergence of the rural communities

During the first years of settlement those peasants who could not settle along the PA-70 highway were widely dispersed and isolated from one another in the middle of the jungle. In demarcating their lands, these peasants attempted, whenever possible, to build their houses in the centre of their lots. According to them, this strategy enabled the families to defend their holdings more easily against "invaders" such as Indians, migrants who arrived later and grileiros.

However, once the major part of the region had been occupied or claimed and the families felt more secure in their possession, changes began to be made in the physical location of the houses. These changes were basically undertaken with two aims: to have a greater proximity to neighbours and better access to water. The presence of close neighbours has, according to various accounts, often been the deciding factor in a family's survival, especially during the first years of settlement. Unaccustomed to the forest environment, most of these families felt themselves under constant threat and unable to protect themselves from animals or from
catching unknown diseases. The situation was even worse for small families or those with young children. In such cases, the father often found it impossible to go to the township for the family's essential supplies since he was unable to leave his wife and children alone in the middle of the jungle. Current inhabitants cited the cases of various families that had abandoned their lots because they had been unable to adapt to the isolation and to the hardship of the jungle environment.

Under these circumstances, the formation of neighbourhood "nucleos" was an inevitable development, determined by the following factors: a) a defensive strategy in a hostile environment; b) the need for solidarity and mutual aid in case of sickness or the absence of key members of the family; and c) as various inhabitants remarked, the need for social relationships which extended beyond the family nucleous.

As these neighbourhood groupings proliferated, the number of families living in isolation diminished sharply. In fact, now they are almost only found in the most remote areas, where the process of occupation is still in its initial stages. To give an idea of the degree of isolation endured by these families during the early period of settlement, I may quote the example of one of the families contacted, where the wife declared that she had not seen any person other than those in her home (her husband and children) since they had arrived at the area eight months before.

As previously mentioned, the locating of houses also depends on good access to water. Therefore, where the water sources are widely spread out, the houses in that specific neighbourhood grouping are also more widely dispersed. However, in general, the distance between the houses in any neighbourhood is never more than one kilometer, with a probable average of two to three hundred metres.

Once a neighbourhood (usually composed of 5 or 6 dwellings) is formed it becomes a point of attraction for the Catholic Church which uses this organizational basis for the development of its community formation program in the Region.
The first action of the church representatives is to encourage the neighbourhood to construct a chapel. Actually, it is only after the construction of the chapel that a neighbourhood nucleus begins to be referred to as a "community" and as a geographical reference for the population of the Region.

Generally the site chosen for the construction of the chapel is on the land of the family with the closest relationship to the church and which is almost always the family which already exercises some form of leadership in the neighbourhood.

Beginning with its construction, the chapel constitutes a centre or focus for the construction of dwellings by peasants who had not previously attached themselves to the neighbourhood grouping.

Those peasants with more distant lots or ones that are not near the chapel, obtain formal permission from those who live near the chapel, to build their houses on the nearby lots. This permission usually involves some form of payment or undertaking by the applicants. In some cases these applicants will cede part of their own lot in payment and in others, the permission is conditioned to a pledge of temporary occupation or of not making a definite claim for the area occupied by the house. However, this last type of arrangement is restricted to families which are very close friends or share some degree of kinship.

The increase of dwellings in these communities is also due to the fact that the sons, when they marry, tend to build their new houses close to or on the lands belonging to their parents. This happens even in the cases of sons who already own their own lots but whose location are farther away from the community. In these cases, however, the "formal permission" as cited above, is dispensed with, particularly the type involving some kind of material payment.

From this one may first conclude that, not all the families in the community live on the lot where they work or are the owners of the lots where their dwellings are located; and,
second, that the majority of the inhabitants of the rural communities are linked by some form of kinship or close friendship.

Each community has anywhere from ten to thirty houses and some communities already have small shops and great possibilities of soon attaining the status of "vilas". There are some fifteen rural communities in the area included in this study⁷ and, as was established by the fieldwork, they are very similar, not only in the nature of their formation but also in the type of social relations developed within them, a topic to which I will return in more detail later in Chapter VIII.
Notes

1 - In Brazil a concentrated settlement is soon called "urban". IBGE, the Brazilian official institution responsible for the populational census, differentiates cidades (towns), which are the main towns of a município (municipality) from vilas (villages) which are the seats of the smaller districts. The rural population is considered to be made up of those persons living outside the constructed area of the places mentioned.

2 - The information regarding the quality of soils in the area were taken basically from the agronomists of Emater-PA based in Rondon do Para.

3 - Most of the information regarding the recent history of PA-70 was obtained through statements made by old residents in the course of the fieldwork.

4 - A more detailed description of the process of adaptation to the new environment is made in Chapter VII.

5 - The decision to use the age of 11 to differentiate the child from the adult, was based on the peasants' own statements which say that only after the age of 11 is a person physically able to carry out the work of an "adult".

6 - Other comments about the role of GETAT in the Region have already been made in Chapter IV.

7 - When this fieldwork was undertaken there were no available official data regarding the number of families living within the area chosen for study. However, reliable information given by SUCAM-Maraba (an institution well known for the seriousness of its work) permits an estimate of 6,000 to be the number of families settled in that area.
CHAPTER VI

Migrants' Background

The purpose of this chapter is to provide a better knowledge of the peasants settled in the PIC and PA-70 settlements by highlighting some aspects of their background.

Very often rural communities are considered to have a homogeneous population, especially regarding their cultural and social attitudes. The similar world view of the inhabitants of such communities is usually attributed, by many social scientists, to the fact that for many generations these populations have lived in the same place and with limited contact with the outside world. It is outside the scope of this chapter to make further speculation about the scientific validity of such a position as well as its generalized application. But supposing that the above assumption is true, PIC and PA-70, being recently-formed communities, would be considered to be, a priori, highly heterogeneous. Since I do not work with "suppositions" an empirical investigation is required.

Since both, PIC and PA-70, are recently-formed communities, any attempt to trace the cultural and social profile of their populations requires, necessarily, an investigation of their background.

The contents of the following sections examine the level of social and cultural heterogeneity existing among these two populations and to what extent such heterogeneity and the families' background influence their adaptation to the new social and physical environment of the Amazonian frontier.

From out of a large range of aspects which deal with the background of the population, I have decided to concentrate my analysis on those aspects which, during the field study, were observed to be the most prominent and to exercise the strongest influence on the settlement process, adaptation and
on the emerging pattern of social relationships within the
two communities. These aspects are: place of origin, previous
employment, migration history and reasons for migration.

1 - Place of Origin

For some authors writing on, and analysing the occupation and
colonisation of the Amazonian frontier, the families' place
of origin has been taken as a means of identifying the routes
and nature of the migratory movements which compose the
process of internal migration in Brazil (Aragon-1981; Magno
de Carvalho-1976; Becker-1982).

For other authors, particularly those devoted to the specific
study of directed colonization (Moran-1981; Ferneside-1980;
Wesche-1981), as well as for the actual government agency
(Incra) responsible for the official settlement of migrants
in the region itself, a family's place of origin has been
seen as a predictor of future performance, and consequently
of the family's chances of success or failure in the region.

For the migrants themselves, place of origin is mainly used
as a means of reference or identification of the members of
the community.

The prevalence of this criterion among the migrants may be
understood due to the absence in recently-occupied areas of
other references usually found in rural communities to
categorize individuals. A number of scholars (Candido-1964;
Smith,T-1972; Pereira de Queiroz-1973) have shown that in
traditional rural Brazilian communities, individuals are
primarily categorized or identified by the family group to
which they belong; that is, it is the name of the family
which constitutes the prime means of identification of the
members of a community. However in recently-formed
communities, such as those found in frontier areas, the
family groupings are still not sufficiently structured and
known to constitute a frame of reference for their members.
As a result, on the frontier, the role of the family name has
been taken over by the individual's place of origin. An
eexample of this on the Amazonian frontier is the denomination

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In this thesis, the inclusion of place of origin as an object of analysis is based, principally, on the assumption that while all Brazilians share a national culture to a greater or lesser extent, one cannot deny the existence of regional subcultures (Wagley-1969; Lambert-1959; Bastide-1959). These regional subcultures are identified as being: a) Northern, composed of the population living in the States of Amazonas, Para, Rondonia, Acre and the federal territories of Roraima and Amapa; b) Northeastern, which includes the population from the States of Maranhao, Piaui, Ceara, R. G. Norte, Alagoas, Paraiba, Pernambuco, Sergipe and Bahia; Southeastern, which includes the States of Minas Gerais, Espirito Santo, Rio de Janeiro and Sao Paulo; Central-Western, which includes the States of Mato Grosso, Mato Grosso do Sul and Goias; and Southern composed of the populations located in the States of Parana, Santa Catarina and R. G. do Sul (see Map 8).

An analysis of these subcultures and their main characteristics is out of the scope of this section as they have already been sufficiently covered by authors such as Pereira de Queiroz (1965), Candido (1964) and Diegues Jr. (1973). In short, however, the majority of the authors share the idea that the Northerners have been greatly influenced by the native Indians, the Northeasterners carry significant aspects of the African culture, the Southwesterners and Central-Easterners which in this work will be fused together under the denomination of Central-Southerners are deeply influenced by the African and Iberian cultures and the Southerners show strong aspects of the German, Italian and Polish cultures due to immigration influence in their states.

In this section, I will restrict myself to identifying which of these subcultures are present in the population of PIC and PA-70 and which are the factors that determined the greater presence of some over others.
Geographical Regions of Brazil

Northern Region

Northeastern Region

Central-Western Region

Southeastern Region

Southern Region
In order to identify the presence of these sub-cultures in PIC and PA-70, I made use of the following methodological proceeding: the family, and not the individual, is the unit of analysis. When facing situations such as when the spouses or other members of the family have different places of origin, I considered for the entire family the place of origin of the member with the strongest power of decision within the family. In the majority of the families the father was the strongest member, but there were cases where the mother assumed this role. The identification of this member naturally was based on investigation carried out during the fieldwork and with close conviviality with the families.

The definition of place of origin also required some examination. Initially, it appeared that place of origin could be the place of birth, the place where the family lived longest or the place where the family was living before coming to the Amazonian frontier. Finally, I decided to leave it up to the family itself to determine which was its place of origin and therefore to which subculture they felt to belong. The criteria used by the families to decide their place of origin coincided with the criteria I opted for should I not get an answer from the family. Such criteria give strongest weight to the place where the family had lived longest and/or the place where the family acquired its basic cultural and social characteristics. In this way, even if all the members of the family were born, for example, in one of the states of the Northeastern region, but had lived longer in a state of the Southeastern region, this family was classified as belonging to the Southeastern subculture. By using this criterion, I wanted to make clear that I was not interested in classifying the families according to their geographical origin, but according to their specific cultural and social characteristics which make them a part of one of the subcultures mentioned above.

Place of Origin of the Families Settled in PIC

Table 8 below shows the place of origin of the families and
Initially, the figures call attention to the predominance of families from the Northeastern Region and the presence of all the subcultures existing in the country.

### TABLE 8
**Place of Origin of the Families Fettled in PIC**

<table>
<thead>
<tr>
<th>Region</th>
<th>State</th>
<th>No. of Families</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>Para</td>
<td>14</td>
</tr>
<tr>
<td>Northeast</td>
<td>Maranhao</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Ceara</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Piaui</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Pernambuco</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>R.G. Norte</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Paraiba</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Alagoas</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Bahia</td>
<td>2</td>
</tr>
<tr>
<td>Central-South</td>
<td>Goias</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Mato Grosso</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Esp. Santo</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>R. de Janeiro</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Minas Gerais</td>
<td>8</td>
</tr>
<tr>
<td>South</td>
<td>Parana</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>R.G. Sul</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>110</td>
</tr>
</tbody>
</table>

It is possible to identify at least two important reasons for the massive presence of families from the Northeastern region in PIC: the first reason is related to the government's original objectives for PIC. As was seen in chapter III, the directed colonization projects in the Amazon envisaged the settlement of the excess population from the Northeastern Region. Thus, at least in the first years of settlement,
priority was given to settler families from the Northeastern Region in PIC. The presence of a large number of families from the State of Maranhao can be attributed to the fact that it was in this State that the INCRA established an office aiming at selecting the colonists at their place of origin and then transporting them directly to PIC. The families from the other states of the Northeastern region have generally made their own way to PIC.

The second reason for the large number of Northeasterners in PIC is that for several decades the Northeast of Brazil has been the principal centre of origin of migrants or rural workers in search of land in the country. Before 1960 the goal of these migrants was to reach the Southern states of the country, but with the exhaustion of the frontier areas in this region, the migratory flows turned from the Northeast towards the Amazonian Region.

The relatively large number of families from the Southern region in PIC is also linked to the government’s objectives when the directed colonization program in the Amazon was established. One of these objectives was the creation of a type of settlement which could encourage the development of "small commercial producers", to use the official terminology. For this reason, the INCRA understood that the presence of some colonists with previous higher standard of technological experience would be useful to achieve this aim. Therefore, emphasis was given to the desirability of recruiting colonists from the more developed Southern region, in order to raise the level of farming skills in the PIC population. As Table 8 shows, the desirable ratio between colonists from the Northeastern and Southern regions is in accord with the INCRA’S initial plan. Nevertheless, the presence of a large number of families from regions other than those of the Northeast and South shows that there were changes in the process of selecting the colonists to settle in PIC.

Actually, during the first two or three years of the Program, the INCRA had sufficient resources to carry out its initial
Besides these financial problems, others of a political and social nature also began to force the INCRA to change its methodology of selecting colonists. On the political level, the government began to link colonization less strongly to the problems of the Northeastern Region. As a consequence, it was clearly stated that colonists should be recruited from all areas with serious social tensions. Among these areas were included those around PIC itself. Due to the INCRA's highly publicised colonisation programs, the vicinity of the Transamazon highway had rapidly become a focus for migrants attracted from all over the country, particularly from the Central-Southern region. Making their own way to the Amazonian Region and unable to obtain land, these migrants began to gravitate to the towns closed to the Transamazon highway hoping that the INCRA would give them plots of land in one of its official projects.

The social tension created by the presence of these migrants in areas so closed to the directed colonization projects forced the INCRA to settle down these families in the projects area, ignoring some of the initial requirements and criteria for selection such as, for example, place of origin. As a result, the population of PIC was composed of families from different regions of the country and not only from the Northeast or South as had been established as a priority in the INCRA's initial plans.

Finally, it should be noted that there is only a relatively small number of families who are actually native to the Northern region where the project is located. The first reason for this, as mentioned before, is due to the preference established by the INCRA for families from the
Southern and Northeastern regions. Secondly, when the place of origin was no longer a prerequisite for a family to be settled, the INCRA's preference turned to those families who were living under bad conditions in the surroundings of PIC and who proved to be families from other regions and not from the Northern region itself. As a result, the families from the Northern Region had few possibilities of being settled in PIC. It is important to stress that due to the small number of families from the Northern Region in PIC, one can conclude that the presence or influence of the "caboclo cultural type", described by Wagley (1954) as being the main characteristic of the rural population of the Amazonian Region must be minor.

**Place of Origin of the Families Settled in PA-70**

In PA-70 there is less diversification regarding the place of origin of its inhabitants than in PIC. As Table 9 below shows, the majority of the families settled in PA-70 come from the states of Minas Gerais and Bahia.

**TABLE 9**

<table>
<thead>
<tr>
<th>Region</th>
<th>State</th>
<th>No. of Families</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast</td>
<td>Bahia</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Piaui</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Ceara</td>
<td>2</td>
</tr>
<tr>
<td>South-East</td>
<td>Minas Gerais</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td>Espirito Santo</td>
<td>5</td>
</tr>
<tr>
<td>South</td>
<td>Parana</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>S.Paulo</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

According to the classification of subcultures made at the beginning of this section, the families from Bahia and Minas
Gerais should be classified as belonging to different subcultures. However, in the case of PA-70, such a classification had to be slightly modified.

In making a more detailed investigation, it was found that these families from Bahia and Minas Gerais were actually from the same area which is located near the boundary of the two states. Besides, the inhabitantes of this area used to live in great interaction and many of them are related by ties of kinship or close friendship. This means that although from different states, these families from Minas Gerais and Bahia settled in PA-70 actually belong to the same subculture. And this subculture, according to the families themselves and to what was observed during the fieldwork, is much closer to the Southeastern than to the Northeastern subculture.

The most reasonable explanation for the predominance of families from the same geographical area and belonging to the same subculture can be found in studies concerning the internal migratory flows in Brazil. These studies have shown that individuals tend to migrate in groups of families or close friends, particularly if it is a long-distance migration as it is the case of moving to the Amazonian frontier.

This tendency is even more clear in the migratory flows to the Amazonian Region characterized by spontaneous settlement as is the case of PA-70. As it was mentioned in the previous chapter, in spontaneous settlement, the solidarity among migrants seemed to be essential for the settlement and fixation of families in the Region. Naturally this necessary solidarity is more likely to be found among groups linked by ties of close friendship or kinship.

The presence of the 12 families from the Northeast in PA-70 is due to quite a different reason. As mentioned in the previous chapter, these Northern families initially took up temporary residence in the PA-70 Region, on their way to other areas of the Amazonian Region. However, as these families could not continue their process of migration, they decided to remain in PA-70. These 12 families are also linked
By close ties of friendship and kinship, a fact that contributed to the development of great solidarity among them. This comes again to reinforce the idea that a kind of solidarity can only possibly emerge among families with close friendship or those linked by ties of kinship, essential to the establishment and definite fixation of families in spontaneous settlements in the Amazonian frontier.

By making a brief summary of this section, it has become clear that the population of PIC has a much higher degree of cultural diversification than the one settled in PA-70. While in PIC, families from all the different subcultures existing in the country are present, in PA-70 the majority of the population belongs to one subculture.

Whether or not this contrast between the two settlements makes any difference in their social and economic development and in how families from different subcultures behave, faced with the new physical and social environment of the Amazonian frontier will be questions to be answered sometimes implicitly, sometimes explicitly in the course of this thesis.

2 - Previous Employment

When previous employment is considered by the authors concerned with the newly settled migrants in the Amazonian frontier, it has been mainly taken as a predictor of success or failure of the migrants in their settlement process (Moran-1979; Fearnside-1980; Becker-1982)

For Moran, for example, a former landowner would have better conditions or chances of establishing himself as a successful farmer in the Region than a former tenant or a free rural worker (Moran-1979).

Similar conclusions can also be found in Fearnside (1980) and Becker (1980). Such conclusions may be true. However, a lack of detailed analysis in these studies of what previous
This being so, I have decided in this section to widen the analysis of previous employment and its possible influences on the present and/or future conditions of the families, considering the following aspects:

1) the type of activity and the level of technology employed by the families; their previous agricultural experience and technological expertise in the raising of crops for their own consumption and for commercialization.

2) the level of control which the families had over the means of production; their management experience, which would include experience in making decisions, experience with credit and marketing, experience in the organisation of production and labour, personal initiative, etc.

3) economic condition, expressed through their standard of living and financial resources on their arrival in the Amazonian frontier.

4) social life previously enjoyed by the families and the possible influence this may have on their present lives, including their relationship with other families within the settlement, their skills in dealing with government institutions (especially for those settled in PIC) and with the struggle for land, a question mainly faced by those families settled in PA-70.

Aiming at a better development of the analysis and as a heuristic device based on my field work, the families were classified according to their previous employment into the following categories: a) owners; b) tenant farmers; c) sharecroppers; d) free rural labourers; e) urban workers.

I should make clear that when talking about previous employment I am referring to the previous employment the family had just prior to making their way to the Amazonian frontier. The same principle is valid for those native families of the Amazonian Region who, although living in the
Northern Region, they did so in areas which were not frontier areas. It is important to clarify this point because, as will be shown in the next section, many families had had different employment before coming to the Amazonian frontier.

Table 10 shows the composition of the two groups, according to the above typology of previous employment.

### TABLE 10

**Migrants' Previous Employment - PIC and PA-70**

<table>
<thead>
<tr>
<th>Previous Employment</th>
<th>No. of Families</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PIC</td>
</tr>
<tr>
<td>Owners</td>
<td>27</td>
</tr>
<tr>
<td>Tenant-Farmers</td>
<td>11</td>
</tr>
<tr>
<td>Sharecroppers</td>
<td>9</td>
</tr>
<tr>
<td>Free Rural Labourers</td>
<td>41</td>
</tr>
<tr>
<td>Others</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td><strong>110</strong></td>
</tr>
</tbody>
</table>

A description of each of these categories, emphasizing the four aspects listed above, is presented.

a) **Owners:**

This group is composed of families who had worked their own lands in their places of origin. The significant differences found among this group led me to make a separate analysis of each settlement and to take into account their places of origin.

**PIC**

In PIC it was found that 10 owners were from the Southern, 15 from the Northeastern and 2 from the Central-Southern Region. The owners from the South had, on an average, lots of 3 to 10 hectares which they farmed commercially, mainly raising tobacco, soya, coffee and wheat. Aside from a few families, who also cultivated some products for their own consumption,
the majority of them used a monoculture system, being therefore, dependent on markets to acquire essential products for their own consumption. Although their system of production relied basically on the family labour force, they very often made use of hired labour. For some of them, especially during periods of great demand for labour, this hired labour would exceed family’s labour force. Their system of production also relied on the intensive use of fertilizers and on a relatively high level of technology. Some of these owners had their own machines, such as tractors and combine harvesters, while others used of this agricultural equipment made available through a co-operative system. Their system of production also required knowledge and use of the credit system and of market fluctuations. Their economic conditions permitted them to have good dwellings. Besides, because they had been living in a relatively developed region, these groups of families had access to some public services such as schools for their children, medical assistance, and transport facilities to urban centres. A great number of these families are direct descendents of European immigrants, mainly Germans and Poles, and it had been with similar descendence groups that they had shared their social life.

The majority of these families were contacted by the INCRA and moved to the Amazonian frontier one or two years after they had sold their land in their places of origin. In the period between the sale of their land and their moving to the Amazon, these families lived in small towns in the region where some were involved in activities outside the agricultural sector for short periods and some were limited to just awaiting the alternatives and options for obtaining land in other parts of the country. Almost all of these families made only one move during this period, a fact that enabled them to reach the Amazonian Region with a relatively large amount of capital, as compared to the colonists from other regions.

Due to the characteristics listed above, one expects a certain confidence on the part of these families in dealing with government agencies, with the bureaucracy of the banking
system and with the strategies which characterize the process of commercial agricultural production. One would also expect that these families would have a better organization of production and employment of a more sophisticated technology in their system of production.

Regarding the owners from the Northeast, it was found that none of them had had areas of land larger than 4 or 5 hectares. In general, they had been involved in a system of agricultural production which was basically geared to family subsistence. They used only the family labour-force, employed a very low level of technology and almost no types of fertilisers. Only a few of them had had occasional opportunity to use credit. With a production which was almost entirely aimed at their own consumption, these families arrived in PIC with no experience regarding credit or market and with limited knowledge of how to organize a crop system of production for commercialization. The owners from the Northeast were used to living in small rural communities, with little contact with urban centres and with a social life restricted to their neighbours or relatives. Generally they had sold their previous lots 2 or 3 years prior to coming to PIC and in the interim had, on an average, migrated twice (in almost all cases within their own region) in unsuccessful attempts to obtain land. During this period they spent a large part of the money they had obtained from the sale of their lands and arrived at PIC with very little capital.

The two owners from the Central-Southern region were very similar to those from the Northeast except for the fact that they had migrated fewer times and arrived with more money at PIC.

b) PA-70

Unlike what had occurred at PIC, not all the families interviewed in PA-70 had arrived in the area as landless migrants. Out of the 38 families classified as owners, 10 had kept their property at their places of origin even after having settled at PA-70.
In their native regions, these 10 families might be considered "medium proprietors", as the size of their lots varied from 15 to 20 hectares. Their system of production was based on the use of part of the lot to cultivate crops for the family's own consumption and part for livestock or commercial stockraising. Such commercial activity would imply the frequent use of credit, hired labour and frequent contact with the market, which gave them a relatively high degree of experience in farm management. By the same reckoning, the initial capital which they brought to the region enabled them to acquire lots at PA-70 which were almost always over 100 hectares in area, and allowed them to make use of hired labour in the starting process of settlement.

Because of their reasonable and stable economic situation, these 10 families had enjoyed social prestige and a relatively good standard of living in their places of origin, including education, medical assistance and urban contacts.

The other 28 families classified as owners were actually members of the so-called "family ownership" which is very common in their place of origin (Moura-1978). In this system of ownership, the farm is supposed to be the property of all the members of the family who continue to live and work on their parents' lands, even when they marry and have children of their own.

The organisation of farm production under the system of "family ownership" involves the collective labour of all the members of the family, and the final product of their work is, in general, shared equally among them. The decisions regarding the division of labour, methods of production, commercialization, and so on, are often assumed by the head of the family but with the support of the other members, which gives them some experience in farm management.

Although the primary concern of "family ownership" was the production of crops for family consumption, some of them were already involved in commercial production, cultivating coffee, soya, cocoa, etc.; others had already devoted their
consequently enabled these owners to acquire some experience with the market and with the various systems of credit.

Since these properties had not been sold (once not all the members of the family had migrated) the majority of the families who had participated in this system in their place of origin had little or no initial capital when they arrived in the Amazonian Region.

b - Tenant-Farmers

This group is comprised by those families which did not have land of their own, but had to rent out land from others in order to grow crops.

Under this system, known as "arrendamento" or tenancy, the lease or rent for the land is paid in money, and at least a part of it is paid in advance.

Leases generally extend for a length of 3 to 5 years and tenants exercise almost total autonomy over the process and some means of production, including the decision of how to utilize the land. However, in some cases, the landowner may condition the granting of the lease to the cultivation of a particular product, but even in these cases the tenant retains his autonomy regarding the production process to be utilized (Garcia Loureiro-1977).

Although the tenant's agricultural production is primarily based on the family labour force, several of the families interviewed said that they had made almost constant use of hired labour. This can be explained by the fact that their production is not necessarily geared merely to their own consumption. Since the tenants have to pay rent in cash for the land they farm, their production has to surpass their consumption in order to sell the surplus and obtain money. However, as they are not landowners, it is difficult for these producers to have access to credit which keeps them restrained or excluded from the use of technology and more sophisticated equipment, or even from increasing their production much above that necessary to feed their families.
With the exception of the credit system, the tenants generally demonstrated a degree of experience in farm management and the commercialization of agricultural produce similar to that of the owners.

Despite the high rents (approximately 40% of their produce value) (Graziano-1978) that the tenants had to pay, a great number of them had managed to produce surplus which not only provided them with a standard of living similar to that of the small proprietors, but also offered them an opportunity to accumulate some financial reserves. Approximately 70% of the tenants who settled in PIC and 50% of those who went to PA-70 had some financial resources at their disposal when they arrived in the Amazonian frontier.

\[c = \text{Sharecroppers}\]

The sharecroppers, like the tenant farmers, lived and worked on someone else’s land. However, the sharecroppers pay for the use of the land by turning half of their production over to the landlord and generally have very little autonomy concerning the process and means of production. It is generally the landowner who decides the type of product to be grown and provides the seeds and needed equipment in the production process. Besides this, it is up to the landowners to commercialize any surplus which might be produced. Some sharecropping agreements also specify that in addition to the payment of rent, the families must work a certain number of days for the landowners.

Authors such as Johnson (1971) and Diegues Junior (1973) have frequently associated sharecroppers with rural workers who have customarily worked many years for others in low-skilled agricultural work, having little experience with farm management. According to these authors, as the sharecroppers in general have repeatedly failed to do well economically, they tend to be tied to the landowner/patron by symbiotic master-client bonds which sometimes gives them security but always keeps them from dealing with the market.
and the credit system. In addition, the dependency-producing relationship with the patron, according to the cited authors, keeps the sharecroppers at a low initiative level, unable to manage production activities effectively and save for capital investment (Nelson-1973; Diegues Junior-1973). The standard of living of the sharecroppers was, in general very low with precarious access to schools, medical assistance and urban centres and the majority of them had no supply of cash when they arrived at the Amazonian Frontier.

d - Free Rural Labourers

This group consists of those migrants who, before coming to the Amazonian Region, survived by selling their labour force either as permanent workers on the large farms or as daily workers (day labourers) in different activities of the agricultural sector.

As permanent workers they generally lived on the large farms where they worked and where they, like the sharecroppers, maintained a dependency relationship with the patron. Although as permanent workers they had exercised no powers of decision, direct and daily contact with the system of production on the large farms (fazendas) had given them some experience of the division of labour and the organization of agricultural production. Some of them had even displayed a certain knowledge of more sophisticated technology, since they had worked on highly capitalized farms where production was geared to the market.

The daily workers, usually known as "boías-frias" or "peoes", generally lived in the shanty towns of the urban centres, making their way daily to the large farms where they were used to work (D’Incao e Melo-1976). Before settling in PIC or PA-70 most of these daily workers had spent some time in the Amazonian Region contracted by the big lumber and stock-raising projects where they performed several different tasks, without, however, having had the opportunity of becoming experts in any activity they engaged in. Their work and their economic conditions in the shanty towns as in the
Amazonian Region were very bad; they had no access to medical or educational benefits and maintained a very low standard of living. (Martins-1980). Despite of this, during the interviews, the daily workers, much more than the permanent workers, showed greater capacity for personal initiative and independence regarding their own problems. This is probably due to the fact that they were not used to the dependency-inducing farm environment as was the case with the permanent workers. Nevertheless, unlike the permanent workers, the daily workers demonstrated a total lack of farm management experience, ignorance of credit and marketing systems and knowledge of merely low-skilled agricultural work. It should be stressed that among the free rural workers, 7 families in PIC and 4 in PA-70 had been squatters in the Amazonian Region for periods that varied from 1 to 3 years. This previous experience gave these families some knowledge of the region, particularly regarding the difficulty of obtaining land and of the physical and social environment that were not found among the other free rural labourers.

e- Urban Workers

Urban workers group included basically the migrants who came from the urban centres where they used to work in activities not linked to the agricultural sector. Most of these families, however, had lived in rural areas at some time in their lives or had close relatives who were rural producers. They had, therefore, a certain knowledge of agricultural production before coming to the Amazonian Frontier. Their experience in urban living had led them to acquire craft skills as carpenters, stonemasons, construction foremen as well as skills in commercial activities, since some of them had been small traders. While their various skills might be considered second-rate in most urban areas and would not merit substantial remuneration, in rural areas undergoing rapid development such as that taking place in the Amazonian frontier, such skills are often in
great demand. Based on this, these urban workers expected to be able to use these skills as an alternative source of income concurrently with their agricultural activities.

In addition to this, the urban experience of these families is probably giving them some elements to better deal with the credit and market systems and the functioning of the official bureaucracy which could prove very useful in PIC as well as in PA-70. Although not as high as the owners', the standard of living of the urban workers was, in general, much better than the other families settled in PIC and PA-70.

As a brief conclusion, this section brought out the fact that an analysis of the previous employment of the families may supply useful elements for a better understanding and evaluation of their settlement process and adjustment to the Amazonian environment. This section also confirmed my assumption that a simple notation of the previous employment is not enough to turn it into a reliable predictor of the present and future performance of the families. One example of this is the fact that characteristics such as experience with credit and market systems, taken as elements for a good performance of the families, can be found equally among former owners as well as among urban workers or tenant farmers. Whatever the typology used to analyse previous employment, it is clear that each category has to be deeply investigated in order to establish its real dimension or importance with relation to the performance of the families.

3 - Migration History

The migration history of the families recently settled in the Amazonian Frontier has only been lightly touched upon by a few authors concerned with the social problems of this Region (Mougeot-1981; Becker-1982; Fearnside-1980).

In general, these authors have limited themselves to identifying the number of migratory stages completed by the families so as to demonstrate the instability of rural residence in the frontier areas (Mougeot-1981), or to confirm
hypotheses, such as the one which associates residential instability with social mobility (Becker-1982-p.136). The studies made by these authors, besides being limited to considering only the number of moves made by the families within the Amazonian Region, do not give further explanation of the implications of this residential instability and/or why this residential instability is associated to social mobility.

The only attempt to make a more detailed investigation of the families' migration history was made by Moran (1981). In his study of the colonists of the Altamira Project on the Transamazon highway, Moran states that "the migration histories of the colonist population turned out to be one of the most significant indexes of their success or failure in farm production" (Moran-1981-p.91). For this author the larger the number of moves made by the family, the less possibility of settling successfully in the Amazonian frontier. The explanation for this fact, according to Moran, is found in the assumption that unstable rural residence is frequently associated with families who have customarily worked for others in low-skilled agricultural work, such as sharecroppers and free rural workers. The result of these conditions of work, adds Moran, has been to keep these families from acquiring the managerial acumen necessary to run their own commercial or agricultural enterprise with success. (Moran-1981-p.92).

I could accept Moran's conclusions as consistent enough to make further generalization for the Amazonian frontier if I had not, at the empirical level, found inconsistencies in such conclusions. As soon as I began the field work, I noticed that neither had the categories pointed out by Moran, such as sharecroppers and rural workers, faced a bigger number of moves nor had these same categories shown less experience with farm management.

There was a significant number of families with a great number of moves who, however, at some moment in their lives, had had a stable rural residence, during which period they
had acquired the necessary experience to run a farm production with success. Many were also the cases of families with a stable rural residence but, given their system of production, they could not acquire experience in farm management. And finally, there were also cases of families that, although not having had a stable rural residence, showed, nevertheless great adeptness at farm management.

In view of this, I have decided to take into account in my analysis other elements such as the place to where the families moved and what these moves meant to the families. By doing this, I aim to identify to what extent the migration history of the families can be taken as an important aspect of the background of the families and to what extent it could influence their process of settlement and adjustment to the Amazonian frontier.

Before beginning the analysis, it seems important to clarify some criteria and concepts that will be used in this section. By "migration" I mean a change of dwelling and of workplace made by a family. It can be divided into short-distance (short-haul) migration if it took place within the same region and long-distance (long-haul) if the change of residence was from one region to another. Furthermore, a move was only considered to be a migratory stage if the family remained for at least a year in the new location. This distinction was necessary because, particularly in the Amazonian frontier, families frequently interrupted their passage from one residence to the next by short stops or temporary stays while waiting for transport or earning some money to continue on their migration process. Although some of these halts might extend for some months, the families, taken as an object of study, made no attempt to establish any kind of system of production or of labour which would characterize their being residents of that specific place.

As the starting point of this analysis, in Table 11 below I show the number of migratory stages or moves made by the families of both settlements.

Two interesting points can be stressed from the figures in
Table 11. The first is the fact that all the families from both settlements had made at least 1 migratory move before taking up residence in the locality where they were interviewed. The second point is that by comparing the two settlements, it is found that the families of PA-70 display a far more extensive migratory history than those of PIC. This suggests that the families who had taken part in spontaneous colonization are also those who had to go through a greater number of migratory stages.

**TABLE 11**

**Number of Migrations - PIC and PA-70**

<table>
<thead>
<tr>
<th>No. of Migrations</th>
<th>No. of families</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PIC</td>
</tr>
<tr>
<td>1</td>
<td>62</td>
</tr>
<tr>
<td>2</td>
<td>35</td>
</tr>
<tr>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td><strong>110</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Extending the analysis beyond the figures it is possible to find out an association between the number of moves and the place of origin of the families. Taking the case of PIC first, it was observed that 82% of the families from the South had passed through only one migratory stage, while the remaining 18% had not made more than two migrations. Quite a different situation was presented by the families from the Northeast. Among this group it was found that 80% of the families had made two or more moves before settling in PIC. Regarding the families from the Central-South, it was found that 55% had made one move, 35% two moves and 10% more than two moves. Finally, all 14 families from the Northern Region had made only one move before settling in PIC. These figures are not surprising, given the fact that the Brazilian literature on internal migration has been showing that the
rural families from the Northeast for some decades have already been facing a very unstable residence, followed by those from the Central-South and South. The low number of moves found among the families from the North is also not surprising, taking into account that only recently has the process of internal migration among the natives of that region been intensified.

The residence instability of the Northerners was also found among the families settled in PA-70, where all 12 families from the Northeast had made two or more moves.

The number of moves alone, however, do not offer enough elements to draw further conclusions. It seems important, for example, to link the number of moves to the place where they occurred.

Taking the case of PIC first, it was found that out of 62 families who had migrated once before settling in PIC, 45 did so in their own region of origin; 12 migrated to other regions, but not to the North; and only 5 families had moved to this region in their first migratory stage. A similar pattern was found with those families who had passed through 2 or 3 migrations; that is, the majority of these families had made their moves within their own regions of origin.

Turning to the case of PA-70, of the 12 families who had made only one move, 8 had been to different regions. Of the 67 families who had migrated twice, the majority had made one move in their own native region and another in the Amazon; of the 21 families who had experienced 3 or more migrations, it was found that the majority had made their first move in their region of origin, while the other stages were basically made within the Amazonian Region itself.

Two conclusions may be drawn from these data: first, that although the Amazon has been a focus for landless migrants during the last 15 years, it was not necessarily the migrants' first option; that is, these migrants made attempts to settle in their own regions of origin or other areas
Before making their way to the Amazon. The second conclusion is that while in PIC the majority were facing their first experience of living in the Amazonian Region, in PA-70 some 60% of the families had made at least one migration within the Amazonian region. This indicates that the great majority of the families living in PA-70 had made other attempts at obtaining land in the Amazon before they settled in the place where they were interviewed.

An attempt at verifying the possible association between the number of migrations and previous employment is given in Table 12 below.

**TABLE 12**

**Previous Employment and Number of Migrations**

<table>
<thead>
<tr>
<th>Previous Employment</th>
<th>Number of migrations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>PIC</td>
<td>PIC</td>
</tr>
<tr>
<td>Owners</td>
<td>74%</td>
</tr>
<tr>
<td>Tenant/Sharecroppers</td>
<td>75%</td>
</tr>
<tr>
<td>Free Rural Workers</td>
<td>37%</td>
</tr>
<tr>
<td>Urban Workers</td>
<td>55%</td>
</tr>
<tr>
<td>PA-70</td>
<td>PA-70</td>
</tr>
<tr>
<td>Owners</td>
<td>13%</td>
</tr>
<tr>
<td>Tenant/Sharecroppers</td>
<td>15%</td>
</tr>
<tr>
<td>Free Rural Workers</td>
<td>15%</td>
</tr>
<tr>
<td>Urban Workers</td>
<td>11%</td>
</tr>
</tbody>
</table>

The figures in Table 12 show that the assumption made by Moran regarding previous employment and number of migrations is only partially applicable in PIC and PA-70. The great number of owners in both, PIC and PA-70 settlements, who made 2 or more migrations contradicts the conclusions drawn by that author and shows that what was found to be true by Moran in his study made in Altamira cannot be generalized for other settlements of the Amazonian frontier. It is true that "free rural workers" is the category that faced the biggest number of migrations; however, both the tenant/sharecroppers and
urban workers, especially in PIC, faced a much smaller number of migrations than would be expected according to Moran's study.

At a more general level, the data of the two Tables above would suggest that the families settled in PA-70 have greater experience in terms of either attempting to acquire land or of adjusting to the Amazonian environment, than the families settled in PIC.

However, during the field study, I encountered sufficient elements to formulate some hypotheses regarding the possible influence the number of migrations made by each family had on their actual process of adjustment and settlement in the Amazon. It was observed, for example, that those families who had undergone several migrations tended to hope most strongly for a permanent settlement on the lot they now occupied. Consequently, these families showed a greater tendency towards making long-term investments and establishing a system of production which either enabled or gave them a better chance to secure the lot they occupied. Alternatively, the families with little or no history of migration showed desire to make new attempts at achieving the objectives which had brought them to the Amazon.

Another observed phenomenon, worthy of mention, was mostly evident in PA-70; in this region the families who had experienced the largest number of moves were also those who had had the most frequent or greatest experience with the process of acquiring and losing land. These previous experiences had also given them more practice in combatting the threats of the "grileiros" or the judicial processes regarding their rights to the land they were occupying at the time of the interview. It was also observed in PIC, as well as in PA-70, that the families who had made the largest number of migrations were also those who had the most varied knowledge of agriculture; that is, how to raise a larger number of products. Although this knowledge was not necessarily linked to a high level of technological knowledge, it had proved important in the Amazon where access
to high technology is difficult and where the ability to
diversify the family's production has constituted an
important factor in the settlement process.

Finally, it would seem reasonable to suppose that in each
stage of migration a family would acquire new cultural traits
which would certainly give it greater skill in coping with
the new social and physical environments.

Thus, based on this, I believe that rather than constituting
a negative factor as Moran and some other authors
(Fearnside-1980; Becker-1982) argue, the number of migratory
stages experienced by the families can be taken as an element
capable of influencing positively their process of settlement
in the Amazonian Region. A more detailed consideration of the
truth of these hypotheses will be made in Chapter XI.

4 - Reasons for Migration

The analyses carried out in the first part of this thesis
have made it possible to discern the social, economic and
political factors which constituted the main reasons for
internal migration in Brazil and, more specifically, for
the migration of landless rural workers towards the frontier
areas of the Amazon. To summarise, these analyses give rise
to the conclusion that the families migrate to the Amazon
because they do not have access to land in their native
regions and because the Amazonian frontier represents the
only alternative for these families in their search for
workable land.

According to the structural approach taken in the first part
of this work, it would be inadequate to attempt to understand
the migratory movements toward the Amazonian Region based on
the individual motivation of each family (Singer-1973;
Brant-1977; Foweraker-1982). Nevertheless, I believe that
when dealing with a case-study (as proposed in this second
part of the thesis), an analysis of the individual reasons
that have brought the families to migrate to PIC and PA-70
may constitute not only useful predictors for their present
and future performance in the Amazonian Region, but can also lend more elements to enrich the structural approach to migration toward the Amazonian Region.

To analyze these individual reasons, I will adopt as a starting point the methodology proposed by Singer (1973) which considers migratory movements as a result of the existence of "expulsion factors" in the native regions and "attraction factors" in the receptor region.

After a general survey of the individual motives which led the families to migrate to the Amazon, it was established that there were similar responses among families who have also had similar previous employment. Thus, with a view to a better understanding of the following comments, I have decided to use groups of families divided up according to their previous employment as a basis for the analysis.

a - Owners

In the case of the former owners settled in PIC, it was found that the reasons which led the families to migrate to the Amazon were also conditioned by their places of origin.

Taking the group of families from the South as a point of departure, the great majority, as mentioned in the item "Previous Employment", were small producers holding plots of land between 3 and 10 hectares. Due to a rapid process of industrialization and capitalization in the agricultural sector, which occurred in the Southern region at the beginning of the 1970's, these small producers found it impossible to compete with the great capitalist enterprises which were being established in that region. As a consequence, no other solution remained for these small producers but to sell their plots of land to these big enterprises.

Besides, as the Southern region was already in the process of closing its frontier, these families were not sure if were they to buy a piece of land in a more remote area (the only option possible with the money they had obtained from the
sale of their lots) they would be safe from the pressure of the big enterprises within a short period. Therefore, migration to other parts of the country appeared to them to be the only means by which they could regain their status as independent producers (Pebayle-1967).

In this fashion, migration to the Amazon appeared to be the ideal way of realizing their main aspirations; that is, the creation of a situation which would enable them to resist the pressures of the big capitalist enterprises and keep their lands. For them this involved the acquisition of large areas of land where they could develop a level of production which would give them the status of medium producers and therefore attain a position where they would be less vulnerable with respect to the competition from the more capitalized forms of agricultural production.

In this regard, coming to PIC appeared to them as the best chance of realizing their aspirations. First, the 100 hectares offered by the INCRA seemed sufficiently reasonable compared to the 5 or 10 hectares they had had before. Second, the terms offered by the INCRA, such as infrastructure of commercialization and access to credit, would allow them to develop a system of production based on the level of technology they were used to in the South, and, therefore, to grow crops primarily geared to the market. Third, migration to the Amazonian frontier under the protection of the government would give them the opportunity to acquire land in the region without becoming involved in the conflicts and violence which some of their fellow countrymen had met with, particularly those who had taken part in the spontaneous migration to this region.

Regarding owners from the Northeast, it was observed that two basic reasons determined their leaving the region. The first was that the large properties had been expanding in that region, particularly since the end of the 1960's when they began to turn more and more towards cattle-ranching. With the ever-growing need to enlarge their properties, the big landowners began to practically force the small proprietors
of the region to sell their lands. The second reason was that, due to the small size of the lots (no greater than 5 hectares) and the low level of technology employed in the production process, the soil had become exhausted, and produced insufficiently to support a family (Oliveira-1972). Thus, subject to pressure from the big landowners on the one hand and being unable to produce enough to ensure their family’s survival on the other, these small producers had no alternative but to sell their lots and attempt to find other lands in other areas. After 2 or 3 years of frustrated attempts to find land in the Northeast region, few options, if any, remained to these former small landowners in their struggle to regain their status as independent producers.

Consequently, for the former small landowners from the Northeast, the move to the Amazon meant, above all, avoiding becoming wage labourers or having to migrate to the urban centres. Of the conditions offered by the INCRA, it was the chance to maintain their previous standard of production, that is, to keep up a level of production sufficient to ensure their family’s board, that most motivated these former owners from the Northeast to come to PIC. And because of this, the 100 hectares offered by the INCRA not only seemed to be enough land, but it also would give them the possibility to reserve some land which could be occupied by their children in the future.

Regarding the owners settled in PA-70, some of them, as mentioned in the item "Previous Employment", could be classified as "medium proprietors" in their native regions, as they had held plots of land of between 15 and 20 hectares. For this group, unlike any of the other families interviewed, leaving their places of origin might not be regarded as a move which they had been pressured into making. Enjoying a reasonable economic and social status, these owners, above all, envisaged the move as a means of becoming large landowners. With the land market in their regions of origin being more or less closed, the frontier areas of the Amazon appeared ideal for realizing their dreams of becoming great
landowners and cattle farmers. In this way, their objective in coming to PA-70 was almost exclusively that of obtaining great tracts of land (admitted by them to be no less than 500 hectares) and devoting themselves more to cattle raising than to agricultural production.

As was mentioned before, the other group of former owners who settled in PA-70 were members of the so-called "collective family ownerships". The collapse of this system for the families who had come to the Amazon began when it was no longer possible for them to enlarge their collective properties in the same ratio that the number of family members increased (Moura-1978). This impossibility came about with the establishment of great capitalist enterprises in the area resulting in a large increase in the price of land, therefore making it impossible for the small producers, whose level of production rose only slightly over that of their own consumption, to acquire more land in the region.

Therefore, for this group of owners to migrate to the Amazonian Region represented a chance for them to continue as independent producers and also, given the abundance of land, the possibility of establishing the same system of collective ownership as the one they were used to in their native region.

Actually, this desire to reproduce the collective ownership system in the Amazonian frontier may be seen in part when one observes that these families migrated in groups and made the greatest effort to acquire lands close to one another.

Moreover, with the opportunity to acquire vast tracts of land in the Amazonian frontier, these families also longed to develop highly commercial activities, such as the production of cocoa, coffee, soya and cattle in the region. In general, these families displayed a great knowledge of these activities, but felt frustrated that they had been unable to pursue them in their places of origin purely due to lack of land; in these terms, settlement in the Amazonian frontier offered the opportunity to realize their long-held dreams. Unlike the medium owners, these small owners had no chance of
returning to their place of origin, which, according to them, implied that if they were to realize their objectives, it would be in the Amazon, and that they had arrived ready for this undertaking.

b. Tenants and Sharecroppers

The tenant farmers and sharecroppers offered very similar reasons for their migration to the Amazonian frontier. In their places of origin, these two categories of rural workers were being systematically replaced and barred from the new forms of production which were being installed in the agricultural sector. As a result, the possibilities for the tenants and sharecroppers were reduced to the following options: migration to the urban centres; work as daily labourers, or migration to frontier areas, where they would have some opportunity to acquire land without having capital.

They saw in the frontier areas of the Amazon not only the possibility of having access to land to work but, above all, an opportunity to finally become landowners and work their own land without having to pay rent for it. To the families who came to PIC (mainly sharecroppers with strong ties of dependence on their patrons) the numerous services and opportunities promised by the federal government made them expect that the colonisation agency would be a far more benevolent patron than those they had previously known.

Those who went to PA-70 not only saw a chance of obtaining their own land, but also dreamed of obtaining enough land to produce more than was necessary for the simple survival of their families. For the tenants in particular, the settlement of PA-70 meant the possibility of accumulating sufficient wealth to enable them to improve their standard of living to match that of the landowners.

c. Free Labourers

The majority of the free labourers interviewed had actually come to the Amazonian frontier with their patrons or as
contracted labour with the great multinational and capitalist companies established in the region which recruited workers from other regions. In both cases, the free labourers' expectation was of having secure employment for a longer period of time than they usually had as daily labourers. However, once in the Amazonian frontier, these workers found that not only had they been deceived regarding the conditions of employment offered by their old patrons or by the enterprises which had contracted them, but they perceived that they might have an opportunity to obtain their own land.

The majority of the free labourers settled in PIC had seen in the conditions of settlement offered by the INCRA an opportunity for their families to have a fixed place to live and to develop a subsistence agriculture based on the labour of the wife and of the young children. This would give the head of the family, together with the elder sons, greater freedom to continue working as hired labourers, an activity that they foresaw could be more profitable than the agricultural production itself. For a great number of the free labourers who had settled in PA-70, acquiring land had also principally signified having a place where they could leave their families while they tried their luck in the nearby goldfields.

However, for others, the acquisition of land offered the chance of raising their status from that of free labourers to that of small landowners, but their aspirations did not exceed producing sufficiently to support their families.

For those free labourers who actually had been squatters for some time in the Amazonian Region, to settle in PIC or in PA-70 was taken, above all, as the end of a long period of frustrated attempts to obtain land in the Amazonian frontier. Above all, what they really wanted when they came to PIC or PA-70 was to escape from the physical and emotional violence which they had suffered in their search for land. The opportunity to have government protection for their crops (in the case of those settled in PIC), the security of the family
and the guarantee of being able to live on and work the same land in successive years constituted the main attraction and objective for them to settle definitively in PIC, as well as in PA-70. In short, what they really wanted was the guarantee of having land to work without the threats of land-grabbers or being forced to quit their land before the harvest as had happened previously.

d. Urban Workers

Regarding the families classified as "urban workers", it was observed that the majority of those who had come to PIC had as their principal objective the pursuit of other activities, mainly commercial, and not that of devoting themselves exclusively to agricultural production. Nevertheless, due to the conditions of settlement imposed by the INCRA, they could only live in the project areas if they accepted a lot and undertook some agricultural production. However, once they saw their attempts to become traders frustrated, they began to devote themselves with more enthusiasm to their lots, although some families had since made some attempt to combine agricultural and commercial activities.

On the other hand, the "urban workers" who had made their way to PA-70 did so with the objective of acquiring tracts of land which would give them at least the status of "medium producers" or of becoming traders. The majority, however, had seen their initial ambitions frustrated and they were actually planning to leave the region.

In short, for the families classified as "urban workers", settling in PIC or in PA-70 and becoming small producers geared principally towards family consumption was not one of their objectives. They had intended to develop a type of activity in the area which would increase their social status to at least that of a medium scale trader or producer.

SUMMARY

This chapter showed that far from being homogeneous, as is
usually the case in traditional rural communities, the populations of PIC and PA-70 present a high level of social and cultural diversity. The real influence of such diversity on the process of settlement, social organization of the communities and economic performance of the families deserves a deep and detailed investigation which is out of the scope of this thesis. However, the contents of the following chapters give some elements which will, at least partially, permit us to evaluate to what extent the migrant’s background actually can be taken as a predictor for the social and economic performance of the families and, consequently, for the expansion of the small farming system in the Region.
CHAPTER VII

Adapting to the New Environment

The rain forest environment of the Amazonian Region is quite different from that which characterizes the regions from where the newly settled families came.

The aim of this chapter is to examine the process of adaptation of these migrants to this new environment. In view of this I focus my attention on three aspects which during the field work came out as being the most relevant for the families, that is, housing, food intake and health. Specifically, I intend to stress the main difficulties faced by the families during the initial period of settlement, the strategies they utilized to overcome such difficulties, and know to what extent the migrants' background could have influenced their process of adjustment and interaction with the new social and ecological conditions. I am also concerned in verifying the results of this initial process of adaptation in the present and future economic and social performance of the migrants on the Amazonian frontier.

1 - Housing

Housing can be considered a mirror of several elements such as climate, cultural formation and socio-economic conditions of a given population. Since the newly arrived families were used to a different climate, carried different cultural formation from that existent in the Amazonian Region and were experiencing a new socio-economic situation, once in the Amazonian frontier they undoubtedly had to adapt to, and to adopt new patterns and styles of dwellings. In this section I attempt to examine how this adaptation occurred and which newly patterns of housing have been established in these newly constituted communities.

The description below begins by pointing out the difficulties faced by the families at the very beginning of the settlement
process. Next, I focus on the current patterns of the dwellings, including a description of the building process, the physical structure and the factors which mostly determine the different patterns of dwellings found among the families settled in PIC and PA-70

**Housing in the Early Days**

The first colonists to arrive in PIC settled along the Transamazon Branch and received partly constructed houses from the INCRA. The houses were built of wood planks, raised above the ground by posts, and had clay-tile roofs. These standardized dwellings contained a living room measuring 4.5 x 3 metres, two bedrooms 3 x 3.5 metres each, a verandah 6 x 1.5 metres, a kitchen 2.5 x 3.0 metres and a wash-house constructed behind the dwelling. Because of the lack of running water and sewage, the toilet was built at a distance of some 15 metres from the house.

These houses, according to the INCRA, were to have served as models for the houses constructed by families settling later, but in fact this did not happen. The peasants who settled later, as well as those who settled in PA-70, had no external or institutional help and they built their houses according to their own financial conditions, their ability to use local resources and their according own conception of what would be best suited to the local environment.

During the first years of settlement, according to the peasants' statements and as may be seen from the older houses, the majority of families who settled in both settlements had to face living in very rustic dwellings. Their ignorance of the physical environment, their lack of skill in utilizing natural resources and the immediate pressure to earn a livelihood prevented them from building anything other than temporary shacks (*barracas*). In many cases these shacks did not last longer than the first rainy season. Statements made, especially by women, show clearly how hard and inadequate their living conditions were during the first years of settlement. Such conditions are well
"... after having walked since dawn through the forest, we finally arrived in the afternoon on this piece of land which would be our "posse". We left our possessions under that big tree and the first thing I did was to build a fire in order to make tea for the children who would not stop crying. My husband looked around and found that nothing could be done that day as night was approaching. I lay down with my children under the big tree while my husband and our oldest son stayed awake to keep watch in case wild animals might approach. This was our first night. The following day we managed to clear a site near the stream and build a shelter using the branches of trees. This shelter, however, was so fragile that during the following weeks we had to keep the fire going all night and one of us, my husband, our oldest son, or I, had to keep watch due to the constant threat of wild animals. The shelter had just one room, within which we had to sleep, and we cooked in a cooker made of stones. When it was raining all 8 members of the family had to pile up in one part of the room where there were less holes in the roof, in order to avoid getting wet. After 6 months we finally managed to enlarge and improve our shelter. We built two more rooms, made a better roof and coated the walls better. It was in this shelter that we lived for three years. It was really a very difficult time; we were poor in our native region but there we had at least had a decent house with three or four rooms with beds where we could sleep without having to be afraid of animals, without getting wet when it rained, and without being bitten by mosquitoes all the time. During those first three years, I regretted very much coming to the Amazon, but we had gone too far to go back to our native region. We came to stay and here we are".
Reports similar to this were heard from many women from both PA-70 and PIC settlements.

b) New housing standards

Once this first period was over, the standard of the peasants' houses have, in general, substantially improved. Nowadays and from a wider perspective the patterns of dwellings at present existing in PA-70 and PIC can be divided into three categories:

1) The first category, which represents around 10% of all the peasants' dwellings, consists of homes built out of cement and brick, with 5 or 6 rooms and a large veranda in front. The walls of these houses are frequently painted bright blue, pink or white with contrasting colours on the doors and shutters. Most of the furniture is purchased at one of the neighbouring towns, and domestic equipment may include a gas stove and sometimes various electrical appliances such as a refrigerator, an iron and a blender when the houses have access to electricity such as those located at the agropolis in PIC. The majority of these houses were built by professionals or hired workers, with little participation on the part of the members of the family in the construction. This category of house is owned by the more well-to-do families in both areas, but in PA-70 they are only to be found along the PA-70 highway, as the transportation of materials to more distant locations is almost impossible due to the lack of roads.

2) The second category of house, which accounts for approximately 80% of the dwellings included in my sample, consists of wattle and daub constructions known as "pau-a-pique". This type of house is very common in the rural areas of the Northeast and Central-Southern regions of Brazil but is very rare in the Southern region where wood is used instead of wattle and daub. As a consequence, the families from the Northeast and Central-South found it relatively easy to build and accept this type of house in the Amazonian Region, while for the families from the South it
was not so, either because they did not know the technique of "pau-a-pique" construction or because to them a house made of wood seemed better.

The technique used by the peasants to build a "pau-a-pique" house can be divided into three phases. The first consists of ramming sticks vertically into the earth with the shortest possible distance between them. After the sticks have been set up, "embaros" or horizontal laths are fastened to the upright sticks with "cipo" (vines), forming a kind of latticework. The final stage is "barreado". A sticky mud mixture is produced by trampling clay and water, which is thrown and pressed onto the lattice from both sides. "Barreado" progresses from the ground upward and from the front room to the back rooms. Among the more well-to-do families, the mud layer is then smoothed out and white washed.

A roof is made from bamboo rafters and "sape", a kind of grass which is cut and tied to the rafters with small pieces of bamboo fiber. Palm-leaves are also sometimes used for thatch.

The floors of the houses are generally earthen (chao batido) although a wooden floor may also be laid in houses that have a large number of inhabitants or belong to the more well-to-do families or families who were not used to earthen-floored houses in their place of origin, as was the case of those families from the South.

With few exceptions, the internal arrangements of the dwellings tend to be very similar. Most houses have a large front living room (sala), which spans the entire width of the house. This is always the most carefully kept room, and is usually furnished as follows: a large table with 3 or 4 chairs is placed in the corner and is used for meals when there are visitors, on which occasions it is moved to the centre of the room. Next to the wall, a long bench is placed with room enough for 3 or 4 people. Stools with hide-covered seats and a hat-rack are placed in the other corners of the room. It is also common to find a second smaller table on which there is a radio and papers such as bills of sale,
medical prescriptions, letters and personal or family notes and documents. In houses with large families there is also a double-bunk which during the day serves as a seat and at night as a bed.

The walls of the "sala" are covered with family photographs, images of saints, calendars and posters of football teams or pop stars.

From the living room a small hall opens onto the bedrooms and the kitchen. The number of bedrooms varies according to the number of people living in the house. In general, there is the parents' bedroom where children under two years of age also sleep, and the bedrooms of the other children. Until the age of 10, children of both sexes share the same bedroom and sometimes the same bed. After this age, however, girls and boys start to occupy different bedrooms. Inside the childrens' bedrooms, besides bunk-beds, there are trunks or boxes for clothes and other personal items. Children's rooms may also be used as store rooms for seeds or products for family consumption. In small families, the usual type of bed consists of a wooden framework (marquesa) upon which planks are placed. Poorer families do not use the "marquesa", but simply spread mats on the bare earth. The use of bunk beds is also very common especially among the large families.

Among families from the Northeast region, however, hammocks are used as beds irrespective of the economic status enjoyed by the family.

The size of the kitchen also varies according to the number of people living in the house. Generally, there is one table with some wooden benches where the family eats its meals, and a smaller one for the barrels of water for drinking or cooking. Kitchen's stove is made of a mixture of red and white clay (taua) moulded into a square block with one deep depression in the upper surface for holding the fire. An iron sheet with two or three holes is laid across this depression to support tin pans or, more rarely, pots.

Household utensils are very scarce; just a few clay and iron vessels, an aluminium kettle and pots which are kept on a
Behind the kitchen is a veranda, a room without walls except for upright poles supporting a roof of palm-leaves. Here tools and animal harnesses, are kept, while in the dry season it also serves as a store-room. A hammock used for siestas always hangs here, and domestic animals such as dogs and chickens circulate freely.

Although most families are worried about keeping their houses clean, the interiors are frequently invaded by insects and small lizards which come through the thatch and down the walls. Nor are mice and rats uncommon, or even the occasional snake, particularly in the bedrooms which also serve as store-rooms. It should be added that the houses belonging to the poorer families are in very bad state of repair. There are holes in the walls, and in many of the poorer structures, the wooden lattice of the walls is almost nonexistent. Some of the houses in the agropolis may use electricity although basically the majority of the houses are lit by lanterns or kerosene lamps.

The building of the house as well as the furniture is generally done by the members of the family with the help of a friend who has the necessary tools or greater ability in cabinet-making.

3) The third category of house consists of very poor dwellings which are very similar to those built in the first stage of settlement which I have already described. They are generally built from palm leaves strengthened by the addition of scrap wood or tin. These huts, which are known as "ranchos" (by the inhabitants of PA-70) and "tapiri" or "barraco" (by the inhabitants of PIC) have only one, if any, internal division or wall. Their furnishings consist of no more than a few wooden benches and hammocks, each hammock often serving as a bed for more than one child. There are a minimum of domestic utensils, principally those used for cooking, which are basically limited to 2 or 3 pans, gourds used as drinking vessels or dishes, a coffee pot and some
cuilery which is almost always less than is needed for the number of people living in the house. In terms of security, these dwellings offer little protection against insects, and some of them are even vulnerable to the attack of wild animals.

Approximately 10% of the houses visited during the field work belonged to this category. In PIC, the majority of the families which owned this type of house were those whose main residence was located in one of the townships; that is, the "rancho" on the lot did not actually constitute the family's permanent home, but served as a sort of shelter for those members of the family who worked on the lot. However, in PA-70, and even for some of the families at PIC, this type of house was the permanent home for various families. Some of these families were newly-arrived peasants who had not yet had time enough to build a better dwelling. Some of them, however, had already been living in the region for many years with no prospect of improving their economic situation, which would have enabled them to build better dwellings. It was also observed that the majority of these families were those whose head was actually either working as hired-labour or working in the gold mines, and therefore absent from home for long periods. In other words, this meant that any improvement to be made in the dwelling would depend on the wife, who is not always capable of doing so. The families who dwelling this third category of house permanently can be classified as the poorest in both settlements studied.

The area from the veranda to the "igarape" (stream) is referred to as the "quintal" (backyard). Here, generally, various fruits such as oranges, avocados, cashews, bananas, pineapples, papayas, mangoes, etc. are planted, and domestic animals such as pigs and chickens are free to forage. There are also vegetable gardens, fenced off from the animals, planted with a range of products: kale, peppers, chayote, maxixe, okra, gilo, tomatoes, parsley, pumpkins and perishable fruit such as strawberries, etc., as well as herbs for tea and medicinal use. And, should a family have the
Necessary equipment to produce manioc flour (farinha), the "casa de farinha" or manioc-flour mill is also located in the "quintal"\(^2\).

Water for the family consumption, drinking, cooking or washing domestic utensils comes from the stream (igarape), which is never less than fifty metres away. When there is visible evidence of any impurity in the water, some families will dig a well to provide drinking water.

A family suffers a great deal of inconvenience and difficulty if there is no stream on the lot, as long walks to fetch water for the animals and crops becomes necessary. Therefore, families whose lots are without water (which is more likely to occur in PIC), not only have a lower rate of agricultural production, but also a lower domestic one, which immediately places them at a disadvantage in relation to those families whose lots are better served by water.

The igarape is also used to wash domestic utensils, clothes and for bathing. A daily bath and change of clothing is a habit shared by all the inhabitants of the region. In general, young children bathe more than once a day, doing it in groups since the "igarape" is considered a dangerous area, where children are vulnerable to be attacked by snakes and insects.

The houses described above reflect the economic differentiation existing at the present moment between the families settled in PIC and PA-70. It has become clear that the better the economic situation of the family, the better the quality of dwelling and household equipment. Although the economic factor is the one that mainly determines the standard of the house, it should not be forgotten that the size of the family and its economic and cultural background also bear some weight on it. Since it is the family's own members who build the house, in the majority of the cases the number of members available to execute such a task can determine not only the quality of the house but especially its size. Regarding the economic and cultural background, it was observed that the families tend to have, if not a better,
then at least the same standard of housing that they had had prior to coming to the Amazon. It was also noticed that those families with an urban background, as well as those from the Central-Southern and Southern regions, were more keen on making improvements in their dwellings.

2 - Food Intake

The Amazonian environment and the conditions under which the process of settlement took place required immediate and significant modifications in their diet from the newcomers. Although it is reasonable to expect that when moving to a completely different geographical and cultural environment a population certainly has to face changes in its diet, in the case of the families settled in PIC and PA-70 such changes became deeper and more difficult due to two factors: the geographical isolation of the settlements and the particularities of the rain forest climate and soil.

Regarding geographical isolation it seems important to go over what was already stressed in Chapter V: that both settlements were constructed in very remote areas where the lack of roads and transportation made it very difficult and in some cases almost impossible, for the newly arriving families to have access to urban centers and, consequently, to markets. Such geographical isolation meant, at least during the initial period, that the majority of the families had to rely only on their own capacity of production for survival. It is true that, as mentioned previously, a large number of these newcomers enjoyed a certain degree of self-sufficiency, producing a large portion of the necessary goods for their survival at their place of origin. None of these families, however, were totally self-sufficient, and a certain reliance on the market was a sine qua non condition for their survival. Also none of them have had previous experienced in living so far away from urban centers or from markets at their places of origin.

The isolation of the settlements from the markets was harder still for those families who were used to being urban workers
and for those who had previously concentrated to grow crops for commercialization than to their own consumption. It is not a new concept for those who are involved in studying subsistence economy that, to make use of the natural resources and organize a system of production in order to reach a self-sufficiency level, is a task that requires a great deal of experience. Neither the former urban workers nor those families who until then had dedicated themselves to marketing their production had had such experience.

Although some families had to face more difficulties than others, the isolation of the two settlements from the urban centers and from markets affected all the families, leading them to make a tremendous effort in order to guarantee their physical survival.

Regarding the particularities of the rain forest climate and soil, I shall first stress that it imposed a new and completely different agricultural calendar on the families. With little or no orientation, the families had to learn by themselves the variations of the rainfall and temperature. During this learning process, several families made fundamental mistakes with serious consequences for their agricultural production and, consequently, for their diet. Similarly, the lack of accurate knowledge of soils also strongly contributed to the problems of changes in diet faced by the families. First, the families had to face several agricultural failures before realizing that many of the products that were basic to their diet in their place of origin, such as rice, for example, could not be easily grow in the Amazonian frontier. Second, besides the need to learn the techniques of how to grow new products, they also had to learn how to appreciate these new products as edible. A good example of this is the case of manioc. This crop is the one that most easily grows in the Amazonian region and is actually the most important component of the diet of the native people in this region. However, manioc and its derivatives were not familiar to many of the newly arriving families and to make it an important component of their diets
meant a really big change. Although all the newcomers faced serious difficulties in adapting to the new diet imposed by the conditions of settlement and by the rain forest environment, some of them were able to overcome this initial period better than others. Those who had financial resources upon their arrival in the Region tried to reach the markets, buy as many products as possible and store them to be used whenever the necessity arose. The availability of money also permitted them to hire labour, and consequently, to produce more quickly the necessary amount of products that they needed for their survival.

Those families with a large number of workers could also better and more quickly reach the level of production necessary for their survival. Similarly, those families with a large number of workers could also produce larger quantities more quickly. The place of origin is another aspect that had some influence on the process of adaptation to diet imposed by the rain forest. Those families from the Northeastern region, for example, could more easily make use of the local products and better explore the resources offered by the forest such as fruits, game and fish as foodstuff since they were used to doing so in their place of origin. However, for many families from the Central-South and especially for those from the Southern region where the ecological and economic conditions were very different, adjustment to the new diet pattern took much longer. Thus the apparent technical and economic superiority of the families from the South and Central-South as claimed by the official agencies, was defeated by the greater capacity of the families from the Northeast and Northern regions to adapt to a new diet and by their superior knowledge of the soil and exploration of the forest. Those families with a greater number of migratory stages enjoyed some advantages as well. Their previous adjustment to other different ecological environments had made their process of changing diets much less painful than those who were having their first experience. Despite the varying degrees of facing diet
changes among the families, all of them had to develop a wide
variety of strategies to deal specifically with the Amazonian
environment independently of their past. When asked to talk
about their diet during the initial period, the peasants
unanimously claimed that the sudden diet changes provoked,
during the first years of settlement, a considerable drop in
their nutritional standards, a certain decline in their
labour potential and productivity and an increase in their
health vulnerability.

The consequences of the problems faced by the families
regarding their physical survival and changes in diet during
the initial period of settlement influenced the later
economic performance of several of them. Many families had to
spend the money they had brought to buy foodstuffs rather
than use it to buy tools, as they had initially planned, in
order to reach a level of production that could place them,
at the present moment, in a better economic position.
A large number of families declared that they had had to use
their first bank loans to buy foodstuffs rather than to
invest in the productive system, thus involving them in a
process of indebtedness, the repercussions of which persist
until the present day.

There is no doubt that the number of adversities faced by all
the families during the initial period regarding changes in
diet and the need to guarantee their physical survival
greatly outback the advantages for better economic and social
performance that some families could have had over others on
their arrival in the Amazonian frontier. The common
adversities faced by the families also led the population of
the two settlements to a certain degree of homogeneity
regarding their eating habits, although there are still some
particularities, as can be observed by the following
description of the daily dietary routine of the families at
the present moment.
Daily Dietary Routine

The present daily diet routine of the families settled in PIC and PA-70 reflects the degree of their adaptation to the rain forest environment, the improvement on the means of transport and, consequently, the access to the market and the remains of the cultural influences acquired in their place of origin.

It is not within the scope of this work to make a detailed or deep analysis on the value or nutritional quality of the families' diet. To do so, it would be necessary to have made a more detailed nutritional survey during the field study than was, for various reasons, possible. During the field study, I limited myself to observing and collecting data that could furnish, with a certain degree of precision, the type of foodstuffs most commonly consumed by the families; how and when they were consumed; how and where these foodstuffs were acquired; and how the families themselves regarded their own diet.

The first meal of the day, called "cafe da manha" or "desjejum" is still, for most families, the same as the one they had been used to at their place of origin. As everywhere else in the country, coffee is pointed out by all the newsettled families as the basic component of their breakfast. However, as coffee is not that easy to find in the Amazonian Region, the families settled in PIC often substitute this product by tea made of cocoa while the families settled in PA-70 prefer tea made from erra-cidreira (Latana canescens). Together with coffee or tea, the families from the Northeast usually eat "beiju", a saltless griddle cake made of manioc or corn flour, while the families from the Northern Region eat "tapioca", also a kind of cake made out of manioc flour. For the families from the Central-South a kind of home-made bread made of corn flour or "mingau de fuba" (a boiled porridge made of a very thin corn flour with water and salt or sugar) is prevalent. Families from the Southern Region still prefer bread made of wheat flour for their breakfast. However, as wheat flour is still scarce in
the Amazonian region the Southerners generally eat either bread made of corn flour or cuscuz made of manioc flour. The children are generally not given coffee but, rather, tea or milk whenever available. Although most of the families realize that milk is an important feature in a child's diet it was observed that only 25% of the families with children in PA-70 and 12% in PIC were able to supply their children with milk on a daily basis.

Lunch or "almoco", served around 11 or 12 o'clock, is the largest meal of the day for most of the families settled in PIC (except for the Southerners) and for the Northerners settled in PA-70. As a heavy meal it generally consists of meat (whenever available), rice, beans, some type of tuber (sweet potatoes, manioc or yams) and vegetables. For those who prefer a lighter meal at lunch, the menu generally is limited to rice, potatoes and vegetables. When work is at its height or when the plantation is far from the house (as is frequently the case in PA-70) the meal is sent to the workers where they are working or they themselves carry it with them to the fields in mess-tins.

After lunch there is a break or rest period for the workers which in PIC is called the "siesta" and lasts for one or two hours. In PA-70, however, this rest does not last more than half an hour.

At around 2 or 3 o'clock there is a light meal known as a "merenda". This meal consists basically of tea, yams, cuscuz (a cake made from manioc flour) and fruit. For several families settled in PA-70, however, the "merenda" consists of "paçoca" a mixture of dried meat and corn flour ground in a mortar pestle. Again, when the place of work is far from the house, the "merenda" is brought along in mess-tins.

Dinner or "jantar" is served around 6 pm. For the majority of the families in PA-70 and for the Southerners settled in PIC the "jantar" constitutes the main meal of the day and includes all the foodstuffs which are considered to be the
strongest and heaviest, such as meat and other food which contain a large amount of fat. Families which prefer a lighter meal at dinner choose lean meat instead of hard-to-digest fats, such as those found in large game animals or fish. Rice, potatoes and some kind of vegetable, however, are always present regardless of whether the dinner is heavy or light. The basic argument used by the families who prefer to have a heavier lunch than dinner, is that having a heavy meal shortly before sleeping can cause digestive and sleeping problems, while those who prefer a heavier dinner argue that because of the high temperatures during the day, a heavy lunch causes health problems and lessens productivity. In both cases, the families actually maintained the habits from their place of origin, rather than changing to practices which might be more suitable to the Amazonian environment.

Sometimes a light snack is eaten late at night before going to bed. In this case, coffee (considered a stimulant), is avoided, and instead several types of tea are preferred, such as those made of "erva cidreira", orange leaf or mint, which are supposed to have a sedative effect. It is served with biscuits or "beijus".

Finally it seems important to point out that the dietary habits of the families are also influenced by some dietary taboos. It was observed that the existent taboos were partially acquired at the families' place of origin and partially acquired in the Amazonian region itself. Thus the taboos can vary from family to family although, except for a few, the great majority of them reflect the worries of the families over the preservation of health.

Some of the more common beliefs refer to mixing acidic fruits which, according to the peasants, provoke bad digestion. Based on this, the peasants claim, for example, that fruits such as mangos and bananas or pineapple and jambo (a local fruit) should not be eaten on the same day. The foods considered to be "strong", such as eggs and cucumbers should not be eaten at night as they may provoke "congestion".
Similarly, "strong" or fat meat such as that of the armadillo, is not recommended for women during the post-natal period as it can diminish their milk, nor during the menstrual period to avoid complications with the menstrual cycle.

How Foodstuffs are Acquired.

The majority of the families produce a large part of the foodstuffs they consume on their own lots. In PIC, however, those who devote almost their entire agricultural production for marketing (such as cocoa, black pepper, sugar, etc.) acquire a significant part of the foodstuffs necessary for their survival on the market. It was also observed that the families who live in the agrovillas tend to make more frequent use of the market to acquire foodstuffs than those who are still living on their agricultural lots. Furthermore, as was mentioned before, it was observed in both groups that the better a family’s economic situation is, the less they produce for their own consumption and, consequently, the greater their reliance on the market.

A total dependency on markets, however, is exceptional, as the majority of the families of both groups, are mainly concerned with the production of foodstuffs for their own consumption. It is also common, especially among kin or families of close friends to exchange goods in order to supply their needs and to avoid having to acquire them from the markets where, in general, such a supply would be more expensive.

The above description of the peasants’ daily dietary routine suggested that manioc constitutes the principal foodstuff for the families and is actually present in all the meals of the peasants as an essential ingredient of their diet. This applies to every family, including those for whom this product was not part of their diet in their place of origin. Although not all the families have the necessary equipment to make manioc flour, nevertheless all of them cultivate this product which can be eaten in different forms, not only as
flour (farinha), contrary to what is generally supposed by less informed outsiders.

Rice and beans are also two basic products in the peasants' diet. There were very few families who said that they had not produced enough rice and beans for their own consumption in the prior year to this field study. Among these families there were those who dedicated themselves more intensely to the production of cocoa, black pepper, sugar-cane, etc. and those families who turned to the selling of labour power rather than to agricultural production. Other families said that they could not produce these two basic products due to the lack of family labour power (particularly due to health problems) or because climatic problems caused them to lose their production. In these cases, rice and beans, which together with manioc constitute a basic food, are bought on the market or from families who have a surplus of such products. Among the poorer families, that is those who have not the money to acquire these basic products on the markets or from other producers, rice is generally substituted by macaroni which is cheaper, while beans are simply omitted from their diet. Corn and potatoes (especially sweet potatoes) are also cultivated by almost all families.

Regarding the consumption of vegetables, these are almost always cultivated close to the house, and it was observed that they are most appreciated by the families from the South and Central-South who are more intensive gardeners than the families from the North and Northeast regions. Among others, the more common vegetables cultivated by the families from the South and Central-South are: tomatoes, lettuce, cucumbers, pumpkins, carrots, onions, asparagus, and other varieties of vegetables which are practically unknown to the families from the Northeast and Northern regions. Among these latter families, the vegetables which they most consume are practically limited to "gilo", maxixe, kale, taro and chayote. In general terms, it was observed that there was a greater consumption of vegetables in PA-70 than in PIC, which reflected the predominance of families from the Central-South in that settlement and their disposition to
maintain their habits in the Amazonian Region of consuming more vegetables than families from other regions of the country. Fruit is eaten at any time of the day and greatly appreciated, particularly by the children. The consumption of native fruit is greater among families from the North and Northeast and the favorites are cupuacu (principally taken in the form of juice mixed with manioc flour), acai, pupunha and various kinds of nuts.

The families from the South and Central-South prefer to eat fruit cultivated on their lots, which are in general those traditional to the South and Central-South of the country, such as oranges, peaches, papaya, bananas, pineapple, mangoes etc. As in the case of vegetables, when there is a surplus of fruit, it is distributed among friends and nearest neighbours as an act of friendship and cooperation.

Although all the families agree that meat should ideally be eaten every day as part of the heavy meal, very few of them can afford to do so. In PIC only 13 out of 110 families interviewed were in a position to eat some kind of meat every day. These 13 families were either the better-off ones, who could buy meat at the market, or those who included the raising of pigs among their activities. In PA-70, only 5 families out of the 100 interviewed eat meat every day, and as in PIC, these families were among those in a better economic situation.

Approximately 70% of the families in PIC and 80% of those in PA-70 claimed they eat meat once or twice a week, while the remaining families said that they eat it only once every fortnight or did not eat it at all for long periods. Basically, almost all of the meat eaten by the families of both groups comes from the hunting of wild game. As a consequence, eating meat more frequently is restricted to those families with a greater number of adult males (women and children do not take part in hunting) and those with previous hunting experience, which practically excludes all of the families from the South. The animals which are most commonly hunted are paca, armadillo, deer, agouti or cutia and land turtles. Only those families which come from the
Northern region and a few from the Northeast eat monkey meat, although some of the more isolated families in PA-70 said that they eat it in times of need.

It was observed that for the inhabitants of PA-70 it is easier to find animals since a large number of these families are still living in very remote areas where the environment has not yet been so thoroughly exploited as is the case in the surrounding areas of PIC. The consumption of pork and chicken is more common in PA-70 than in PIC. In PA-70, repeating a tradition existent in the Central-South, nearly every family keeps pigs and chickens which not only enables them to have meat more frequently, but also eggs and fat. In PIC only the families from the South and Central-South evince an interest in raising pigs and poultry.

Consumption of fish is far more common among the families from the North and Northeast regions. Although the small streams that cut through the colonists' lots in PIC or through the PA-70 region do not contain the large fish species of the big Amazonian rivers (Hond-1972; Verissimo-1970), the families from the Northeast experience little difficulty in obtaining fish once or twice a week. Nevertheless, fishing, curiously enough, constitutes one of the habits which families from the South and Central-Southern have most difficulty in assimilating. In general, these families justify this failure by arguing that there are no fish in the nearby streams (which is not totally true, as the families from the North and Northeast have demonstrated) or that there is danger of their being attacked by wild animals or of their contracting diseases (such as malaria) in the vicinity of the streams, especially in the late afternoon when it is supposedly the best time for fishing. Besides this, these families also argue that fish is not a welcome addition to their table, and therefore they eat it only in the total absence of meat.

Regarding milk, it was found that less than 25% of the families can obtain this product from their own animals. In PIC those families who do not have animals but who are keen
on giving this product to their children tend, whenever they can afford it, to obtain this product in powdered form from the market. In PA-70, where access to the market is still more difficult than in PIC, a great number of families who do not have their own animals obtain milk for their children from neighbours who do have animals. It is precisely this type of co-operation or solidarity among neighbours, far more developed among the families settled in PA-70, that explains why the consumption of milk by children in this settlement is higher than in PIC.

Although sugar is obtained at the market by almost all the families, it can occasionally be substituted by "rapadura", a kind of hard brown sugar made from molasses by those families who grow sugar-cane and who know the techniques of how to make this foodstuff.

The above section demonstrated that a large portion of the basic components of the peasants' diet is produced by themselves. It became clear, however, that part of the components of this basic diet are acquired at the market, either because the peasants themselves cannot produce them, such as salt and sugar, because the peasants are involved in other kinds of agricultural activity, or yet because it serves as a way to improve their diet, as is the case when they acquire products such as powdered milk, macaroni, sweets, biscuits, tinned sardines, bread, etc. Although the degree of use of market products varies according to the agricultural activity and economic situation of the family, the reliance on the market either to obtain essential foodstuffs for their physical survival or as a way of improving the quality of their diet is a condition faced by all the families settled in PIC and in PA-70. Further discussion concerning the reliance on the market by families to acquire food and other goods which are necessary for their survival as small producers in the Amazonian frontier will be presented in chapter XI.
Health problems constitute one of the families' major preoccupations and are regarded by them as being the principal obstacle to a better adjustment to the Amazonian environment. In both PIC and PA-70, the peasants claimed that it was mainly due to health problems that several families (especially during the first years of settlement) returned to their native regions, leaving back their plans of settling permanently in the Amazonian Region.

As the abandoning of lots in PIC or of "posses" in PA-70 has recently become more rare, disease then became one of the main justifications given by the families for their poor economic situation.

A more detailed examination of the health problems faced by the families is therefore important in order to make an assessment of the current and future prospects for the inhabitants of the PIC and PA-70 settlements.

The Amazonian region has long had a reputation for unhealthiness matched by few other areas in the world (Moran-1981:p.183). However, it is not my objective here to make a comparative analysis of the index of diseases that exist in the Amazonian Region and those of other parts of the country or of the world. Instead, I prefer to begin my analysis from the standpoint that for the newcomers families, the Amazonian region presents new and totally unknown health problems. It is precisely these new and unknown health problems that make these newly settled families feel weaker and more impotent in the Amazonian environment than they would in their native regions.

No attempt is made here to make an inventory of all the different diseases which the newly settled families encounter, or to verify the means by which these diseases are propagated within the studied population. I have a far simpler objective, which is restricted to reproducing the peasants' statements regarding the illnesses from which they
most frequently suffer, and how they cope with these diseases and their consequences upon labour productivity, loosing of working days, monetary expenses and emotional distress.

The health problems that most seriously plagued the colonists of PIC were the same as those found throughout the PA-70 region, although some problems were more frequent in one region than in the other, thus causing more damage to one group than to the other.

The Case of Malaria

Malaria is invariably cited as being the most serious health problem that the newly settled families have had to face in the Amazonian Region. Although such a disease concerns equally the population from both settlements, the figures below show that the situation in PA-70 is somewhat worse than in PIC. Out of 100 families interviewed in PA-70, 86% said that at least one member of the family had contracted malaria since their arrival in the Amazon. In PIC, although with a lower index, the situation is not any less serious. Out of 110 families included in my sample, 74 said that at least one member of the family had suffered from malaria since 1971 (see Table 13 below).

TABLE 13
Cases of Malaria Occurring in the Period from 1971 to 1983 among the Families Interviewed in PA-70 and PIC

<table>
<thead>
<tr>
<th>Number of Cases in Each Family</th>
<th>No. of Families Affected</th>
<th>PA-70</th>
<th>PIC</th>
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<tbody>
<tr>
<td>1 case</td>
<td>40</td>
<td></td>
<td>46</td>
</tr>
<tr>
<td>2 cases</td>
<td>28</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>3 cases</td>
<td>13</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>4 cases</td>
<td>5</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Total number of families affected</td>
<td>86</td>
<td></td>
<td>74</td>
</tr>
<tr>
<td>Total number of cases</td>
<td>155</td>
<td></td>
<td>113</td>
</tr>
</tbody>
</table>

There was also a greater number of cases per family in PA-70
than in PIC. As indicated by Table 13 above, 53% of the total number of families who faced the contraction of malaria in PA-70 had two or more members affected. But in PIC, only 35% out of the 74 families who faced malaria had more than one member affected by the disease.

It was not possible to find official or bonafied justification for the higher incidence of malaria in PA-70 than in PIC. The literature regarding malaria in the Amazonian Region, however, sustains that some areas of the Region are more susceptible to the incidence of this disease than others (Moran-1981).

The statements made by the settled families themselves, however, can shed much light upon the incidence of this disease in the Region. When asked to give reasons why some families are more vulnerable to malaria than others, the peasants offered the following reasons: a) individuals who have only lived in the region for a brief period are more likely to contract the disease; b) the disease occurs mostly in families which live in the most isolated regions or close to the virgin forest; c) many of the individuals who contracted the disease were infected in areas which are considered to be danger zones (as is the case of areas where goldmines are located) and not in the area where the family dwelling is located.

Peasants' explanations are supported somewhat by the collected data regarding the occurrence of malaria in the two settlements during the 1971-83 period. Approximately 52% of the cases in PA-70 and 46% in PIC occurred in the first 5 years of settlement; that is, from 1971 to 1976, with a mean of 16.4 cases per year in PA-70 and 10.4 cases per year in PIC. In the later period, that is, from 1976 to 1983, the mean number of cases in PA-70 was 9.12 and 7.6 in PIC. This decline in the annual number of cases may be linked, as the peasants argue, to the population's longer period of residence in the area. Without neglecting the peasants' explanations, it should be mentioned, however, that after 1976 the public health service through SUCAM
(Superintendencia de Combate da Malaria) became more active in the areas where the two settlements were located.

In a survey of cases which occurred in the year prior to this study, that is from June 1982 to June 1983, it was observed in PA-70 that the greatest number of malaria cases occurred among the families living in the most isolated areas (see Table 14). In PIC, those more isolated families also had a higher incidence of cases although lower that found at PA-70. It should, however, be taken into account that fewer families live in isolated areas at PIC than at PA-70 which, statistically speaking, cancels out the difference between the two groups.

Another factor to be considered is that the families who live in the more isolated areas are also those who have just arrived in the region. Thus, it is difficult to establish which of the two variables (living in an isolated area or length of residence in the region), exposes the families to greater risk of malarial infection. Nevertheless, it does not discount the possibility that one of these two variables, or even both, increase the families' vulnerability to the disease, as is the peasants' belief.

Further, in relation to the incidence of malaria in the 82/83 period, Table 14 indicates that 47% of the individuals who had contracted the disease had been in the so-called danger zones, as in the case of prospectors.

<table>
<thead>
<tr>
<th>Cases</th>
<th>PA-70</th>
<th>PIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Families who just arrived or live in isolated regions</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>Individuals returning from gold-mines (prospectors)</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>Others</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
<td>19</td>
</tr>
</tbody>
</table>
Although the relevant literature maintains that malaria afflicts all ages and sex groups with an approximate probability (Moran-1981), in both the PIC and PA-70 settlements, its greatest incidence occurs in the group composed of adult males (see Table 15 below).

The explanation given by the peasants is that this group more frequently visits river areas to bathe in or to fish and which are considered to be habitat of the transmitters of the disease. Besides, such visits generally occur at sunset after the completion of the farm work. It is exactly at this hour, according to the peasants, that the mosquitoes attack their victims. The peasants add that women and children usually bathe during the day when mosquitoes are inactive. Such explanations coincide with some studies (Moran-1981; Smith-1982) which maintain that the mosquitoes (Anopheles darlingi, Anopheles aquasalis, etc.), considered to be the principal vectors for malaria in the region, prefer partially shaded, unpolluted, and relatively still water for breeding.

<table>
<thead>
<tr>
<th>TABLE 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incidence of Malaria According to Sex and Age and Number of Deaths due to the Disease: for the 1971-83 period</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Groups of Age and Sex</th>
<th>PA-70</th>
<th>PIC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of Cases</td>
<td>No. of Deaths</td>
</tr>
<tr>
<td>Adult males</td>
<td>88</td>
<td>6</td>
</tr>
<tr>
<td>Adult females</td>
<td>47</td>
<td>5</td>
</tr>
<tr>
<td>Children</td>
<td>20</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>155</td>
<td>14</td>
</tr>
</tbody>
</table>

However, since women and children also contract the disease, malaria vectors are thus probably breeding close to the peasants' homes and therefore the whole family is susceptible to infection in the evening when it is assembled at home.
Contrary to what is found in some studies on the population living along the Transamazon Highway (Moran-1981; Smith-1982), all of the families settled in PIC and PA-70 acknowledged that mosquitoes are malaria transmitters. They are also keen on employing strategies such as not going into the danger areas, and not going out at night to avoid being contaminated. The use of nets over the beds or hammocks where the children sleep is another strategy utilized by families who can afford to buy it. According to many statements, families who systematically employ these strategies are less susceptible to contracting the disease. Unfortunately, it was not possible to collect sufficient data to demonstrate the efficacy of this strategy.

The peasants, however, are conscious that to keep the mosquitoes at bay is an impossible task unless the public health service increases its action in the area. On their arrival in the Amazonian Region, the majority of the families had no knowledge of the symptoms of malaria. This probably explains the relatively high rate of deaths from the disease during the first years of settlement. Nowadays, the families basically distinguish the fever caused by malaria from other fevers because it is not susceptible to mild remedies such as aspirin.

Although the symptoms of malaria are relatively well-known to the families, the idea that women and children are less likely to catch the disease remains widespread among them. As a result, there is a certain resistance to accepting the fact that these two groups can be infected, even when they display the characteristic symptoms of the disease. Because of this resistance and due to the fact that the role of women and children in the labour-force is neglected among many families there is always a long delay in seeking proper treatment when a member of these two groups contracts the disease. Such an attitude by the families probably explains the large number of fatal cases of malaria among women and children (see Table 15).

Although it would be difficult to place a quantitative value
on the impact of malaria on agricultural productivity, there is no doubt that it is significant in terms of working days lost. In a survey of the adult males who contracted malaria in the 82/83 period, it was found that the mean number of working days lost was 45 in PA-70 and 33 in PIC\textsuperscript{10}. The effect of the working days lost is further aggravated if one takes into account the annual cycle of the incidence of malaria. The principal peak of malaria (in the early part of the rainy season) coincides with the critical time of planting, a task that cannot be delayed without negative consequences for the crop development. If planting is postponed for more than a month, crop yields are drastically reduced. A higher incidence of malaria can also occur during the harvest season or when new fields are being cleared. A delay of 20 or 25 days in the reaping of the cereal can mean the loss of the entire crop. Another minor peak of malaria coincides with the time of cutting the forest. A delay in this task means that the slash may not have sufficient time to dry for a thorough burn and consequently the planting cannot be carried out in time (Moran-1981-p.195).

In various cases the contracting of malaria by some member of a family not only threatens the family’s economic stability but even the viability of their definite settlement in the region. In the course of the field study it was possible to observe a case in PIC where the mother’s malaria had forced the family to borrow money to cover the costs of trips to town to consult doctors and purchase medicine. In arranging these loans the family became involved in a process of indebtedness which they only escaped from with difficulty over a period of 3 years. During the field study, it was also observed that two families settled in PA-70 were making preparations to return to their native regions because they could not afford the expenses of treatment of their fathers who had contracted malaria. According to them being in their native regions, they could, at least, receive the support of their relatives.
Other health problems

A number of other diseases besides malaria were reported by the peasants as constituting a permanent problem in their adjustment to the region. These diseases, which reflect those cited in official reports on health in the region (Smith-1982:p.97) are, principally: gastro-enteritis problems, children’s diseases, skin lesions and accidental traumas. Of these, accidental traumas due to the number of working days lost is probably the one which creates the most economic damage to the families. Accidental traumas occur mainly in adult males while they are engaged in clearing the fields. As the injury is generally severe the injured person is rushed to the hospital rather than being treated at home. The time for recuperation is generally longer than in malaria cases.

Gastro-intestinal disease is another serious and frequent health problem faced by the families. The contaminated drinking water (streams and ponds from which the families obtain their water also serve as washing, bathing and defecating facilities) is believed to be the major cause of the high incidence of this kind of disease in PIC and in PA-70.

Although a large number of adults suffer from constant gastro-intestinal problems, this kind of disease mainly attacks children and is probably the principal cause of infant mortality in the region. Children are also frequently afflicted by diseases such as diarrhoea, dehydration, anaemia and, especially, respiratory infections which are also responsible for a large number of deaths in this age group. It was observed that the index of childhood diseases tends to decrease as a family improves its economic status, which is also responsible for improvements in sanitary practices.

Another health problem frequently complained about by the peasants was that caused by bites from insects or animals such as mosquitoes, scorpions and snakes. Although in the majority of cases the reaction to simuliid bites cause only temporary discomfort, it was observed that due to intensive
scratching and unsanitary conditions it was not uncommon to find cases where bites from insects had resulted in disseminated mucocutaneous or secondary infections. According to the peasants, problems from skin lesions caused by insect bites were most frequent in the first years of settlement or most common among the recently-arrived families or those who lived in the most isolated areas, which could actually be confirmed among the families settled in PA-70. However, during the rainy season (the major peak of simuliiid feeding) the problems resulting from insect bites can be intense enough to interfere with the productivity of all the families in both settlements.

Finally, it appears that as the peasants adapt and gain a better knowledge of their environment, they also learn how to avoid being attacked by snakes and scorpions. Nevertheless, it was observed that snake-bites, in particular, still constitute a relatively frequent problem in terms of working days lost, monetary expenditure and even death. During the period from June 1982 to June 1983, two people died in PA-70 from snake-bites.

Coping with Disease

When facing health problems, the peasants have the following treatment options: public health service, private health service, home cures and healers.

In the PIC area, the public health service operates through hospitals with outpatient services in Itaituba and Santarem and a mobile clinic in Ruropolis Presidente Medici. For the peasants settled in PA-70, access to public health service is made through a hospital in the town of Maraba. In these hospitals the medical services are free and, generally speaking, all of the patients who go to them are treated. However, these hospitals are not able to meet all the demands for their services. There are insufficient beds and the doctors are constantly handicapped by a lack of equipment and supplies. Consequently, the patients who appeal to them very often have to wait for hours or even a whole day before being
seen by a doctor. It is not rare for a sick person, in order to be seen by the doctor, to have to lodge in town over-night, being forced to face expenses that often he or she cannot afford. In addition, as the hospitals have a limited stock of drugs, it is not uncommon for the patient to have to buy the medicine necessary for the continuation of his or her treatment. Nor, is it rare for the patient because of the lack of beds to be discharged before the completion of treatment resulting in that the patient has to return to the hospital one or two weeks after being discharged, as is frequent in cases of malaria. Well aware of the chaotic services provided by the hospitals and the expenses involved in calling on the public health services, families tend to utilize this option only if the illness is considered to be severe, such as malaria.

Private health service, which consists of some hospitals, clinics and doctors with private practice, may provide better service than the public sector. However, due to its high cost, very few, or only the more well-to-do peasants can afford to pay for private medical treatment, especially if hospital care is necessary. Nevertheless, the peasants sometimes prefer to pay the 10 consultation fee rather than wait in line for public service.

Another service provided for by the private sector is that offered by the pharmacists. In fact, this is the option most commonly chosen by the families settled in PIC and PA-70. Since doctors' prescriptions are not necessary for even the most potent drugs, when the peasants are feeling ill they go straight to a pharmacy. At the pharmacy, the pharmacist, whose main interest is making a sale, generally deals sympathetically with the sick person and listens attentively to his/her complaints about his/her health. As the pharmacist generally has some empirical knowledge of local diseases and the effects of some drugs, his diagnoses, as well as the remedies he offers, are readily accepted by the sick person. In dealing directly with a pharmacist, the peasants feel that they save time, since they receive immediate attention from
the pharmacist, and money, since there is no consultation fee to be paid. Furthermore, due to the personal relationship which is established between the pharmacist and the patient, it is not uncommon for the peasants to obtain more favourable terms in paying for the medicine, such as payment in kind or postponing the payment until after the harvest.

Although going to a pharmacy is considered by the peasants to be their most viable option, it does have some negative aspects which are often not perceived by the peasants. As the pharmacist is, above all, interested in the sales of his products, he generally prescribes more medicine than is really necessary. This is the case, for example, of antibiotics which are prescribed for simple colds without considering their side-effects. Furthermore, it was observed that instead of oral medication, the pharmacist tends to prescribe injections; not only does this increase the cost of the treatment for the peasants but it also increases the risks of infection since sterilisation procedures are, in general, inadequate.

As one can note from the above description, the options open to the peasants for treatment by conventional medicine are very often not only inconvenient but are also very expensive. As an example, one can observe that to treat a single case of dehydration in a child in the private health sector (consultation, remedies, transport and lodging), a family has to spend an amount of money equivalent to seven days' wages, the selling of 5 or 6 sacks of rice or the equivalent of obtaining seeds for the following year.

This situation has led the peasants, whenever possible, to make increased use of so-called folk medicine, although this alternative is still used to a lesser degree than is usually the case among rural populations settled outside the Amazonian Frontier or within more established and traditional rural communities in the country.

Folk Medicine

Three types of folk treatment of disease were observed in the
two settlements. The first, which the peasants refer to as "tratamento caseiro" (home doctoring) is based on combatting sickness with herbs teas or brews made from plants and herbs which the families grow in their own yards.11 This type of treatment varies according to the families' place of origin. That is, each family primarily uses the plants that it knows from its native region. In PIC a certain resistance was noted among the families from the South and Central-South to using plants native to the Northern region even if these plants were considered effective by the Northerners. The Northeasterners, however, not only found a large number of familiar medicinal plants in the Amazon but also adapted most rapidly to the use of local plants for remedies. As a result, families from the South and Central-South use a much lesser number of home-made remedies, making them seek conventional medicine more often than the families from the Northern and Northeastern regions. This, in the final analysis, implies that these families have a greater monetary expenditure with sickness than do those from the Northern and Northeastern regions.

In PA-70, where the majority of the families are from the same region, the home-made remedies are practically the same for all the families and practically no use is made of any native plant since their contact with native people is also very rare. However, they, like the Northeasterners in PIC, found a great variety of familiar plants, which has permitted them to carry out in the Amazonian region almost the same "tratamento caseiro" as they were used to in their native regions.

Among the plethora of teas used in home doctoring there are some which are common to all the families and to both groups. Of these, the following may be recognized: quina for the treatment of malaria;12 cedrat, anise and euphorbia for children's diseases; "capim santo" (local herb) for upset stomachs; orange peel for diarrhoea; copaiba oil for throat infections, garlic, lime and mint for colds and wormwood for liver problems.
The effectiveness of these teas in curing illnesses is questionable but, according to the peasants, they are extremely useful in overcoming the more severe symptoms.

When home doctoring proves insufficient, the sick person falls back on the second system of folk medicine; that is, he or she seeks help from a healer, or "curandeiro", using the local word. Although common figures in the rural Brazilian scene, "curandeiros" are relatively rare in the frontier areas of the Amazon. When asked about this point the peasants stated that a "curandeiro" needs time to know the local flora and gain the confidence of the population before becoming well-known. As the communities are only recently formed, these "curandeiros" do not yet play as outstanding a role in the region as they normally do in other rural regions of the country.

Even though the word "curandeiro" generally implies that the person is a kind of spirit healer or has special supernatural power, this actually does not apply to the "curandeiros" in the Amazonian frontier. There, the majority of the people (almost always old) who assume the role of "curandeiro", are merely those who have stayed longer in the region or have dedicated themselves with the greatest enthusiasm to learning the local flora and finding the plants considered effective in treating illnesses. It should be stressed, however, that some of these "curandeiros" have been more and more used by the local population for all kinds of advice, not only for health treatment. Curandeiros usually prescribe herbal medicines that can be prepared at home or that can be bought cheaply at the drugstore. The curandeiros do not charge for their services although it is customary for the patient to make a contribution, which in general takes the form of produce.

The third type of folk treatment utilized by the sick person is to seek a kind of faith healer, known as "benzedeiras" (blessers) or "rezadeiras" (those who pray). Most of these practitioners are women who are generally considered to be
endowed with healing powers. Although the benzedeiras will sometimes prescribe herbal medicine, their treatment consists basically of the so-called "simpatias". A simpatia is a ritual in which the benzedeira, grasping an arruba branch, recites prayers and a number of unintelligible supplications while making gestures symbolizing the expulsion of the illness from the patient's body. Benzedeiras are mainly in demand for curing children of the "mau olhado" (evil eye - which makes the child weak) or women with psychological problems or those related to menstruation and childbirth.

Although folk medicine is generally viewed askance by public health officials and even by some peasant families, it has been assuming an ever more important role in the peasants' struggle to overcome health problems in the Amazonian Frontier Region.

In this section it was made evident that health problems were a great obstacle faced by the families during the first years of settlement in the Amazonian Region. Nowadays, although the conditions of treatment have improved, the diseases are still a serious constraint to the agricultural production and consequently to the definite establishment of the families as farm producers in both the PIC and PA-70 settlements. The lack of an efficient public health service made the families develop and use a range of strategies which reflect their cultural background and their degree of adaptation to the local environment. Many of the most common diseases faced by the families, however, cannot be treated by the use of folk medicine, the main strategy utilized to overcome health problems. A more effective presence of the public health service in the area, therefore, seems essential in order to permit an improvement in the economic and social conditions of the families settled in PIC and PA-70.
Notes:

1 - Within this category, those houses built of adobe, a type of brick made of clay, should also be included. Even though the walls built of adobe have a better appearance than those of "pau-a-pique", the difficulty in finding the appropriate clay, and the fact that just a few peasants know the techniques for making adobe, is the reason why this kind of construction is very rare in these settlements.

2 - A more detailed description of the use of the "quintal" as a source of income for the families will be made in Chapter IX.

3 - In a dietetic survey undertaken in 1967, of the most common foodstuffs in the region, manioc flour was found to be the principal food, with an average daily consumption of 242gm per person, which corresponded to 29% of all food consumed (Wisniewski and Libonati-1967). In his study of a community in the Amazonian Region, Wagley estimated that a family of 5 consumed 2 or more kilos of farinha per day (Wagley-1957:p.102).

4 - Authors such as Lima Araujo (1975) and Josue de Castro (1982) made some analysis of the dietary standards of the population of the Amazon. According to Josue de Castro

"The biological and chemical analysis of the Amazonian diet reveals a dietary regime with innumerable nutritive deficiencies. These deficiencies are immediately noticeable due to the absence of important foodstuffs such as meat, milk, eggs, cheese, butter, fruit and green vegetables. It is an inadequate diet with a caloric total far below the requirements of a basic metabolism or the metabolism for labour" (Castro-1982:p 72/74).

Castro's opinion is endorsed by the findings of a dietetic survey of the most commonly consumed foodstuffs in the region cited by Wisniewski and Libonate (1967).
However, these studies were made of the native populations of the region, whose dietary patterns do not necessarily coincide with those adapted by the recent arrivals in the region, as is the case of the families settled in PIC and PA-70. In a study undertaken in the Altamira Project along the Transamazon Highway Moran states:

"No cases of protein deficiency were noted in any of these interior communities, in contrast to urban areas of the Amazonia. No signs of protein malnutrition were noted among the adult population of the Transamazon agrovilas near Altamira" (Moran-1981:p.207).

5 - A study of the recent changes in the dietary habits of the peasants of the Amazon, FASE (1983) concluded that the quality and standard of the peasants' diet substantially deteriorated once they began to dedicate themselves to the cultivation of products exclusively for commercialisation.

6 - According to Josue de Castro

"farinha is prepared in the Amazon region by special processes which grant the product a greater degree of richness and therefore a greater caloric value than the farinha produced in other parts of the country. Furthermore, in the Amazon region, farinha is not eaten on its own, an exclusivity which would be fatal and would render the local diet deficient, as has happened in other hungry areas in China and Indonesia, where the diet consists almost exclusively of rice, without addition or variation - a terribly monotonous diet which has reduced to extremes the nutritional index of these oriental populations" (Castro-1982-p:65).

7 - According to the dietetic survey quoted by Wisniewski and Libonati (1967), Acai had a daily rate of consumption in the region of 76gm per person and was the second most commonly consumed foodstuff in the Amazonian Region. According to
8 - According to most of the people interviewed, the quality of food was measured by its capacity to ward off an individual's hunger for a determined period of time and also its property of providing the necessary energy for physical exertion in working the land.

9 - It should be stressed that not all the cases of malaria cited by the peasants had had medical confirmation, especially those which had occurred during the initial period of settlement when access to doctors was more difficult. Nevertheless, due to the peasants' knowledge of the symptoms of the disease, it should be understood that it is highly probable that their diagnosis would have been correct.

10 - These data are very close to those cited by Smith who says that each victim of malaria is ill for an average of 38 days (Smith-1982-p:106). However, in a study carried out at the Altamira Project, Moran found that only 8 working days are lost by a worker who contracts malaria (Moran-1981:p.195). This difference between my data and that collected by Moran is probably due to the fact that the population studied by Moran has better access to medical treatment.

11 - A very detailed description of the species of medicinal herbs used in Brazil and especially in the Amazonian Region, may be found in Smith (1982) and in Mors and Rizzini (1966).

12 - Besides quina (quinine), a large number of plants are used to cure or mitigate the painful symptoms of malaria such as, for example, janauba (Hymathantus sucuuba), picao (Bidens bipinnata), quebra pedra (Phyllanthus stipulatus) and assafrao (curcuma sp.). According to Mors and Rezzini,
however, most of these plants, including quina apparently have no real therapeutic value in combatting malaria (Mors and Rezzini-1966:p.90).
CHAPTER VIII

Family Structure and Social Interaction

An analysis of the internal dynamics of the peasant household as suggested in the proposed framework has, besides other aspects, to take into account on the one hand, how the household in itself is constituted as an unit of production and consumption and, on the other hand, how the households interact among themselves within a small farming system.

This being so, this chapter attempts, in the first place, to carry out an investigation of the basic element of the household, that is, the family and the elements that give shape and sustain its structure. On the second place, this chapter examines the type of relationships established among the households, within each settlement.

Such an investigation will then allows us to delineate the nature of the social relationships that have been emerging in these newly formed communities that PIC and PA-70 represent.

In order to attain these objectives, I began by analysing the family composition of each household regarding the number, sex and age of its members as well as the hierarchical pattern and personal relationships existing among these members.

Next, the general features of kinship, marriage and godparenthood will be focused on, pointing out their role and importance in the maintenance of the household and on the interdependency established among them. The role and importance of religion, and the problems faced by the families regarding access to education are also examined.

The following section is concerned with the social interaction that has been developing within the communities. It will be examined the status position, conflicts, leadership and other aspects which characterize the community's social organization.
Finally I present a brief description of leisure recreation and the kind of entertainment available to the families in both settlements as well as a brief comment about the role and participation of the families in the local rural workers' unions.

Besides the objectives mentioned above, this chapter is also concerned with two other aspects: first to verify to what extent the living-conditions in a frontier area produce modifications in the internal structure of the families and introduce new forms of social relationships and behaviour within the family and among the inhabitants as a whole; second, to investigate the hypothesis that the nature and intensity of such modifications are conditioned to the kind of settlement in which the families are located, that is, directed or "spontaneous".

1 - Composition of the Families

Despite the controversy concerning the definitions of "family" and "household"¹, in this work both these terms are used interchangeably to designate a co-resident domestic group, that is, a group of people living under the same roof.

Contrary to what is generally expected in rural areas of Brazil, very few households in both the PIC and PA-70 settlements were found to have any individuals other than the parents and their children. And even in these very few cases, only those individuals who lived more or less permanently with the family and actively participated in the process of production and household consumption were considered to be part of the co-residential group². In the same way, those children who no longer lived with their parents were not considered to be part of the household.

The average household size found in PIC was 5.2 and 6.6 in PA-70. Even though these numbers are not very different from those found in similar research papers on the Amazonian frontier³ the difference of 1.46 in the average size of the families of PIC and PA-70 is relatively significant and therefore deserves some comments. Moreover, as Table 16
TABLE 16

No of families

PA-70

PIC

POPULATION:
PA-70: 666
PIC: 573

No>10

No of members
demonstrates, there is also a significant difference in the distribution of family size between the two groups. The size of the families ranged from 2 to 10 in PIC and from 2 to 16 in PA-70. The majority (52%) of the families in PIC have between 3 to 5 members while in PA-70 only 40% of the families are composed of 3 to 5 members. However, it is the number of big families (10 or more members) that constitutes the greatest difference between the two groups. While in PIC only 2 families have 10 members, in PA-70 approximately 26% of the families have 10 or more members. Although the difference in average size and in the distribution of family size between any two groups is usually attributed to a variety of demographic factors, I argue that in the case of PIC and PA-70, this difference is greatly influenced by the type of settlement, that is, directed or spontaneous, through which the two communities emerged. Three factors give rise to this assertion.

The first factor is related to the families settled in PIC having prior knowledge regarding the conditions of settlement and the size of the lot they would occupy. Once the families had this prior knowledge, some of their sons, particularly those who had reached adulthood, preferred not to accompany their parents on the migration to the Amazon. Being already of age to start their own families, these sons either remained in their place of origin or migrated to other areas where they saw better opportunities for obtaining a lot of their own. On the other hand, in PA-70 where the families could not foresee the area of land they would acquire, the adult sons generally accompanied their parents in migrating to the frontier in the hope of also being able to acquire their own lots.

A second factor is linked to the question of guarantee of land tenure. In PA-70 this guarantee to the lots the families occupy was, and still is, very tenuous. Ensuring possession of land in PA-70, as I have already mentioned in other parts
of this work, for a great number of families depended (and in some cases still depends) on the size of the family; that is, the more members of working age a family has, the greater the possibility of this family's resisting the "grileiros'" threats, and the greater the possibility of carrying out the necessary improvements for the official regularization of the land they occupy. Given this situation, the grown-up children in PA-70 tend to remain with their parents in order to help them to keep their "posses". In PIC, quite to the contrary, the families all have their lots securely guaranteed by the Government. As a consequence, there was a great flight of grown-up children, especially sons, immediately after the families arrived in the region. These sons, especially those belonging to families from a better economic background and who had previously in urban areas, upon seeing the difficulties of life in the frontier, they simply left their parents and returned to their place of origin or migrated to other areas.

The third factor is related to the selection criteria used by the Government agency (INCRA) for settlement in PIC. Although such criteria, as mentioned in Chapter IV, gave preference to settling families with high number of members, it was also among its priorities to settle families from the Southern Region. Since the families from the South have, in general, due to the socio-economic characteristics of this Region, a lower average family size, their presence at PIC made the general family size of this settlement lower than that found in PA-70.

a. Composition According to Sex and Age

The composition of the families by sex and age, as shown in Tables 17 and 18, also presents significant differences between the two groups. Taking the composition by sex first, Table 17 shows that in PA-70 46.8% of the population is female and 53.2% male, making this group congruent with general expectations of populations located in frontier
areas, that is, a larger male than female population (Modell-1971; Brown-1981). However, this congruence is not found in PIC, where the female population is 52.5% and the male 47.5% (Table 18). Again this difference between the two communities can be attributed to the great exodus of sons from PIC as was already observed in the previous section. In fact, as Table 18 demonstrates this quantitative difference between male and female is greatly accentuated in the 18 to 29 years age group. According to observations made during the field study, it is precisely the males in this age group who are most prone to leave their families.

With regard to the composition of the groups according to age, Table 17 and 18 show that while 49.2% of the population of PIC is under the age of 11, in PA-70 this age group accounts for 59% of the population. These data indicate the existence of a relatively greater number of dependents in PA-70 than in PIC.

On the other hand, the proportion of the population of PA-70 over 48 years of age is only 2.8% while in PIC this age group accounts for 11.1%. This indicates that, in general, the population of PA-70 is younger than that of PIC.

In conclusion, it may be said that, although at the time of this study PIC had a larger working age population, the prospect for the future is that this situation will reverse in PA-70's favour. Adding to this the fact that fewer sons leave PA-70, it may be discerned that in a few years this settlement will not only have a larger number of individuals available for work but it will also manifest an even greater demand for more land in this part of the Amazonian frontier.

2 - Family Hierarchical Structure

Many studies concerning the social relationships developed in the frontier areas indicate that the family hierarchical structure tends to change once the family is settled in the frontier areas (Brown-1981; Stratton-1981). This also seems
According to peasants' statements, the family hierarchical structure they had before coming to the Amazonian frontier was very similar to the pattern usually found in traditional rural communities. For many authors (Harris-1956; Candido-1951; Fukui-1979; Willems-1953) such a pattern of hierarchical family structure is characterized by the father's maximal authority within the household. He is the person who decides everything concerning the family's activities and to whom all the members of the family have to submit and show great respect whatever the situation may be. Women have a secondary role in any decision making, the children are totally dependent on their parents' decision, even when this concerns their own personal affairs.

What was observed among the families settled in PIC and PA-70, however, was that such a pattern of family hierarchical structure has suffered profound changes in its main characteristics since these families came to the Amazonian frontier. The relations among the members of the household are still based on a hierarchical system, but the rigidity of this hierarchy is much more flexible and pliable than it used to be before.

It is still true that the father generally stands out as the head of the family. However, in many cases, especially in PIC, this role assumed by the father is mainly to attend to the needs of dealing with the institutional agencies (such as Incra, banks, etc.). For these institutional agencies the father is still the legitimate representative of the family and it is in his name that, for example, INCRA concedes legal documentation to the lot and the bank concedes credit to the family. However, among the members of the household itself, the role of the father as head of the family is far from authoritarian or unquestionable.

On examining some possible reasons for the changes in the family hierarchical structure, it was observed that the
father began to be undermined at the very moment that a decision was made to migrate to the Amazonian frontier. The migration to the Amazonian frontier meant a very big change in the family’s life, and as such, the decision of moving to this region had to be accepted and shared by all the adult members of the family.

The consequences of such a decision were that from that moment on all the members of the family began to have a greater participation in any other decision the family had to make. Besides this, the members acquired more independence and freedom regarding their own interests and desires. Immediately after the settlement in the Amazonian frontier several other situations arose that contributed to the decline of the father’s authority. The new physical and social environment presented by the Amazonian frontier caused the father to be more dependent on other family members in dealing with situations that he used to manage on his own and which used to reinforce his position as leader of the family. In addition, it is important to stress that the migration to the Amazonian frontier created an unprecedented expectation of improvement in life style among all the members of the family. If the father as leader does not match up to such expectations, his overriding authority and the respect he may enjoy from the members of the household can very easily be undermined. It is not unusual, for example, for the father to lose his position as the leader of the family due to an equivocal decision related to the family economy. Before coming to the Amazonian frontier such equivocal decisions certainly would not have threatened father’s position because the other members of the family did not possess “great expectations" of change.

As mentioned before, despite the changes, especially regarding the role of the father, the families still maintained a hierarchical structure among their members. Just below the father, the next member in the hierarchical family structure is the mother. The position of the mother is, however, very often ambiguous. On matters which are purely
family hierarchy, overriding the father even when he is still the head of the family. Thus, it is left to her to decide about the division of labour within the house, the care of the children and of those who are ill, the care of clothing and the preparation of food. However, when the family has to deal with issues beyond the domestic sphere, such as the organisation of production, the commercialization of produce and more formal contacts with the outside world (banks, government agencies, etc.) the lead position occupied by the mother in the family hierarchy is generally assumed by the oldest adult son. In such situations, however, whatever decision the oldest adult son has to make, it always has to be discussed and approved by the other members of the family.

Even though this model of family hierarchy applied to the majority of the families is, as I have mentioned before, not rigid; actually the position of each member within the family hierarchy depends on several conditions. The importance of such conditions is particularly strong when determining the position of the female members in the family hierarchy. It was observed, for example, that although in the majority of cases women have a greater participation in matters regarding family’s economic and social interests, their position is actually determined by their degree of participation in agricultural production. If wives and daughters work on the agricultural production as much as men do, they find themselves on a far more equal footing with their spouses and brothers than when they are limited to domestic tasks. It was also observed that as soon as the family attains an economic situation that allows them to hire outside workers, females participation in agricultural production diminishes, and consequently, their participation in family affairs also tends to decline.

Besides the economic situation, females position in the family hierarchical structure is also determined by the family background. Among the families from the Southern Region, females in general (whatever the economic situation
of the family), enjoy a better position in the family hierarchy than do the females who belong to families from other regions of the country. This aspect, however, can be partially explained by the fact that women from the South tend to continue working on agricultural production even when the economic situation of the family permits them to hire outside workers more than those from other regions.

Although the family hierarchical structure found in PIC and PA-70 determines the position of each member according to his or her participation in the productive process, there is no doubt that such a hierarchical system relies also on a certain degree of sexual discrimination. This aspect became even clearer when the position of the young children in the family hierarchical structure was examined. Parents always say that they care for all of their children equally. Nevertheless, it was observed that from the beginning male child gets more of his father's attention than do his sisters, while the mother tends to be closer to the female children. To the boys are often permitted to lash out openly, while the girls are constrained at the first sign of physical aggressiveness. Girls are more rapidly and more thoroughly integrated into the housekeeping system - looking after younger children, sewing, washing, etc. - with the result that their orbit of daily activity rarely takes them out of the house. Boys, on the other hand, gradually come to spend more and more time outside home, whether by themselves or accompanying their father on visits to townships, fishing and hunting.

This differential treatment continues even when the children become teenagers. Sons are allowed more contact with friends and to participate more frequently in social events such as dancing, parties, sports, etc. Furthermore, when it is decided how much of the family income the children should receive for their personal expenses, to the sons are generally given more than the daughters, even when the latter participate equally in the system of production. Greater priority is also placed on the sons' attending school and they are expected to have a better performance than the
Despite the different treatment they receive from their parents, the relationship between siblings is, in general, extremely friendly with the brothers feeling responsible for the moral and physical protection of their sisters. This protective feeling on the part of the brothers, however, as is the case of families from the Northeast, can be excessive, resulting in a kind of oppression, as was stated by one of the girls.

This brief analysis of the family hierarchical structure of the ones settled in PIC and PA-70 showed that the physical, social and economic conditions of the frontier introduced some changes in the hierarchical structure of the families. Members of the household who participated in all the stages of the migration and settlement processes enjoyed a more equalitarian participation in matters concerning the families' interests and more freedom in their personal affairs. However, aspects such as the reduced participation of women as the economic situation of the families improves and the differential treatment given to girls and boys makes it difficult to predict whether this new and more flexible family hierarchical structure will last into future generations or whether the authoritarian and rigid hierarchical model present in the traditional rural areas of the country will also prevail in the Amazonian frontier region.

3 - Kinship

Unlike what is usually found in traditional rural communities the so-called "extended families" such as the ones described by various authors in studies of kinship systems in Brazil (Wagley-1963; Hutchinson, C.-1957; Lewin-1979; Smith-1972; Kottak-1967) were not observed in the PIC and PA-70 settlements. I argue, however, that the absence of these extended families should be considered rather as a matter of circumstance than
as the adoption of a new or different concept of kinship by
the families settled in the frontier area. The fact that both
communities under study have been formed recently and that
they integrate individuals from different regions (as is
especially the case of PIC), plus the fact that not all of
the families were able to settle on lots close to those of
their relatives, constitutes technical barriers against the
proliferation of the "extended families" in the region.

The absence of the "extended families", therefore, does not
imply that some kind of change in the ideology of kinship is
in progress among the families settled in PIC and PA-70. On
the contrary, as I will soon show, it might be argued that
the circumstances inherent in migration to, and settlement
in, the frontier area tend to reinforce even further the ties
of kinship among the families and among individuals. This
reinforcement, as will be well illustrated below, is not only
expressed in the maintenance of the basic characteristics of
the kinship system which exists in the Brazilian rural
communities in general but, is also characterized by an
overestimation of those kinship ties which are more likely to
promote the social and economic well-being of the families.

In fact, as I have already mentioned in Chapter V and as it
will be given in more detailed form below, kinship ties not
only constituted an important element in the families'
process of establishing themselves during the first period of
settlement, but also, at the present moment, can wield great
influence on their economic and social position within the
community.

The Range of Kinship Relations

Kinship affiliation is bilateral and involves all the
individuals linked by blood ties as well as those linked by
affinity, such as in-laws. The kindred are classified into
primary kin (parentes proximos) and secondary kin (parentes
distantes). The primary kin include all collateral relatives
up to second or third cousins traced through the mother and
father. This group also includes the close in-laws such as
Secondary kin are considered to be individuals with distant blood ties such as fourth or fifth cousins plus more distant affines such as co-brothers/sisters-in-law (*concunhados*), etc. However, recognising an individual as a secondary relative does not follow any rigid rule since the criteria used vary from family to family. It was observed, for example, that the families settled in PA-70 tend to give more importance or more ready recognition to a distant secondary relative than do those settled in PIC, particularly those from the Southern region. Among the families from the South, a secondary relative, in general, is only recognised as such if he or she has the same family surname. This rule does not apply to the families from other regions, especially those from the Northeast, for whom the surname does not constitute the norm of recognising kinship for either primary or secondary relatives.

Acknowledgement of an individual as primary kin automatically implies in his or her inclusion as a member of the "family". In this respect the term "family", not only refers to the co-residential group, as mentioned before, but may also refer to the circle of primary kin. The inclusion, or not, of a secondary relative as a member of the "family" depends on the degree of friendship, closeness and "kin behaviour" that he or she has towards the group which constitutes the circle of primary kin.

The more restrictive rules for recognising secondary relatives as kin or as "members of the family" by those from the South makes these families smaller than, for example, the families from the Northeast which are much more flexible in recognising either primary or secondary relatives as kin or members of the family. However, this does not imply that the relationships the families from the South or other regions maintain with their kin are any weaker than those found among the Northeastern families.

Finally, it should be stressed that although the majority of
the families settled in PA-70 are from the Central-South, their attitudes towards recognition of kindred are closer to the criterion of the Northeasterners' than to that of the Southerners'. Actually, it was observed that for many families settled in PA-70, the recognition of an individual as a secondary relative or kin may even override or exempt blood relationships or ties of affinity. Many were the cases found where an individual was considered a cousin by the family, taking into account only the friendship shared by the ancestors of both families or the current friendship and economic relationship that this individual has with the family.

Rules of Behaviour Among Kin

Some basic norms of attitude and behaviour guide the relations among kin and sustain the continuity and reinforcement of the existing kinship system. Some of these norms may be easily identified in the interpersonal relations among primary kin.

Behaviour of the younger towards the elder kin is marked by respect and deference. Grandparents, as well as aunts and uncles, are treated by the children in the same way as they treat their parents; that is, with great respect, addressing them by the title of "senhora" and "senhor". Children are willing to support parents and grandparents in their old age, while on the other hand grandparents and uncles/aunts are expected to act as surrogate parents, particularly if the parents should die while the children are still young. Grandparents, like uncle/aunts, are frequently consulted and invited to make suggestions on household problems and to serve as intermediaries and mediators in the case of misunderstandings between parents and children.

Relations between cousins are very similar to those which exist among siblings; that is, they are characterized by great friendship and mutual responsibility for one another's welfare. Close association in economic business and social events among cousins is very common and may continue

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Another norm existing among kin, and probably the most important concerning this thesis, is that which stipulates that among kin there must have mutual support and co-operation in sickness, financial difficulties and, above all, loyalty should the family become involved in disputes with other families. Failure to fulfill these requirements does not necessarily mean the exclusion of the person from this kindred group, but he or she will certainly be maintained at a distance and subject to severe criticism by the members of the kindred.

I will now examine in more detail how kinship ties, guided by the rules and norms cited above, have actually intervened in the lives of the families and how this has generated even stronger kinship ties. For this reason, the two settlements will be examined separately.

a) PIC

Due to the fact that the families settled in PIC came from different regions and, consequently, also have different cultural backgrounds, the traditional rural habit of amity and cooperation between neighbours was not immediately established. Therefore, it was to their kin (when they were also in the settlement) that the families turned for support and mutual aid in the initial period, even if they had not settled close by.

Initially, solidarity was expressed through moral support in face of the psychological and physical distress provoked by the hardships of the new environment, by the cultural and physical isolation which the families had to endure and by the constant threat of diseases until then unknown to most
To this moral support was later added a material by sharing of provisions and supplies to ensure the families survival (especially those with little or no initial capital) until after the first harvest. Besides this, as the families were given lots of virgin or untouched forest, the initial clearing of the land was very difficult, especially for families with a small labour force. Once again it was the solidarity and mutual aid of relatives which was the answer to this problem, since hired labour was practically non-existent in this initial period of settlement.

Finally, the greatest exchange of information regarding climate, variations of soil, work techniques and the best way to gain access to official agencies was mainly found among kin.

In short, it may be concluded that for a great number of families, help from kin was crucial in overcoming the problems presented by the initial stage of settlement and ensured their remaining in the area.

Once the initial period was over, although mutual aid among kin was no longer essential for survival or as a guarantee for the continued residence of many families in the region, it nevertheless became an important factor in the social and economic improvement of many families.

To illustrate this last point, below I will describe the case of the Garcia family group, which constitutes a good example of the importance of association and mutual aid among kin at the present moment in PIC and how it actually influences the social and economic position of the families involved in this kind of relationship.

The Garcia Family Group

During the last five years, the INCRA has adopted a more flexible and, apparently, more rational policy towards the process of selecting the colonists to be settled in PIC's
area and the distribution of the available lots. As a result, the last families to arrive have had greater opportunities to choose the location of their lots, while those who were already settled have been given permission to exchange their lots for ones which better suit their interests. Making use of this flexibility on the part of Incra, some 16 families of the Garcia Group (all of them related by kin ties) managed to obtain lots relatively close to one another, as shown in Map 9.

The proximity of their lots and their kinship ties have enabled the families of this group to carry out a number of activities together with one another, which was not found to be the case among unrelated neighbours.

First, any requirement of extra labour by any of these families is supplied by the exchange of days among its members and by "mutiroes". As a result, these families employ practically no hired labour, which represents a great reduction in their production costs. Days exchange and "mutiroes" also extend to domestic tasks such as children caring, picking up fruit etc., as well as for making manioc flour. Besides the supply of extra labour, the relations among this kinship group enable the families above all to use improved techniques in the production process, such as, for example, the collective hiring of harvesters and other equipment, which, due to the high price of leasing, one isolated family could not afford. These collective family actions also extend to the joint storing and commercialization of their produce, enabling them to obtain better prices for their crops.

Finally, an important advantage shared by the families of this kin group lies in their greater capacity of obtaining bank credit. As I will examine in more detail later on in this thesis, to obtain credit is a very difficult task for which, among other conditions, a family is required to have a guarantor. Since standing as guarantor involves an economic risk, it generally only occurs among very close friends who have a great amount of mutual trust, which is mainly found
LOCALIZATION OF THE LOTS – GARCIA FAMILY GROUP

Plot 8  Gleba 21  -  Ego
"  9  "  -  Brother
"  10  "  -  Uncle
"  12  "  -  Brother
"  13  "  -  Brother
"  5  "  -  Cousin
"  4  "  -  Cousin
"  9  Gleba 19  -  Brother-in-law
"  11  "  -  Cousin
"  13  "  -  Cousin
"  5  Gleba 23  -  Brother-in-law
"  4  "  -  Uncle
"  7  Gleba 20  -  Sister
"  9  "  -  Cousin
"  4  Gleba 22  -  Sister
"  6  "  -  Father-in-law

CUIABA-SANTAREM HIGHWAY-SOUTH BRANCH

NOVA ESPERANÇA COMMUNITY
among kin. In the case of the Garcia family group, it was reported that all of the families had obtained credit based on a collective deed of mutual guarantee backed by all the members of the group.

In conclusion, the factors brought out by the peasants as being the main constraints for a good economic performance in PIC (such as lack of initial capital, lack of labour power, inability to obtain credit, etc.) have been overcome by the Garcia group through mutual aid and cooperation among its members, sustained by kinship ties that unite them. As a result all of the 16 families which make up the Garcia group currently enjoy an economic position well above the average for PIC as a whole.

b. PA-70

In PA-70, the kinship ties among the families appear to be even more important than they are in PIC. The solidarity and mutual aid shared by kin in PA-70 was in evidence even before the settlement process. As I have already mentioned (Chapter V), the majority of the families settled in PA-70 arrived in this region in groups, several of which were composed of kin groups. Once in the area, it was precisely these kin groups that remained more cohesive, with the families seeking to establish themselves close to one another.

Initially, these families shared temporary shacks in "way stations" where the women and children stayed while the men went together into the forest in search of free land. Once free land was found, the women and children were taken into the forest where 2, 3 or more families continued to share a dwelling and food supplies until all of them could build their own houses and have enough provisions for their survival.

This helping and mutual aid among kin continued throughout the initial phase of land clearing, throughout the exploration and the attempts at better understanding the forest and, later, in the defense of the land against the attacks of grileiros. Currently, besides mutual aid in
agricultural production, the collaboration among kin can be observed mainly in their collective action aimed at obtaining a definite regularization of the lands they occupy from the authorities. The following description of the relationship established among the members of the Lacerda family group constitutes a good example, for a better understanding of the importance of kin ties in PA-70.

The Lacerda Family Group

In 1970, the first three families of the Lacerda group arrived in the area and occupied lots 49, 47 and 40 (see Map 10). At the same time they were working their own lands, these families reserved (by demarcation and the making of small improvements) the area which corresponds to lots 54, 50 and 48. These lots were occupied by three related families who arrived 6 months later. In 1972, two more families of the group arrived who were able to immediately occupy lots 41 and 44 under the guidance of their already established kin. In 1974, three more families arrived and lived with their settled kin until they were in a position to occupy lots 43, 78 and 81. Finally, two more families arrived in 1975, one of which occupied lot 86 while the other occupied part of lot 49 as sharecroppers.

At the end of 1975, a "grileiro" appeared in the area with false deeds to the area corresponding to lots 54, 50 and 48 and demanded the immediate withdrawal of the occupants from these lots. Due to the grileiro's decision to use physical violence by employing "capangas" (hired bravos), all of the other related families gathered in the threatened area where they resisted the grileiro's attacks until he finally gave up. Later the families which had settled on lots 41 and 44 suffered a similar threat and once again all the families of the group came to help in order to secure the ownership of the lands they occupied.

Currently, also by collective action, this group of families is making great progress in achieving definite regularization of the land they occupy. By taking collective action, these
Lot no.  49  -  EGO
Lot no.  47  -  BROTHER
Lot no.  40  -  FATHER
Lot no.  54  -  BROTHER-IN-LAW
Lot no.  50  -  COUSIN
Lot no.  48  -  SISTER
Lot no.  41  -  BROTHER
Lot no.  44  -  COUSIN
Lot no.  43  -  UNCLE
Lot no.  78  -  COUSIN
Lot no.  81  -  COUSIN
Lot no.  86  -  BROTHER-IN-LAW

Source: GETAT
families can save money on trips to the cities and with lawyers in order to speed up the official bureaucracy.

Besides the examples cited above, mutual aid within this group of families takes the form of supplying labour by exchanging days, muti roasted at harvest time, lending tools, and joint transportation and commercialization of produce. Most recently these families, also collectively, have invested in cattle-ranching. To do so, some families have set aside part of their lots for grazing lands, while they use part of the other families' land to supplement their agricultural production. In this way they have been able to adopt a system of crop rotation which is considered important when combining agricultural and cattle production.

To summarize, it is due to mutual aid, sustained by the ties of kinship which unite them, that the families of the Lacerda group were not only able to settle and secure their land in the region, but are also currently in a better economic position than the majority of families who are not integrated into a similar kinship network.

4 - Godparenthood

In addition to kinship, the system of "compadresco" or co-parenthood (D'Avila-1971) also constitutes an important means of establishing ties of friendship and cooperation among the families settled in PIC and PA-70.

As in other Brazilian rural communities (Harris-1956; Audrin-1963; Pierson-1951; Hutchinson, B-1966), in PIC and PA-70 there are various ways in which "compadresco" is established. The most common, however, is that in which the parents of a child invite a man and a woman to serve as godparents at their child's baptism.

By virtue of the baptism, the sponsors become godfather (padrinho) and godmother (madrinha) of the godchild (afilhado) and this also establishes a strong relationship between the parents of the child and the godparents, who
become co-mothers (comadres) and co-fathers (compadres).

It is expected that the godparents will pay special attention to the godchild, particularly material help, including adoption, should both of the child’s natural parents die. In turn, the child is expected to owe special respect to his or her godparents. It is also expected that between the parents and their child’s godparents there should be a relationship of intimate friendship, mutual respect and, above all, mutual aid in case of financial and economic problems.

A great number of parents choose relatives for godparents of their children as a way to reinforce the bonds based on ordinary kinship ties. However, especially in PA-70, the majority of parents prefer to choose godparents from among unrelated persons or from among people who are in a better economic position and who live in the townships where they enjoy some social and economic prestige. By this means the parents in PA-70 attempt to obtain some advantages such as: the opportunity for the children to live with their godparents and so have access to school; a house to stay in when some member of the family needs to visit the village; a chance to utilize the godparents’ influence in negotiations on the legal question of land; better access to the market, both to buy and sell products; and material help such as money lending or standing surety to obtain bank credit. However, in such cases the relations of "compadresco" are not always so close and intimate as those existing between parents and godparents who belong to the same economic and social stratum. In PIC, the choice of godparents based on the economic and social advantages that it can bring is less accentuated than in PA-70. Instead, the parents in PIC tend to restrict their choice to the social group to which they belong and which is basically comprised of families which share the same place of origin. Further comments about these social groups in PIC will be presented later in this chapter.

Another way to establish godparenthood ties is that offered by marriage, when both the bride and groom invite a couple to be the sponsors of their marriage. This also brings about a
close relationship, but only between the sponsors who are called "godparents" and the marrying couple. In general, the couple to be married try to choose godparents who are in a better economic position than they, hoping for some material benefit from the wedding arrangements, as well as with the construction of a house and with the buying of domestic utensils.

In short, one can conclude that even though many parents still choose relatives as godparents for their children, the compadresco relationship aims, above all, to create entirely new associations between families and groups, inside and outside the community, than reinforcing existing kin relationships through this additional tie. This is, actually, easily understood due to the fact that in recently formed communities the number of related people is smaller than that usually found in traditional rural communities. There is, however, one aspect in the godparenthood system found in PIC and PA-70 that deserves further comment. While in PIC the "compadresco" mainly aims at reinforcing the relationship between individuals or families within the community itself, in PA-70 it is mainly used as a form of obtaining some support from outside the community in order to enable families to keep their land.

This difference in the meaning of the compadresco system between the two communities can undoubtedly be explained by the difference in degrees of security relating to the land tenure that exists between the two settlements. Based on this, one can conclude that the compadresco system as a way of creating a network of connections of patron and client or of patron and dependant (Hutchinson-1966) is more likely to happen in PA-70 than in PIC.

5 - Marriage

The decision to get married taken by young people is considered by the majority of parents', according to their own words, a great relief or the end of their duty in their
upbringing. For his parents a son’s marriage means that he is finally "settled in life", to use the local expression; that is, he will have more responsibility, will be more worried about saving money and will no longer be involved with prostitutes. On the other hand the marriage of a daughter means, above all, less burden on the family. This burden is defined as financial expenditure and worry about the protection of her moral integrity.

For young people themselves, getting married is the realization of one of their principal goals and a great change in their life cycle. For males, marriage represents a means of acquiring the respect and trust given to "married men" by the family and society; for the girls, it means their independence from parental authority and economic security for the future.

Unmarried individuals are social anomalies. Elderly bachelors are subject to scorn and pity and elderly spinsters are frequently objects of ridicule.

Courtship generally begins at dances in private homes and it constitutes the most prolonged form of young heterosexual association. To dance with the same partner several times in a row, in general, brings about the relationship of "namorando" (courting) between a girl and boy.

As the courtship progresses, the young man becomes a frequent visitor to the girl’s house. When the boy takes the girl to his family gatherings it means that their relationship is serious and he has the intention of marrying her. In general, the courtship lasts some months before the couple announces their intention of marriage to the respective families. When their decision to marry is announced, the boy seeks his prospective father-in-law’s consent to the marriage (failing this, the girl’s eldest brother or mother). No one could remember of any case where such a request had been refused. After the family’s consent has been obtained, the couple become engaged, which is generally celebrated with a lunch or dinner, for the two families. In the course of this lunch/dinner the couple discusses the best date for the
wedding with the two families and the boy states his financial position, his plans for the future and displays a pair of wedding rings which he and the girl begin to wear on their right hands as a sign of their commitment.

The wedding generally takes place some months after the engagement. There is a feeling that the bride’s family ought to finance the marriage ceremony; in practice, however, both families contribute according to their respective means. The ceremony takes place in the chapel closest to the bride’s home or in one chosen by the priest as being more appropriate for celebrating all the weddings which he has been asked to perform on the same day.

After the religious ceremony in general there is a lunch at the bride’s home for family and guests, followed by dancing through the night. Very few couples have been joined by both religious and civil ceremonies since civil sanction implies that the couple have to travel to town. Only couples whose families are in a good economic position have participated in a civil marriage which generally takes place some days before the religious one. Other couples either have the civil marriage performed some time later when they have an opportunity to go to town and can afford it or simply put aside the civil ceremony entirely. Priest’s acceptance is felt to be sufficient and the civil code is regarded as expensive and, for many couples, taken as superfluous.

Partner’s choice is left to the young with hardly any parental interference. Parents impose few, if any, restrictions aside from expressing preference for a particular girl who has a good reputation (for "honesty" or for being of good family) or for a particular boy considered to be a good worker and provider.

There is no fixed age at which the young people marry. However, some parents argue that there is a certain minimum age that should be considered if the marriage is to be a happy one. In general, girls are considered to be ready for marriage at 17 and the boys when they have a certain economic autonomy, which usually happens after 20.
The majority of marriages take place between boys and girls who belong to the same community or to neighbouring ones. Although social and economic differences are not considered a barrier to marriage, most parents do not recommend marriage when the girl comes from a family in a better economic position than that of the boy. In these cases, according to the parents, marriage would tend to be unstable since the boy would be unable to provide the material comforts she has had from her parents. Finally, marriages between first cousins or close relatives, such as uncle and niece, are extremely rare and highly disapproved by the community.

Although there is no explicit coercion applied to those who want to get married, the young people tend to choose their partners from their own social circle. In this way, marriage constitutes a reinforcement of social divisions already present among the families and which are mainly based on economic status and place of origin. A more detailed analysis of these social divisions will be given in the next section. Evidences of this marriage function can easily be found in both settlements. In PIC, out of 25 marriages performed during the last 3 years, 20 were between people whose families were from the same region. When asked to talk about it, the families from the South argued that the choice of a partner from the same region reflects the desire of a person to marry someone with a similar cultural background. On the other hand, however, the Northeasterners stated that the people from the South avoid partners who are from other regions due to the racism (both cultural and skin colour) of the Southerners. The other 5 marriages which took place in PIC joined partners from different places of origin. All the partners, however, belong to those families that occupied the top of the economic and social pyramid of the settlement.

In PA-70, where the majority of families are from the same region, the social division of the groups is mainly based on economic position. And the choice of partners for marriage also follows this same criterion. All of the 22 marriages carried out in this settlement during the last 3 years joined partners from families with similar economic positions.
It may be concluded that marriages not only reinforce the social divisions of the families regarding their place of origin (as was the case in PIC) but also encourage, in both settlements, social and economic inequality since they tend to join families of similar social and economic status.

6 - Religion

Although Catholicism is the predominant religion in both settlements, approximately 15 families in PIC (all from the South) and 10 in PA-70 belong to Pentecostal Protestant sects. These families comprise the group of "crentes" (believers), as they are known in the region. The "crentes" are frequently referred to by the Catholics as being moralistic and puritanical due to their eschewing of worldly pleasures such as smoking, drinking, wearing fashionable clothes, going to sports events etc.

It was observed that the "crentes'" avoidance of social events in the community and their private religious meetings tend to set them apart from the Catholics. On the other hand it was also observed that the common religious affiliation of the "crentes" constitutes an important source of social cohesion creating ties of friendship and relationship among them which are very similar to those existing within the kinship groups as previously described. Despite all this, the religious affiliation is not taken by the families as a factor of social division or capable of interfering with the process of social interaction between Catholics and "crentes".

The Catholics only attend religious services when these are held in the local chapel by priests who periodically visit the settlements (once or twice a month). These priests, in general, are foreigners (French or Belgian) who live in the nearby townships. The religious service usually consists of a mass, baptisms and weddings followed by an informal conversation between the priest and those present.
In PIC the priests have little or no influence on the social life of the community since they restrict their activities to purely religious questions. But in PA-70 the presence of the priests is considered by the peasants to be, above all, an evidence of the Church's concern for their material problems, especially regarding those relating to the question of land. It was actually observed that the priests frequently acted as the peasants' spokesmen in dealing with the authorities concerning problems involving the land-question. Nor is it rare for these priests to act as mediators between the peasants themselves in solving internal problems in the communities and personal disputes between individuals.

Apart from attending religious services during the visits of the priests, the Catholics in both settlements manifest their religiosity by occasionally praying at home, not working on holy days and participating in ritual practices or festivities on the most significant dates of the religious calendar, such as Christmas and the Festival of Sao Joao (St. John's Day) in June.

7 - Education

The difficulty, and sometimes total lack of access to schools is frequently stressed by the peasants as being one of the negative aspects of their life in the frontier. In PIC, where the situation is considered better than in PA-70, approximately 10% of the children between the ages of 7 and 15 do not attend to school, 45% attend sporadically and only 45% attend primary school regularly.

Some reasons can be presented to explain this lack of formal education. First, contrary to the original government plans for Itaituba's Project, not all the agrovillages have a school. As a result, a large number of lots are located more than 20 kilometers from the nearest school.

In fact, it was observed that almost all of the 45% of children who regularly attend school come from families which have two residences; that is, one on the agricultural lot and
another in the agrovillage, where the children generally live in order to attend the local school. Of the children who attend school irregularly, it was observed that the majority live on agricultural lots located 5 to 10 kilometers from the nearest school. As no means of transportation exists, the children have to cover this distance on foot, which frequently makes their attendance at school very irregular. Among those children who do not attend school at all, the large majority belong to families whose lots are situated more than 20 kilometers from the nearest school and who are unable to maintain a home in the agrovillage. Therefore, the long distances should be considered the principal reason which prevents children from having access to formal education in this settlement.

Another factor which seriously affects children's regular access to schooling is linked to the need of the family to use children's labour force. As will be better focalized later on, children constitute an important part of the family labour force for many families. This being so, freeing children from working on the lot to attend school may even constitute a threat to the family's own survival.

Finally, but to a very slight degree, parents' own attitude to the relative importance of formal education may constitute an obstacle to their children's access to formal education. Three families were found where the children did not attend school despite living relatively close by, because their parents did not consider it important enough to acquire a formal education. It was observed that parents whose background included some degree of schooling and urban living are those who are most preoccupied with giving their children a formal education.

On finishing primary (elementary) school, the only way for the young to obtain further education is to go and live in one of the nearby towns, which rarely happens since their families lack the necessary financial resources.

In PA-70 the issue of education is even more critical since
public schools exist only in the townships located along the highway. Consequently, those children whose families live on lots far from these townships (which constitute the majority in the sample studied) are practically excluded from any kind of formal education.

Nevertheless, some parents, demonstrating a clear interest in providing some type of formal education for their children, joined with other parents to sporadically employ a private tutor for their children. This teacher is usually a resident of the community who, in general, is unable to teach more than the basics of literacy. Nor are such lessons continuous, being dependent on the cash available to the group of families who pay the teacher. Other families, especially those in a better economic position, tend to rent a house in the village, where the children, accompanied by their mother or oldest brother or sister, live in order to attend the local school.

Many of the families settled in both PIC and PA-70 state that despite all the problems they had faced in their native regions, they had had the opportunity, at least, of attending schools. Therefore, they considered the move to the Amazonian Frontier as a step back in terms of their children's education.

Actually, it was observed that in PIC only approximately 15% of the parents interviewed might be considered "totally illiterate", all of them having come from the Northeast. On the other hand, no adults (over 18 years of age) among the families from the South were found to be unable to read or write a little.

The educational level found among the adults in PA-70 is lower than the one in PIC. Around 25% of the parents were illiterate and approximately 10% of the children over 15 had never attended school. Although low, the educational level found among the parents in PA-70 seems better than that which their children can acquire at present and in the future if access to schools does not improve in the settlement.

Although a direct relationship between the level of
education and the economic performance of the family is not easily perceptible, it is evident that a certain level of schooling brings some advantages to those families who have had it. First, it is clear that it is the parents with some degree of education who are most interested in giving their children a formal education. In addition, a certain degree of schooling gives the peasants greater assurance in dealing with official agencies. Being able to read and write makes it easier for the families to obtain credit in the case of PIC. Similarly, in PA-70, those with a certain degree of learning can overcome bureaucratic obstacles regarding the regularization of the possession of their lands much more easily.

8 - Social Interaction

Some aspects of the social interaction existing among the families have already been highlighted in the previous sections, when, for example, the kinship system, neighbourhoods and mutual aid were focused on. In this section, however, I intend to show how this social interaction manifests at a wider level adding and analysing some new elements that may reinforce or obstruct the social relationship within these newly formed communities.

In PIC the social interaction is deeply affected by the division of the families into groups. Such groups are defined according to the families' place of origin and, to a lesser degree, according to the economic situation enjoyed by the families. The division according to the place of origin results in the formation of two socially distinct groups: the "nordestinos" (Northeasterners) which includes those families from the Northeastern Region, and the "gauchos" (Southerners) which is comprised of those families from the Southern Region of the country. The families from the North and those from the Central-South do not constitute distinct groups of their own. The Northerners are, in general, closer to the "nordestinos" and very often they are considered as
such. On the other hand, the families from the Central-South tend to be closer to the Southerners although some of them may feel more integrated with the "nordestinos".

Although there is no real conflict or hostility between the two groups, the limited social contact between the members of these groups is not imperceptible. This may be observed, primarily, in the relationships between neighbours. When neighbours come from the same region, they generally establish strong ties of friendship, characterized by a sense of solidarity and mutual aid. However, this does not occur where the neighbours come from different regions. In such cases the families either declare that they do not know their neighbours or that they have no form of social contact with them. Besides the social distance, the existence of two socially distinct groups can also affect the productive system. Exchange of services or collective decisions taken with a view towards improving production levels only involve the members who belong to the same group. Another way of showing lack of social interaction among the families in PIC can be exemplified by the failure of successive attempts by the INCRA to organize a cooperative in the community aimed at obtaining better prices for agricultural production.

Even though the majority of the families agree that the cooperative could benefit them all, the project did not accomplish its objectives because neither group could accept that the cooperative be ruled by members of the other group. A similar attitude is found in any initiative that requires the participation of families from different groups, such as the election of official leaders of the community, a mothers' club, etc. and even in the process of convincing the workers to join the regional rural unions.

This same recalcitrant attitude is also evident even at social events such as religious festivals or football games where all the members of the community are supposed to participate. It was observed that during such social events the individuals tend to gather around in their own groups, keeping a certain distance from the members of the other
The reasons for this division of families into two distinct groups according to their place of origin are neither very obvious nor clear. Some colonists do not deny that such social division within the community is a result of a "racist posture" taken by individuals from both groups. However, the majority of the families questioned maintain that social division is a reflection of the cultural differences found among families from different regions of the country. Although this explanation is worth considering, there is more to question than that, since this type of division does not occur in other areas of the Amazon where there are also inhabitants or migrants from several parts of the country.

What should not be forgotten when searching for reasons for this division of families according to their place of origin in PIC is the State's own role in the emergence of this settlement.

It is evident that the State, through INCRA, has adopted a policy of ever categorizing the families according to their place of origin and linking social and even moral values to this categorization, since the beginning of the settlement. It is not unusual to hear INCRA technicians refer to the colonists from the South as being the most "competent", "honest", etc., while on the other hand, the Northeasterners are frequently described as "slothful" or "dishonest". This prejudiced attitude taken by the INCRA officials has undoubtedly fostered a feeling of animosity and mutual mistrust between the families from the Northeast and those from the South. This has, consequently, hindered the development of a better social interaction among the families settled at PIC.

Economic status also constitutes a factor liable to promote social division among the families, although to a lesser degree. Greater social interaction was observed between families of similar economic status. It was also observed that among the more well-to-do families the issue of place of origin hardly interfered in their social interaction with
One of the most outstanding results of such a social division among the families settled at PIC is the lack of leadership in the community since no one seriously sought to comply with all the conditions required to occupy this position. It is true that within each of the social groups it is possible to identify one or two individuals who, either due to their economic position or better access to official agencies and a better relationships with all of the families, can exercise some kind of leadership among the families of the group they belong to. However, it is very unlikely that this incipient leadership can, in a short period of time, be extended to the other social groups or to the community as a whole.

At PA-70 the place-of-origin issue is almost ignored by the families settled in this community. As mentioned in Chapter VI, the majority of the families come from the same place, that is, the Central-South. However, there was no observable sign that this majority could comprise a social group which would exclude the 12% of families from the Northeastern Region.

Nevertheless, as in PIC, a family's economic status was frequently used by the local inhabitants to categorize themselves as belonging to the rich or to the poor group. Although this division into two groups is not very perceptible at collective social events, it may be clearly seen when referring to more permanent forms of social interaction, such as marriages, as has previously been described.

In spite of this division, the social interaction among families and between the two groups is much more intense in PA-70 than in PIC.

To a large extent, such a level of social interaction can be attributed to the role of leadership that, unlike in PIC, is very prominent in PA-70. The leaders, in general, belong to the group classified as rich or of good economic situation. But this is not so for all. This indicates that the leadership is not determined by economic power and its
derivatives. Leadership actually arise due to a person's sense of justice while mediating personal disputes between families, due to their initiative in organizing social and religious events and due to their willingness to help families with health problems or economic difficulties. The leadership, however, becomes stronger when it brings advantages to the question of land disputes. The ability of the leader to deal with government agencies, his knowledge of legal rights and his courage in facing the "grileiros", even in violent struggle, make his decisions yet more respected.

This section presented some elements which indicated that the profile of social interaction in both settlements is not yet defined or established. In PIC, the strongest factor in the definition of social interaction, that is, the presence of the INCRA officials, tends to disappear at the rate that the role of the Government becomes more and more limited in this settlement. In PA-70, the land disputes, the main support of leadership and consequently of social interaction, tends to come under a truce due to the expectations created by the presence of GETAT.

Setting aside these two elements, the social interaction found in PIC and PA-70 present distinct characteristics which can only be understood by going into a deeper analysis. It would be interesting, for example, to investigate the nature of the "racism" stressed by many families settled in PIC. Still to be analyzed is why place of origin and/or cultural differences become a social divisor; and, to what extent such cultural differences actually become antagonistic and, consequently, an obstacle in social interaction. Although economic status was found in both settlements to be a social divisor it is not clear how this is perceived and evaluated by the families. Without a deeper level of analysis, which unfortunately was not possible to attain with this thesis, it became difficult to evaluate the present stage, to predict the future and the ways social interaction would occur in either settlement.
In PIC, the low level of social interaction among the families has also resulted in few collective entertainment activities. In fact, it was observed that most of the families settled in the Northern and Transamazon branches go to Santarem or Ruropolis Presidente Medici over the weekends, where they attempt to integrate and find entertainment with the population of these two towns. Families settled in the Southern Branch, which is located very far away from any town, tend to gather, over the weekends, in one of the agrovilas built in this part of PIC. In these agrovilas some collective social events occasionally occur, such as religious festivals, football matches and dances. However, even being collective events, the social division existing among the families restricts entertainment since the individuals tend to congregate with the members of their own social group.

Apart from these occasional collective events, entertainment for the female members of the families settled in this part of PIC is practically restricted to visiting kin or friends, while men generally meet in the "vendas" (small shops) where they drink and play cards with their friends.

In PA-70, on the other hand, it is the collective activities which are the main source of entertainment for the families. When questioned about their means of entertainment, peasants would generally refer to events which happen on days when mass is celebrated in the community.

On such days the religious service is followed by a football game in which teams from different communities compete for some prize and have lunch or "churrasco" (barbecue), there being a cow or goat provided for by one of the residents. At night a "baile" or dance party takes place in a dancehall built by the inhabitants close to the chapel. It is also on this day that the peasants who live the farthest away take the opportunity to visit friends and relatives in the community, negotiate deals and discuss the progress of their
In the communities which have better access to the PA-70 highway, the residents, especially the young people, frequently visit villages where they spend the weekend at friends' homes. For the women, especially housewives, amusement can basically be summarised by visiting neighbours or by informal chats in the evenings at one of their homes. Besides making their own amusement, children take part in almost all the adult social activities.

In addition to the above activities, there are also, in both settlements, weekly dance parties at private homes. Although these parties usually rely on records or tapes for music, occasionally some inhabitants form a band and play live music. Generally these bands consist of two or three men who play the guitar or accordion and African drums and rattles. Iberian traditions, mainly represented by guitars of various sizes and pitches (cavaquinho, viola and violao) are still predominant. Although in moderation, some form of alcoholic drink is always provided, especially "caipirinha" (a mixture of cane-alcohol and lemon) which is the most popular drink all over Brazil. The host also provides some snacks such as peanuts and popcorn for the guests.

Besides music and dancing, "desafios" (challenges) between the residents of different communities are also common during these weekly parties. The "desafio" is a musical contest in which two people (mainly men) sing impromptu verses on topics related to local life or to their native regions, accompanied on the guitar.

Dance parties usually continue throughout the night and although the great majority of those present are young adults, the presence of older people and of a great number of children is not unusual.

10 - Trade Unions

One of the strongest rural workers' unions in the Amazon has its central office in Santarem. Its president is also one of
the most influential rural worker leaders in the country. The rural workers' union of Santarem geographically covers an area in which the Transamazon Highway is located and includes the Projeto de Itaituba. In spite of this, the action or influence of the trade union on the inhabitants of PIC is still very tenuous. The largest number of families which are affiliated to the Union are settled in the Northern and Transamazonian branches. These are also areas of the Project that are visited more often by representatives of the central office. Although affiliated, families expectation from the union is sceptical and only a few of them sporadically attend summons to meetings at the union office. Those families settled in the Southern branch are even more isolated from the workers' union. Due to their being geographically more isolated from the central office, they practically ignore the union activities and have no incentive or opportunity to alter this situation.

Regarding the PA-70 Region, the strongest rural workers' union has its central office in Maraba. In this part of the Amazonian Region the rural workers' unions have strong ties with the so-called "progressive" Catholic church. Actually, the priests of this "progressive" group of the Catholic church are the main agents of the unions for contacting the peasants. Consequently, participation of the peasants in the unions depends basically on the action of the priests. So far, the priests who have been working with the families settled in the PA-70 settlement have had moderate actuation and their attempts to get the peasants more involved with the unions have not been so successful. Some of the families are affiliated to the union, but the majority do not bother to become associated because they do not believe that the union can help them with their main problem, which is, obtaining an official title to their lands.
Notes

1 - Several articles concerning the definition, description and analysis of "household" and "family" can be found in Laslett (1972). Critiques regarding the interchangeable use of the two terms can be found in Pollak (1985), Laslett (1975), Creighton (1980) and Harris (1984).

2 - A similar criterion is used by Demos (1972).

3 - In his study of the Altamira Colonization Project Moran (1981) found that the average size of the families he studied was 6.22. In turn, Smith (1982) found an average of 6.7 members per family in a study carried out in the same area but using different families as a sample. Unfortunately, it was not possible to find any study which made reference to the average family size in areas of spontaneous colonisation in the Amazonian frontier.

4 - Many studies made by The Cambridge Group for Study of History of Population and Social Structure argued that the size and structure of the family is mostly determined by demographic forces. (see e.g. Burch-1972). However, the effects of other aspects such as economic, life-cycle or ethnic are also examined by members of this group (see e.g. Klapisch-1972 and Goody-1972)

5 - On the question of the father being the "head of the household", Pearson, Whitehead and Young state that

"...the power and authority of the household head is derived not so much from the internal relations of the household, as from the use the state makes of households as legal, economic, administrative and political units" (1984: pg. XV - Introduction)

6 - A more detailed description of the division of domestic tasks is given in Chapter X.
Part Three

In order to remember the reader about what have been discussed so far, I recall that Part One of this thesis reviewed the main theoretical issues concerning the study of peasantry, the process of land occupation in Brazil, the role played by the peasants in such a process and a detailed account of the social formation in which the Amazonian Frontier peasants are inserted.

In Part Two, I concentrated on an ethnographic account of two groups of newly-arrived peasant families in the Amazonian Frontier. Emphasis was given to their background and to their process of adaptation to the new physical and social environment. An attempt was also made, while surveying personal relations, group activities, attitudes, and other details of social life, to present an inductive analysis that would shed light upon the social organization in these newly-formed communities.

Next, comes Part Three in which I examine the material and economic conditions of the families with a view towards evaluating the real possibilities these newly-arrived migrants have of establishing themselves as small farm producers in the Amazonian Frontier Region.

To accomplish this, Part Three firstly focus (Chapter IX and X) the System of Production. In Chapter IX, I basically examine the available resources for farm activities and how the families organize and utilize these resources in their process of production. In Chapter X, to complement the analysis on system of production, I investigate the process of labour recruitment and alternative off-farm activities developed by the families.

Secondly, Part III deals (Chapter XI) with the conditions of reproduction and differentiation among the peasants. An attempt is made to provide grounds for the argument that the level of reproduction is the most suitable indicator to
identify a process of differentiation among the peasants in the Amazonian Frontier. Chapter XI also examines the empirical consistency of some hypotheses discussed throughout this thesis, regarding the economic performance of the families, as well as of some factors often used in studies on peasantry as indicators of economic differentiation among peasants.

Finally, Part Three also includes a section reserved to the general conclusions of this thesis.
The Means of Production and the Productive Process

This chapter gives an account of the means of production, that is, the resources available to the peasants, such as labour, land, instruments of work, technological knowledge, capital and how they have organized and utilized such resources in order to insert them into a productive process.

The analysis will also stress the difference between the two settlements regarding access to the means of production and which particularities of each settlement or each family shape the manner in which the means of production is utilized.

For a better academic presentation, the analysis of labour will be made in the subsequent Chapter, which will also include a specific section concerning the use of labour in off-farm activities.

The first means of production to be focused is land.

The discussion about land is initially concerned in giving an idea of the amount of land available to the peasants and the kind of control the families actually have over such a resource.

I then examine how land has been used or what kind of activities the peasants have been developing on their plots.

Next, I describe how the peasants prepare the land for productive activities and the instruments of work (also taken as means of production) which are used in this process.

An account of the various stages which constitute the agricultural cycle for the main crops is also included in this chapter, as well as the kind of technical assistance the peasants may receive.

This chapter ends with an analysis of market conditions and bank credits as providers of capital and therefore also considered as means of production.
Given the great differences found between the two groups of peasants, the analysis, for the purpose of exposition, will consider the two settlements separately.

The Government's original plan for the Itaituba Colonization Project stipulated that each colonist would receive a 100 hectare lot. This decision to limit the size of holdings would, according to an official statement, prevent a concentration of landownership within the area of the Project. To further reinforce this principle of non-concentration, the INCRA established the following rules during the process of settlement: a) each family has the right to only one plot of land; b) the colonist could not sell his lot without first paying his debts to INCRA and having a definite title to the lot; c) the new purchaser would have to meet the INCRA's basic requirements for obtaining a lot (INCRA-1971).

These norms established by the INCRA were, actually, observed during the first years of the Project (Botelho-1981). However, in 1983, one could no longer say the same.

First, the rule that each family should have only one lot has frequently been circumvented by a number of strategies that take advantage of loopholes or laxity in the INCRA's regulations.

One of these loopholes refers to the registration of the lots. Under the INCRA rules, the lot is registered under the husband's name. But if the couple are not legally married (that is, do not have the civil sanction of their marriage) then the wife also has the right to apply for a lot and have it registered in her name. Besides this, the sons of the couple, if they are over 18 and even if they are single, can also apply for and obtain, a lot in their name. Even though the INCRA has the prerogative to deny such applications, a number of requests for lots made by wives and sons of
Among other reasons, INCRA's officials state that giving a lot to someone who already lives within the Project area involves less work for the bureaucracy of the INCRA itself. The result is that there is already a significant number of "family units" which include more than one lot although officially these lots are considered to be separate productive units.

The looseness of the regulations regarding the sale of lots has also influenced the concentration of landownership within the Project area. Contrary to what was first stipulated, the colonists no longer need to have a definite title in order to sell their lots. This shift in the rules is mainly a consequence of the slowness of the INCRA's bureaucracy in granting the definite deed to the lots. As a result, the "Licenca de Ocupacao" a provisional document that the colonist receives by the time he has settled, became legal proof of ownership and is now considered sufficient title for selling the lot. In the same way, the rigid criteria regarding the purchaser, adopted by the INCRA in the early years, are no longer applied, and thus the lot may be sold to any applicant. This being so, one applicant is able to buy several lots, registering the purchase in the name of different members of his family.

Most of the lots that have been sold have been acquired by ranch-owners settled in the area located behind the 100 hectare lot which is reserved for stock-raising. For these ranch-owners the obtaining of a 100 hectare lot along the main highway greatly simplifies their problem of transporting products.

Besides the facilities with which the colonists can sell their lots, they are also tempted to do so because of the high price of land in the area. Therefore, as soon as a family realises that the working of the land is not profitable enough, the selling of the lot appears to be a
Finally, it should be stressed that the Government's own incentives to the colonists to produce crops suitable for exportation have also influenced the commercialization of the land within the Project area. Thus, for example, the cultivation of cocoa or cattle raising is only lucrative if the colonist follows the capitalist pattern which shapes these two activities in Brazil. This pattern necessarily demands production on a greater scale than is possible in an area of 100 hectares. Therefore, the colonists who pursue these two activities try to enlarge their possessions by buying up the lots of other colonists.

Despite the looseness of the INCRA's regulations and an evident increase in the commercialization of the lots, the concentration of landownership within the Project has somehow been kept under control and is not very far from what was initially stipulated in the Government's plans. As may be seen in Table 19 below, the majority of the 110 families interviewed each has a lot of 100 hectares.

<table>
<thead>
<tr>
<th>Area of lot (Ha)</th>
<th>Number of Families</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>99</td>
</tr>
<tr>
<td>200</td>
<td>2</td>
</tr>
<tr>
<td>300</td>
<td>6</td>
</tr>
<tr>
<td>400</td>
<td>3</td>
</tr>
<tr>
<td><strong>110</strong></td>
<td></td>
</tr>
</tbody>
</table>

According to the INCRA officials, by July 1983, 7,644 families had settled in the Itaituba Project. By maintaining the same rate of settlement as in the first months of 1983...
that the 10,059 lots of the Project would be totally occupied by July 1984. Thus, in 1984 the INCRA would be concluding the settlement stage of the Itaituba Project, also ending the Government program to settle families on lots of 100 hectares in the area of the Transamazon and Cuiaba-Santarem Highways. After that, the INCRA officials could not state precisely what role this Government Agency would have in the Itaituba Project. With the scarce resources faced by the INCRA already in 1983, it is to be supposed that once the settlement stage is over, this agency will probably be totally absent from the Itaituba Project. Even though one can see positive aspects in the INCRA withdrawal, it may, however, mean an increase in the concentration of the landownership within the Project area, as there will be no rules to obstruct it.

**PA-70**

The present distribution of land in PA-70 may be attributed to the initial process of occupation, the land conflicts faced by the occupiers (both aspects have already been examined in chapter IV) and the precarious productive conditions faced by the families who settled in this region.

Highlighting briefly what I have already said in Chapter IV, at the very beginning of the occupational process, the size of the plot that a family could take over was determined by the size of the family's labour force and by the amount of capital that the family had at the time of arrival. These conditions, however, did not prevent the majority of the families who arrived up until 1972 from occupying lots with at least 100 hectares. Those who had a large family labour force and capital could actually occupy lots of 300, 400 or more hectares.

After 1972, however, with an increase in the demand for land due to the increase in new arrivals in the region, even the families with a large labour force could no longer occupy
family could not occupy a lot bigger than 50 hectares even in the most remote areas. By 1980, the newly-arrived families were occupying lots no bigger than 20 hectares.

Land conflicts also tended to diminish the size of the lots, including many of those occupied by families who had arrived before 1972. As was mentioned in Chapter IV, many families involved in land conflicts, especially with land-grabbers very often had to agree to give up at least part of it in order not to lose the entire land they were occupying. Therefore, many families who were occupying lots of 100 hectares, for example, ended up with 50 or less hectares of land.

Finally, due to problems of adaptation, either with the productive process or with disease, many families had to sell part of their land in order to obtain money to guarantee their survival or to pay for medical treatment.

To summarize, as time passed there was a decrease in the area of land occupied by the majority of the families. This decrease, however, does not mean that there was a more equal distribution of land. Actually, despite all the problems cited above, a few families could, somehow, keep the area of land that they originally occupied or even enlarge the area of their lots.

By the time this field work took place (1983), it was difficult, if not impossible, to obtain precise information regarding the size of lots occupied by each family. Approximately 60 out of 100 families included in my sample, did not have any kind of document that could prove their rights to, or the size of, the lots they were occupying. Some of these families did not feel any constraint in talking about the true situation of their claims; but others stated that they preferred not to talk about their situation, arguing that it could create problems for them at the time they applied for the official regularization of their lands.

Regarding the families who had some kind of document, it was
found that only 6 had a definite title to their lots, which
gave them the legal ownership over the land they were
occupying. Around 25 had a "Licenca de Ocupacao", a document
supplied by the INCRA with which these families would have a
large chance to obtain the definite title. The remaining 19
families had a "Recibo de Compra", a piece of paper with the
signature of the former occupier of the lot saying that he
had sold that land to the present occupier. Even though this
receipt had had no legal value before, it has been taken by
GETAT (the official body responsible for regularization of
land tenure in the region at present), in some cases, as
proof that the families actually have been occupying the lot
for the period they claimed.

By taking the documents shown by the families who had them,
the information given by the families who had no documents
but did not mind talking about the size of their lots, and by
an estimate1 it was possible to construct Table 20 below
which can give an approximate idea of the size of lots
occupied by the families included in my sample.

**TABLE 20**
Agrarian Structure of PA-70 Region

<table>
<thead>
<tr>
<th>Size of Lots (Ha)</th>
<th>No. of Families</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 10</td>
<td>21</td>
</tr>
<tr>
<td>11 - 30</td>
<td>17</td>
</tr>
<tr>
<td>31 - 50</td>
<td>13</td>
</tr>
<tr>
<td>51 - 100</td>
<td>20</td>
</tr>
<tr>
<td>101 - 200</td>
<td>20</td>
</tr>
<tr>
<td>201 - 500</td>
<td>3</td>
</tr>
<tr>
<td>501 - 1000</td>
<td>6</td>
</tr>
</tbody>
</table>

As one can see in Table 20, in contrast with PIC, the PA-70
settlement has a very diversified agrarian structure, besides
the fact that approximately 65% of the families occupy lots
of less than 100 hectares.
shown in Table 20 is not definite, and the final decision about the area of land that each family will have in the future depends very much on the way GETAT conducts the process of regularization of landownership in the Region. Even though it is likely that the families with some kind of document will be able to keep the area of land they occupy at the present, the same cannot be said about those who have no document at all.

2 = Utilization of Land

A = PIC

The utilization of land in PIC has undergone some alterations in the 12 years of the Project. In the first 5 years, the land was basically used for the so-called "white crops", that is, the growing of rice, beans manioc and maize. During this period the volume of production barely exceeded the minimum necessary for the consumption of the families settled there. Nevertheless, it does not mean that there was no commercialization. The sale of products on the market has, since the beginning, constituted a necessary condition of survival for the families. At no time has a system of production existed which was aimed exclusively at subsistence. However, the amount of production commercialized during these early years was never more than what was necessary to obtain some basic products necessary for the survival of the family, such as clothes, sugar, medicine, etc. In short, what was commercialized was the surplus production which exceeded the family's immediate needs.

The low production during the first years of settlement can, to a great extent, be attributed to the difficulties experienced by the colonists in adapting to their new environment, which made the initial process of clearing and preparing the land for agricultural production very slow and extremely difficult. In several of their statements, the
colonists stressed that a family with 3 or 4 workers was unable to clear and plant an area greater than was necessary for their own survival in the third or fourth year of settlement.

Actually, it was only in the fifth year of settlement that a substantial increase in the production of the project as a whole was noted. For example, between 1975 and 1976 the area planted with rice increased by 75%, corn by 101% and manioc by 180%. Taking into account the fact that the number of colonists only increased by 64% in the same period, it may be concluded that there was a substantial increase in the area planted on each lot (Incra-1979).

This increase in the agricultural production of the project as a whole cannot be attributed to the colonists' better adaptability to the environment. From the fifth year of settlement on, there was a great improvement in roads, facilitating transport, and a more secure commercialisation network was also established. The presence of various intermediaries with an increasing demand for more products provided the necessary motivation for the colonists to substantially enlarge their areas of production since they no longer ran the risk of losing their produce due to a lack of purchasers as had previously occurred, particularly in the third and fourth years of settlement.

From 1978 on, with the new credit program, the colonists began to grow products with a greater commercial value; that is, the so-called "perennial crops" such as cocoa, coffee and black pepper. The emphasis placed on these crops, particularly cocoa, may be clearly seen in Table 21 below.

In the period from 1978 to 1981, the emphasis on the production of perennial crops resulted in many families' abandoning the cultivation of basic products such as rice, corn and even manioc, thus becoming purchasers rather than producers of these staples. As a result, many of these families found themselves with huge debts due to the failure
of perennial crop production during this period. This failure, in many cases due to a lack of technical knowledge and the unforeseen lower market prices for these products in 1981, forced many of these families to return to the original system of "white crop" cultivation.

### TABLE 21
**Type of Crop and Planted Area - 1978/79**

<table>
<thead>
<tr>
<th>Products</th>
<th>Planted Area (ha)</th>
<th>Increase in the Planted Area from 1976/77</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice</td>
<td>12,620</td>
<td>10%</td>
</tr>
<tr>
<td>Corn</td>
<td>1,320</td>
<td>9%</td>
</tr>
<tr>
<td>Manioc</td>
<td>2,081</td>
<td>10%</td>
</tr>
<tr>
<td>Beans</td>
<td>454</td>
<td>-</td>
</tr>
<tr>
<td>Bananas</td>
<td>477</td>
<td>10%</td>
</tr>
<tr>
<td>Black pepper</td>
<td>70</td>
<td>9.3%</td>
</tr>
<tr>
<td>Coffee</td>
<td>209</td>
<td>10%</td>
</tr>
<tr>
<td>Cocoa</td>
<td>1,281</td>
<td>146%</td>
</tr>
</tbody>
</table>

Source: Incra-1979

As may be seen in Table 22 below, which covers the 110 families included in my sample, with the exception of a few families who had been successful in the growing of cocoa and those who had used the rural credit program to invest in cattle, the great majority of the colonists are, at the present moment, concentrating on the cultivation of "white crops".

Another point to be stressed is that during the last few years, the colonists have been diversifying their production activities. Actually, it has been observed that in the majority of lots, some 5 or 6 different products are growing in sufficient quantities for commercialization. Among those families whose main activity is to grow "white crops", rice remains the most important product in terms of volume,
and partly due to the poor quality of soil found in many lots thus forcing the colonists to enlarge their area for production.

PA-70

In the PA-70 settlement, most of the larger lots, particularly those covering an area of more than 400 or 500 hectares, have been used primarily as a "value reserve" rather than for any kind of productive activity. However, some of these large lots are being used as sources of raw materials and especially for the extraction of timber which has been turned into the most profitable business in the region. Besides the interest in the extraction of timber, these lots have been deforested (in most cases in a very predatory way) in order to also make some form of "improvement". As was observed in the region, the simple deforestation of an area is usually considered as "improvement" by the official authorities when charged with the regularization of land tenure.

Medium-sized lots with areas of between 100 and 500 hectares have been used mainly as pasture. Although the cattle herds are not yet very large, the expansion of the grazing areas demonstrates a disposition towards stock-breeding among the medium landowners. There is also some exploitation of wood on these medium-sized lots, but to a lesser extent than on the large ones, as this type of activity demands a greater initial capital than these medium landowners can generally afford.

Agricultural production is, therefore, principally the province of the small proprietors and a few medium landowners with holdings between 100 and 200 hectares. Rice is the principal crop, involving approximately 50% of the land under agricultural production. After rice come maize, manioc and beans as the main crops in the region.

Taking the group of 100 families included in my sample, it
was found that 25 families devoted themselves to cattle-raising as their principal activity although 20 of these combined this activity with the production on a small scale of some agricultural products such as rice and manioc. However, it should be noted that for the owners of lots of between 100 and 200 hectares, their cattle raising activity is restricted to the planting of pasture which they lease out to the big ranchers, as they are not themselves in an economic position to buy their own cattle.

To summarise, one can conclude that the form in which the land is utilized in the PA-70 settlement is related to the size of the lot which each family possesses. Thus, agricultural production as the principal activity appears most frequently among the small proprietors, particularly among those who have lots with 50 or less hectares. For the medium proprietors, although agricultural production still constitutes a major source of income, there is a tendency to combine this activity with cattle raising, while for the owners of holdings between 200 and 500 hectares, stock raising is the main activity. For the large landowners, the land has only been utilized for the extraction of wood or not used for any productive activity at all.

Finally, it should be stressed that for families with lots of less than 20 hectares, the production of fruit and vegetables constitutes, in some cases, the family’s principal source of income. It was also noted among these families that the production of maize rather than rice has become the major activity since this crop is essential for feeding domestic livestock such as pigs and chickens, which constitute one of the main sources of income for these families, especially for those who have lots smaller than 10 hectares.

Perennial Crops

The perennial crops are frequently cited as providing greater potential for development in the Amazon than annual crops (Alvim-1980). Nevertheless, among the small proprietors in
In the Region, the development of perennial crops has been very slow. In PA-70, for example, where the vast majority of families have some previous experience with perennial crops such as cocoa (among those from Bahia) and coffee (among those from Minas Gerais), there was not one family who concentrated exclusively on these perennial crops. The peasants explained this by arguing that such crops require both a capital outlay that they cannot afford, and an infrastructure to supply seeds and commercialize the product, which do not yet exist in the PA-70 Region.

In PIC, however, the situation is different. In the first place the colonists had better access to credit, making it possible for them to acquire the necessary capital to grow this type of crop. Secondly, PIC is included in the area chosen by CEPLAC (Executive Commission of the Plan for Cocoa Cultivation) for the development of an ambitious plan to expand the production of cocoa in Brazil. This plan not only includes special credit schemes for the colonists, but also supplies seeds, technical assistance and the infrastructure of commercialization.

However, to qualify for the CEPLAC program, the colonist must own a lot with good soil and have a number of other qualifications such as previous experience with credit systems and perennial crops, a willingness to use new techniques and fertilizers, etc. Of the 110 families interviewed, only 24 had taken part in CEPLAC's program. Although the results of production had not completely met the colonists' expectations, cocoa now constituted the principal source of income for these 24 families. In PA-70 some families do grow cocoa but only for their own consumption.

Apart from cocoa, coffee and black pepper are the other two perennial crops grown by the colonists of PIC. Even though coffee has not fulfilled the initial expectations of the colonists and technicians, by offering a very low yield, some settlers are still keeping several bushes in their back yards for domestic consumption. In PA-70 coffee is grown basically for domestic consumption, although 3 families said
that they will be able to produce enough for commercialization in two or three years. On the other hand, although black pepper has given good results in terms of production and is one of the most profitable crops in the region, very few families in both settlement have had access to the credit scheme for this crop.

Finally, it was observed that some families in both settlements have been increasing their bananas production and home-cured tobacco. In PA-70, for example, tobacco has been taken as an important component of income for those families who grow this product.

Cattle and Pasture

In PIC as well as in PA-70 there is a general feeling among the peasants that cattle ranching constitutes the most profitable economic activity in the Amazonian Region. Actually, it was observed that whenever possible, the peasants tend to invest their profits in cattle rather than in crop technology. However, although it is relatively easier to obtain credit for cattle-ranching, the transformation of land into pasture and the purchase of cattle require an initial capital which the majority of the peasants do not possess. Tossing grass seed into fields according to the peasants is a relatively easy task, but keeping pastures free from weed invasion and stump sprouting and fencing them in is very onerous.

In both settlements, several families who could not afford to buy livestock planted pasture on their lots which they later rented to big ranchers. The common arrangement in these situations is that either all calves born belong to the owner of the pasture or rent is paid at a usually high rate. Thus, after one or two years the owner of the lot is generally in an economic position to buy some cattle.

Another method widely employed by the less highly capitalized ranchers, especially in PA-70, is "troca pela forma" that is, trade of one year's use for pasture formation. In this
arrangement the land is lent to the small cultivator to clear and cultivate for one year in exchange for which the farmer shares his crop with the owner and agrees to plant pasture. After the cropping cycle, the farmer may relocate to another parcel on the ranch or move away. The owner of the land then introduces his cattle.

One of the main obstacles to a major expansion of cattle in both settlements is the limited size of the lots. According to some studies made in the region and to the peasants themselves, for cattle-ranching to actually be profitable it is necessary to have at least 50 head of cattle, and this requires an average of 1 hectare for each head (Smith-1982-p.86). Thus for the families settled in PIC who have only a 100 hectare lot, a massive investment in cattle-ranching means that they have to convert most of their cropping area to pasture which can be highly risky, especially for those who have no experience with cattle-ranching activities. In PA-70, as was already mentioned, only those families who have lots with an area of over 100 hectares dare make a massive investment in this type of activity. Actually, it was observed that in lots smaller than 100 hectares, the cattle-ranching activity is basically limited to provision of milk and curds for the family’s own consumption.

Despite the limitations imposed by the size of the lots and all the problems associated with cattle-ranching in the Amazon (Smith-1982; Poelhekke-1984), the peasants try as much as possible to invest in this activity, arguing, as mentioned before, that cattle-ranching is the best way to make money. However, according to Smith, the profitability of cattle ranching in the Amazon is approximately 739 US dollars per 40 hectares, which, according to this author is much lower than that of crops such as manioc (Smith-1982-p.86). Smith’s argument, however, does not apply to the PIC and PA-70 settlements, where it was found that the 20 families in PIC and the 24 in PA-70 who concentrate their activities on
cattle-ranching were in a much better economic position than those who concentrated solely on the cultivation of annual crops.

Land Preparation and Instruments of Work

To gain access to agricultural potential, the peasants in both settlements use the traditional system of rocados, a form of slash-and-burn agriculture. The successive operations in preparing the land are known locally as:

a. **Broca** (clearing of underbrush) - cutting of low growth and hanging vines. For this operation the peasants tend to use only the machete (tercado) and "foice", a type of long-handled scythe. Underbrush clearing, in general, takes place between June and July.

b. **Derruba** - the felling of trees which takes place after the underbrush has dried, in August or September. Some peasants own powersaws but the majority use a single-edged steel axe as the only equipment for this task.

c. **Queima** - burning should take place one or two months after the derruba, when the large trees and the brush will have dried, but before the rainy season starts. It takes place between October and December, depending on the weather.

d. **Coivara** - gathering and reburning of unburned remains. This process deposits ash with valuable nutrients for crops that are subsequently planted (Sawyer-1979; Moran-1981). At the same time, however, it exposes the thin layer of topsoil to erosion and leaching. If the topsoil were deeper and the rains less heavy, and if the subsoil were more fertile, the peasants would be able to use the same clearing for longer periods of time; but the tropical soils and rainy climate permit worthwhile yields for only one to four years (Moran-1981).

Although the slash-and-burn method appears old-fashioned in comparison with the level of technology existing in developed
countries, it has been pointed out by agricultural experts as the most appropriate method for tropical regions. According to Sanches and Buol (1975) and Baldanzi (1959), the efficacy of this method lies in the fact that the ashes from burning decreases soil acidity, and this aids the nitrification process. Burning also aids the flocculation of colloids, which are sorely lacking under natural conditions in many tropical soils (Moran-1981).

This method also has advantages in economic terms. In making comparisons between slash-and-burn and bulldozer methods in a number of experiments carried out in the Amazonian Region, Sanches et al. (1974) found that without fertilizer and lime the mean relative yield of eight crops on bulldozer-cleared land was only 30% of that on land cleared by the slash-and-burn method. Even with fertilization and lime, bulldozer-cleared land produced only 80% of the mean relative yield produced on land cleared by the slash-and-burn method.

However, the slash-and-burn method does have some disadvantages. Sawyer (1980) states that this method induces a rapid growth of pests, weeds and diseases, since the conditions of heat and humidity that are favourable to the development of crops are also favourable to the development of their natural competitors and enemies. Lovejoy and Schubert (1980) point out that the slash-and-burn system works reasonably well as long as the slash-and-burn is repeated. In fact, slash-and-burn techniques are usually associated with a system of shifting cultivation. This implies that the system may only be used efficiently in situations where there is enough land available for the cultivators to use new areas of land while the soil that has been utilized for 3 or 4 years remains fallow to recover its fertility. This is the case among the colonists of PIC, where, in practice, the families clear new fields each year. However, this is not so in PA-70, where the soil on lots of less than 20 hectares was found to be already exhausted as the families have not enough land to practice the rotation of crops.
Agricultural Cycle

a. Planting - Late November and early December is the time for planting rainy season crops such as rice, corn and manioc. The well-drained slopes are reserved for rice, while corn is planted in the low areas which usually have less surface rock than do the weathered slopes. Manioc is generally planted on the poor or badly burned soils. Beans are planted only after the heavy rains have ceased, which usually occurs between May and June. Bean seeds are sown at the base of the, by then, dry corn plants. This system allows the beans to benefit from the support of the corn stalks and at the same time have some protection from excessive rainfall, which can rot the seed.

The sowing of rice, corn and bean seeds is done manually by placing seeds in holes opened with a hoe or machete or with a simple seeder called "tico-tico" which releases a small number of seeds when its point is stuck into the ground and its two handles are brought together. Some 90% of the colonists in PIC use this type of dibbler, but very few of the peasants in PA-70 possess such a tool implement.

Some of these major crops are intercropped with other products. As has been said before, corn is associated with beans; in PIC, bananas may shade cocoa or be planted with thin papaya trees and low growing pineapples; manioc may be associated with bananas and pasture grasses. In both settlements, some families may plant grass after crops of manioc and bananas have been planted.

b. Weeding - during the rainy season one or two weedings may have to be carried out, especially in those fields which have been badly burnt and, consequently, have vigorous weed invasion. For this operation a broad-bladed iron hoe, about 25 cm wide, is used.

c. Harvesting - Rice is the first crop to be gathered in the harvesting cycle. Several stalks at a time are cut with a small blade designed for this specific purpose. To separate the grain from the stalks, approximately 30 families in PIC
have access to a threshing machine (trilhadeira) which has been leased during the last years by the union for the use of its members. Five families with sufficient production to warrant it, lease this machine for themselves while the rest of the colonists, like the majority of those settled in PA-70, perform this harvesting task manually.

For the hand-threshing process, an area is selected near a large fallen log in the middle of the rice field, and the ground around the log is cleared of any stumps that may not have been burned. Then four holes, two on either side of the log, are dug with a "cavadeira" or post-hole digger, to about two feet in depth. The posts are placed in the ground and packed with the remaining dirt. Old burlap sacks are then used to make an open three-sided box, each of the panels being strengthened by cross supports tied to the posts with vines (cipo). The rice is then beaten against the log, and falls to the burlap-covered ground. In the process of beating, flying grain is caught by the three-sided shield, and diverted to the pile in front of the thresher. After separating the grain from the stalks, farmers must send their rice harvest to a drier place. For home use, the seed heads are carried home where women pound them in wooden pestles and mortars (pilao) to separate the chaff from the kernels. The rice is then transferred to a large, circular, flat basket and is tossed into the air to remove the husks.

The rice yields in PIC during the agricultural year 1982/83 were far lower than those in PA-70. In PIC the production average was around 1,200 kg/ha while in PA-70 it was 2,200 kg/ha. The colonists of PIC claimed that the agricultural year referred to had not been very good whereas in PA-70 the families said that it had been a normal year in terms of agricultural production. Nevertheless the higher yields obtained by the peasants of PA-70 were off-set or cancelled by the greater difficulties in commercialisation that they faced in 1983. Thus, in the end, the part played by rice in making up the overall income of the families was very similar in both settlements.
Corn can be harvested at two different times of the year. The first is during the months of February and March, when the green or fresh corn on the cob is used as meal. It is roasted over coals as "milho assado", or boiled as "milho cozido" or processed into corn pudding. The rest is left to dry on the stalks and is harvested with beans in August or September. Corn is generally husked and the grains removed from the cob by hand. As meal such as "fuba" (a kind of corn flour) the dry corn is ground manually with a mortar and pestle. The greater part of dry corn, however, is used as poultry feed.

The peasants of PA-70 produce more corn than do the PIC colonists. The average area planted with corn in 1982/83 at PA-70 was approximately 1.5 ha per family while in PIC the average was no more than 0.5 ha. The corn yield in PA-70 was approximately 650 kg/ha, while in PIC this productivity was no more than 500 kg/ha. In terms of source of income, corn also had a far more important role in PA-70 than in PIC. In PA-70 it contributed an average of 20% to the family agricultural income, whereas in PIC, this product provided less than 5% of the income among the few families who actually could produce enough for commercialization.

Beans are harvested in August or September. Like corn, the beans are separated from their stalks or hulls when dry by manual threshing or by being trodden on by people or animals. The seeds are then separated from the remaining straw and hulls by tossing in the wind.

The area planted with beans is more or less equivalent to that planted with corn, although the families settled in PA-70, on the average, produce higher yields than those settled in PIC. The bean yield in PIC, where the colonists complained of the presence of fungus, were very low in the 1982/83 agricultural year, with an average of 320 kg/ha. On the other hand in PA-70, where the peasants said it had been a good year for beans, production was approximately 650 kg/ha.

In PA-70 beans formed approximately 10% of the families' income from agricultural production, while in PIC none of the families included in my sample had sold a significant amount
of beans, and several said that they had not harvested sufficient amounts for their own needs.

Manioc can be harvested at any time of the year. In contrast to the other agricultural products, manioc presents few problems during the growth process; weeds do not impair harvesting, the tubers can be converted into flour any time from six months to two years after planting, and the yields are higher than those of rice, corn or beans. According to Smith (1982-p.68) the average manioc yield in the Amazonian Frontier is about 20 tons of tubers per hectare, which means 6,500 kilograms of flour per hectare. Bearing in mind that the price of a sack of manioc flour is at least twice that of rice, one can conclude that the production of manioc can provide a greater income than that accruing from rice. The method of processing manioc flour, as well as the role of manioc production in the family income, will be analysed in a more detailed way in the section entitled "Domestic Production" in Chapter IX.

As one can conclude from the previous items the equipment used by the peasants in the production process is very simple and may be reduced almost exclusively to simple iron tools that are operated manually. This being so, agricultural production is highly labour intensive, requiring from the workers a great amount of physical effort.

Technical Assistance

Among the various benefits promised by the Government for the Official Colonization Projects were free technical assistance and agricultural advice for the colonists. This function was entrusted to EMATER (Rural Technical Assistance Enterprise) whose staff of agronomists and agricultural technicians were encharged with orienting the colonists mainly with regard to cultivation methods for food crops, to production methods for commercial crops, such as sugar cane, black pepper, coffee and cocoa, and to ways of conserving the soil.

Although this type of assistance has never attained the level
promised by the Government, during the first 3 or 4 years of settlement the colonists who settled in PIC did receive sporadic visits from agronomists or rural technicians and obtained some sort of agricultural advice. However, during recent years, this technical assistance has become more and more scarce.

In 1983, only 35 out of the 110 families interviewed actually were visited by an agronomist or agricultural technician. And, among these 35 families were included those 24 families who were involved in the special program for cultivation of cocoa with special technical assistance. Therefore, for the majority of the families settled in PIC, the only way to obtain any advice on agricultural matters is to go to Ruropolis Presidente Medici, where they may meet one of the 3 agronomists and 5 agricultural experts at the EMATER office. Nevertheless, according to the colonists' own statements, they only visit the EMATER office to gain the specialists' support with a view to obtaining bank credit.

In PA-70 the situation is even worse. The peasants settled in this settlement receive no technical assistance whatsoever. Of the 100 families interviewed, only 10 said they had attempted to find an agronomist in one of the neighbouring towns for guidance in the use of some fertilizer, or for explanations regarding the utilization of agricultural credit. The Government agency EMATER does have offices in the neighbouring towns, but the lack of staff and resources plus the fact that the majority of the families who settled in the PA-70 settlement have no "legal" document for their lots (which automatically puts them outside of any government assistance) means that the peasants settled in this region are virtually without technical agricultural advice.

4 - MARKETING

The commercialization of the products is frequently stressed by the peasants from both settlements as one of their main problems and one which bears great influence on their economic performance. Even though the peasants from both
settlements share similar problems in marketing their products, the commercialization process found in each settlement shows some differences in its structure which, for a better understanding, should be described separately.

The commercialization of rice was taken as an example for both processes; although this product is not the only one to be commercialized, it is by far the most important in both areas. Moreover, the commercialization of other products tends to follow the pattern established in the commercialization of rice.

The Commercialization Process in PIC

The first problem in commercialization faced by the colonists is that of storing the rice when it has been harvested. After separating the kernels from the stalks, farmers must send their rice in sacks to a drier before it ferments or moulds. Most colonists cover their rice harvest with canvas or plastic sheets, while others store the cereal in a hut or in their homes until transportation can be arranged. Due to the bad conditions of these storage-places, the rice is often subject to rats, infestation of insects and mould, lowering the value of the product on the market.

As regards transporting the crop to the market, the situation is particularly difficult for those colonists with lots which are farthest from the main highway. In these cases, the rice is generally carried by mule back, one or two sacks at a time, which is a slow and expensive process, particularly if the farmer has to borrow a mule to take his production to the main highway. Once the rice is placed on the highway, the farmer has the following options for selling the product: the first one is to take the rice to the warehouses of CIBRAZEM (a government agency designed to buy and store the production of the colonists), which is located in Ruropolis Presidente Medici. However, few of the colonists choose this alternative, especially those who have bank debts. Under the CIBRAZEM system, the farmer’s debt is deducted from the total
value of his production, and the colonist is reasonably assured of continuing credit. The colonists complain, however, that the prices paid by CIBRAZEM are, in general, considerably lower than those paid by private entrepreneurs. In addition to this, the colonist must await payment at the Bank of Brazil. A delay of several weeks, and numerous trips to town are often necessary before the colonist receives any payment for his rice harvest sold to CIBRAZEM.

The second alternative which is probably the one most frequently used by the colonists, is to sell their produce to the "atravessadores". These agents are independent middlemen who are in direct contact with the colonists with whom they generally establish close friendships. The middlemen usually have a truck which enables them to collect the harvest from the lots located far from the main highway and they generally pay the colonists immediately and in cash. Although the role of the "atravessadores" in the process of commercialization tends to diminish as the secondary roads are improved in many parts of the project area, they are still playing an important role in the colonist's life. As they are present all year round, the colonists have a guarantee that in case of disease or an urgent need for money, they can sell a small quantity of rice to the "atravessador" and obtain cash immediately. Besides, these "atravessadores" often advance money to the farmers, making the families grateful for their favours. As a result, the colonists often prefer to sell their products to these middlemen rather than to another buyer even when the price paid by the former is lower.

Another option reserved for colonists who have small quantities of products to sell or have difficulties in transporting them, is to sell their rice to the "taberneiros" (small traders settled in the agrovilas or along the roadsides). These purchasers generally finance the poorer colonists, advancing them money and/or consumer goods, using the colonists' rice harvest as their principal guarantee for this credit. Under this agreement, the colonist is obliged to
sell his production to the "taberneiro", generally at a lower price than he would get from other buyers while at the same time paying a very high interest on loans. This type of mercantile transaction, which is known as "selling on the leaf" (venda na folha) though it is not widespread in PIC, can be found everywhere in the old settlements of the Amazonian Region (Wagley-1953; Prado and Capelato-1975).

Finally, the colonists have the option of going to either Santarem or Itaituba and selling the rice directly to the mill owners or to the exporters. Although the colonists get the best price for their produce in town, they have to pay transportation costs which are always very high, making this alternative more profitable only if the colonists have a large crop to dispose of.

Despite some attempts by the Government to stipulate a minimum price for rice in the region, market forces have determined the value of this product, which does not always favour the producers. In 1983, for example, the minimum price stipulated by the Government for a sack of unhulled rice was 3,000 cruzeiros. However, none of the colonists interviewed said that they had sold their rice at this price, but rather at a much lower one.

The Commercialization Process in PA-70

The process of commercialization in PA-70 presents even more problems for the farmers than the one in PIC does for the colonists settled there. Due to the kind of settlement developed in PA-70, that is, with the lots spread out in the middle of the jungle, and a total lack of roads to reach the majority of them, the farmers face the very difficult task of selling their products. Unlike PIC, there is no "atavessadores" or "taberneiros". So, for the peasants in PA-70, the only option is to transport their products on horseback to the PA-70 road and from there by bus or lorry to the nearest township.
Once in the township, the majority of the peasants take their products to "vendeiros" who are owners of small shops which also serve as storehouses. Like the "atravessadores" in PIC, the "vendeiro" in PA-70 generally maintains a close friendship with the peasants; this relationship, in general, being kept through an exchange of favours between the "vendeiro" and the peasants. The "vendeiro" usually keeps the peasant's products stored before they can be sold, or the "vendeiro" himself buys the products if they are not such large quantities, since the "vendeiro" usually is not in an economic condition to buy large quantities. In doing this, the "vendeiro", on the other hand, expects that the peasants will buy the products they need for their own consumption such as sugar, kerosene, macaroni, sugar-cane, etc., from his shop. Actually it was observed that it is because of the goods sold to the peasants that the "vendeiro" can keep his shop.

The other agents of commercialization in the region are those called "medium traders" or store owners and their main suppliers are the "vendeiros". The peasants look for these medium traders to sell their products to when the quantity to be sold is more than the "vendeiro" can buy or when the goods the peasants need to buy are not available in the "vendeiro's" shop. Although it is not very often some of these traders do lend money to a producer in exchange for a not yet harvested product, characterizing the system of "selling on the leaf" mentioned in the previous section. However this system of "selling on the leaf" is not so expressive in PA-70 as it is in PIC. In PA-70 these medium traders generally are not in an economic condition to finance the peasant's production, and their own business is almost invariably financed by big merchants from other regions. The advantage for the peasants in selling their products to the medium traders is that in having trucks, these traders can usually pick up the peasants' products at the PA-70 road, thus relieving the peasants of the hard task of transporting their products, sometimes by bus, to the township.
Besides the "vendeiros" and medium traders, the peasants also have the alternative of selling their products to the mill-owners. Even though the prices paid by these mill-owners are generally lower, the peasants sometimes have to sell their products to these mill-owners in order to have part of their rice cleaned for their own consumption or as seeds for the next agricultural year. Having a monopoly on cleaning the rice in the region, these mill-owners are able not only to charge a high price for this service, but also charge a lower price for the unhulled rice that they eventually buy from the peasants.

Besides the problems of selling agricultural products faced by the peasants from both settlements, it should be stressed that the price that they usually get for their production may clearly be characterized as what is called "unequal exchange" for the manufactured goods they need for their survival. Even though this kind of analysis is outside the scope of this thesis, the examples given below can well illustrate the results of this "unequal exchange" on the peasants' economic life.

It was stated by a peasant in PA-70 that the one thousand cruzeiros he obtained from the sale of a 60 kg sack of husked rice could only buy him the following goods: 2 kilos of sugar (Cr$ 200); one kilo of coffee (Cr$ 200); one can of cooking oil (Cr$ 250); one bar of soap (Cr$ 70); one kilo of crackers (Cr$ 180); and a tin of powdered milk (Cr$ 580). I shall remember the reader that by the time the field work was carried out, one US dollar was equal to 610 cruzeiros.

In another statement made by a peasant settled in PIC, it was found that he had exchanged 35 sacks of rice (the production of 2 hectares) for a year's supply of cooking oil, soap, sugar and coffee.
The possibilities of obtaining rural banking credit are quite different for the peasants settled in PIC and PA-70. Therefore the following analysis will focus on the two settlements separately.

Obtaining Credit in PIC

Easy access to credit was one of the benefits promised by the Government to the families settled in PIC. Actually the majority of the families contacted during the two phases of the field work did have a chance to obtain credit. However, due to a number of reasons that will be highlighted below, the majority of the families made use of credit just once, and very few actually could make a real improvement in their lives with the help of loans.

In a brief retrospective of the access to credit in PIC it was found that in 1974, out of 1,200 families then settled in the project area, 472 obtained credit. However, approximately half of those who obtained credit could not pay their debts. In the 76/77 agricultural year, when there was a great increase in the number of families settled, a total of 800 colonists resorted to credit, but 30% did not settle their debts. In 77/78, when there were 1,900 families settled, only 500 made use of credit and this time 60% of them were unable to pay their debt. In the subsequent years, not only did the number of loans taken drop, but the percentage of those unable to pay their debts increased. In 1982, with the number of families having reached 6,000, there were only 700 loans made and the majority were made to newly-arrived families.

In the agricultural year 82/83, taking into account only the families included in my sample, it was found that out of 110 families interviewed, 53 had made use of credit, but only 22 said they had been able to repay their loans properly. This meant that only these 22 families would be able to obtain new credit for the following year.

Many reasons are given by the peasants to explain why so many colonists are unable to pay back their loans and why having
access to credit does not always provide the families with the possibility of improving their economic performance.

The first reason is related to the bureaucracy that the colonists have to face to gain loans from the bank. Before going to the bank, the colonist has to submit his project or application to EMATER, the agency in charge of evaluating the economic and technical conditions of the colonist. To have his project approved by EMATER, the colonist usually has to make several trips to Ruropolis President Medici. After the approval from EMATER is obtained, the colonist has to make his way to Itaituba and seek the release of the funds by the Bank of Brazil. It is not uncommon for the colonist to make two or three trips to Itaituba before he actually obtains the first portion of his loan. The loan is released in five or six payments (parcelas) which are to be doled out with the completion of each step of the agricultural production process. To receive each of these parcelas, the colonist again needs the authorization from EMATER, which is also in charge of the inspection of the colonist’s proper use of the loan. This inspection generally takes a long time and usually the colonist gets the money only after great delay.

In short, the bureaucratic process that the colonist has to face to obtain credit not only precludes his having the money at the right time but, above all, it forces him to spend a great deal of money on the trips he has to make to Ruropolis President Medici and Itaituba. According to the peasants, no less than one-third, or even one-half, of the loan actually goes to cover the costs of obtaining the credit.

Another constraint faced by the colonists in obtaining credit is related to the documentation of their lots. If the colonist has only the "Licenca de Ocupacao" for his lot, he can apply only for short-term loans, which means that he has to pay his debt by the end of the harvest. A long-term loan which gives more time to the colonist to finish the harvest properly and wait some time before selling his product in order to get a better price, is only available to the colonist who has the definite title to his lot. To obtain the
definite title, however, the colonist has to face another complicated and onerous bureaucratic process, with no guarantee that he will, in the end, be successful.

Besides these bureaucratic problems, the colonists also face constraints because of the bank's own selection criteria. That is, despite the rural credit being subsidised by the Government, the Bank of Brazil has to make sure that the credit conceded to the colonists will become a profitable investment for the institution. For this reason the Bank first requires that a guarantor grant credit. In this regard it is evident that colonists who have personal relationships (and surety is generally provided by a friend) with the more well-to-do colonists are in an advantageous position. That is, the nature of the colonist's personal relationships will affect his access to credit. Furthermore, since the act of being a guarantor or being guaranteed requires a closer relationship between the two parties involved, the colonists who belong to the so-called "family groups" (as described in Chapter VIII) are able to find a guarantor more easily, and consequently have more access to credit.

The composition of the family unit, or the available labour force in each family is another of the bank’s criteria in granting credit. Thus, families with a larger number of people available to work receive preference from the Bank.

Delay in repaying previous loans may also constitute an obstacle to a colonist’s obtaining new credit. Thus, colonists who have had a good harvest and are able to repay earlier loans would have better access to new credit, while those who have been unable to settle their debts find themselves debarred from further credit. Regarding this aspect it was observed that many colonists who have additional sources of income (such as working as hired labour or prospecting) usually use this extra income to pay back their loans which could not otherwise be done with just their income from agricultural production. Once again, it is worth stressing the importance of the composition of the family, since this additional income is only available to families
who have a number of people able to work away from the lot.
Yet another factor taken into account by the bank is the quality of the soil where the lot is located, the previous harvest obtained by the family and the amount of technical assistance which the colonist receives. Therefore, those colonists who, for whatever the reason, receive more attention from EMATER are more likely to be selected by the bank.

The criteria listed above apply to the granting of short-term credit for the production of the so-called "white crops", that is, rice, beans, manioc and corn. However, the criteria used for granting long-term credit, that is for perennial crops and stock-breeding, is even more restrictive for the majority of the colonists. For the cultivation of cocoa, for example, there is a special credit program run by CEPLAC. Selected for this program, however are only colonists with lots that are classified by CEPLAC as having optimum soil, who have proven to possess managerial ability and, above all, who would be able (based on their present economic situation) to meet their debts should the harvest fail. Therefore, with such criteria, the vast majority of colonists are automatically excluded from this program which, although not considered a total success, has, however, constituted an important factor in increasing the income of the colonists who do have access to this form of credit.

Once the constraints imposed by the bureaucracy and by the bank's criteria are overcome, the amount of benefit that the bank credit furnishes the colonist is to a great extent determined by the use that the colonist make of the money obtained.
It was observed that the colonists who use credit to find a major diversification of their production activities achieve better results than those who concentrate on the development of one particular product. However, in this process of diversification, technical assistance is of fundamental importance, particularly in the questions of production techniques and orientation on the tendencies of
the market. In any event, only very few colonists actually receive such assistance. On the other hand, concentrating credit in one particular activity has produced differing results among the colonists. While some have found themselves suddenly ruined and totally unable to repay their debts due to the failure of their harvest, others have achieved vast profits and are now in a good economic position. Nevertheless, as the colonists state, financial concentration in one activity involves huge risks which not all of the colonists are in a position to run should the harvest fail. Thus, the utilization of credit for one crop has been a successful decision only for those colonists who are already in a better economic position and who have previous experience with the credit system and monoculture production.

In more general terms, it was observed that the financing obtained by the colonists was very rarely used to improve production technology, with perhaps a few exceptions in the case of perennial crops. In fact, a large number of colonists used credit as a means of surviving the period prior to harvest, although some of the more well-to-do colonists may use the money to pay hired labour or to build storehouses where they keep their produce until the following between-harvest period, in order to obtain a better price for their products. However, the great majority of colonists are unable to do the same since the conditions stipulated by the bank force them to sell their produce as soon as the harvest is completed. As a result, the prices which they obtain are far lower than those they would have received had they been able to wait some months before selling their produce.

To summarise, it was found that access to credit in PIC has been provoking contradictory effects or results. On the one hand obtaining credit has driven a great number of colonists to such a situation of permanent indebtedness that some of these colonists, if they have not already lost their lots (since the bank requires the lot when the colonist is unable to repay his loan and the guarantor refuses to do so), or are very close to it. On the other hand, obtaining credit has
been the most important factor for those colonists who are already in a good economic situation, to improve their economic and social condition even more. Thus, credit is one of, if not the most important factor, for the process of social and economic differentiation among the families settled in PIC.

**Obtaining Credit in PA-70**

Access to credit in PA-70 is quite a different matter. First of all, unlike PIC, there is no special subsidised rural credit, and therefore the peasants settled in PA-70 are subject to the conditions existing everywhere else in the country.

Official policy on rural credit in Brazil is basically implemented by the Bank of Brazil, which provides approximately 80% of the available institutional credit; the rest comes from other banks which can be either public or private.

Although the Bank of Brazil is a government institution, in practice it follows the same criteria in granting credit as the private banks do. That is, strict requirements regarding security and ability to repay loans predominate to the detriment of any other considerations of a social nature. Thus, due to this stance adopted by the bank, access to credit is not only a difficult bureaucratic matter but also requires the producer to furnish certain guarantees that most of the peasants settled in PA-70 cannot fulfill.

Failing financial guarantees, the bank will usually demand that the producer offer the land itself as surety. So, in an area where half of the producers have no deed whatsoever to the land that they occupy, access to credit is thus automatically reduced to a minority. However, it should be pointed out that although the bank initially demanded that the producer hold a clear title to his land before granting a loan, since 1979 (the time when the Government instructed the Bank of Brazil to adopt a more flexible policy) this requirement has been relaxed and the Bank of Brazil actually
has been accepting provisional title-deeds as legal document for granting credit. If this new policy resulted in an ever-increasing number of producers making use of credit in the country as a whole, in the PA-70 settlement, however, a great number of peasants are still without access to credit because (as described before) they do not have any document regarding their rights over the land they occupy.

It is interesting to note that in the PA-70 settlement, this more flexible policy adopted by the Bank of Brazil, rather than providing greater access to credit for the peasants, has actually come to have a strong effect on the process of land regularization in the area. Since the bank's main security is the land, this institution has put pressure first on the INCRA and now on GETAT to regularize the land held by those peasants who have obtained credit through their provisional title-deeds. Thus, for a peasant to be indebted to the Bank becomes a positive factor in having his claim more rapidly regularized by the Government agencies.

Although rural credit was very useful for those peasants who could get it, in order to enlarge their area of production and to improve their economic situation, at the present moment it is no longer so, due to the increase bank interest rates have undergone as of 1983. In 1982, interest rates ranged from 6 to 12% per annum, but in 1983 they soared to 35 or 40%. In spite of this increase in the interest rates, rural credit is still extremely advantageous to the producers since the inflation rate itself rose by more than 100% in 1983.

Another reason to explain the fact that only few peasants actually make use of the rural credit lies in the fact that the banks have been giving preference to financing cattle-raising rather than agricultural production. As a result, the majority of peasants who could initially fulfill the conditions required by the bank to obtain credit, are actually excluded from this benefit as they are predominantly agricultural producers. Out of 100 families interviewed, 20 said that they had obtained rural credit in
1983, but only 5 of them have agricultural production as their main activity while the other 15 were concentrating on cattle-raising.

Finally, it should be noted that in contrast to PIC, few peasants in PA-70 said that they had difficulties in repaying their Bank loans. Besides, all the peasants who somehow have access to rural credit are in a much better economic position than those who could not get such loans, a fact that is not totally applicable to PIC, where bank credit does not always bring improvements for the colonists.

**Summary**

The first section of this chapter showed that all the families possess, and have control over the land where they work. It is true that in the case of PA-70, some families do not yet have legal ownership to the plot they occupy. However, for the time being, these families, like the others, are free to decide what use to make of the plot of land where they are settled.

Regarding the distribution of land, it was shown that in PIC, due to its being a settlement organized by the government, all the families own plots of 100 hectares. However, due to some changes in the government's policies toward the Project, some families, although a minority, have been able to have access to larger areas of land through either concession from the Government or purchase.

By contrast, in PA-70 there is a great diversity in the distribution of land. The majority of the families (71%) possess plots with an area of 100 hectares or less, with variation in size of plots. The reasons for the diversity in the distribution of land in PA-70 were highlighted in Chapter IV and completed in this Chapter. In short, these reasons can be seen in the land conflicts during the first stage of settlement, the availability of money for the family when arriving at the region and in the availability of labour for each family during the first stage of settlement.
Regarding the use of land, it was shown that nearly all the families use the land primarily for agricultural purposes. Exceptions to this pattern were found among a few families in PIC who have been dedicated more to raising livestock, and among those families with large plots in PA-70 who dedicated themselves either to the raising of livestock, exploitation of timber or simply maintaining a large part of their plots in an unproductive state. But even in these large plots some kind of agricultural crop is always being grown.

Even though there is a great diversity in agricultural production, the majority of the families concentrated their resources on the cultivation of rice, beans, corn and manioc. In general, the families simultaneously cultivate all these crops although priority is always given to rice. In PIC this priority given to the "white crops" has given way, among some families, to the cultivation of the so-called "commercial" crops, especially cocoa and secondarily coffee and black-pepper. But even in these cases where production has become more specialized in one kind of crop, the family still maintains part of the plot for the cultivation of consumer products such as rice and manioc.

The technology utilized for the production process is very simple. For the preparation of the soil, the families use the slash-and-burn method. The instruments utilized for either preparation of the soil or the cultivation process are limited to simple iron tools operated manually such as axes, machetes, brush hooks and, occasionally, hand-saws. Few families (basically only those involved with commercial crops) utilise fertilizers or have some kind of technical assistance in order to improve the productivity of their crops. So the productive process relies basically on labour and under very hard conditions requires a great deal of physical strength. Even though the labour-intensive varies according to the agricultural cycle, in general, the labourers work in the agricultural production, on the average, eight to nine hours per day, about 180 days per year.
For the commercialization of their products, the families have to face the costs of transport to the market place. For those families whose plots are located near the highways, this transport is usually made by hired trucks. However, for those situated far away from the highways, the transport of the products is made by animal to the highways. An alternative to avoid the costs of transport is to sell the products to the middlemen who come to the highways but pay lower prices for the products.

Access to credit is basically restricted to the families who settled in PIC. But even among them, the conditions imposed by the banks and the bureaucracy that they have to face, make access to credit very difficult. Basically, only those families involved in the cultivation of commercial crops can actually reap some benefits from the credit system.
Notes

1 - The estimate was made using as indicators the production volume and improvements observed in those lots about which the occupants were prepared to give more precise informations.

2 - Data regarding bank credits were collected at the INCRA's office in Ruropolis Presidente Medici and at the Bank of Brasil's office in Itaituba.
CHAPTER X

AVAILABILITY AND USE OF LABOUR

This chapter is divided into two sections. In the first, entitled Labour Recruitment, I show how labour is provided and organised by the peasants in order to allow them to carry out their farm productive process. In the second section, entitled Alternative Uses of Labour, I look at the utilization of labour in activities which are not considered by the peasants themselves as part of their farm productive process which, nevertheless, greatly contributes to the composition of the family income.

LABOUR RECRUITMENT

The previous chapter provided a basis for asserting that due to the lower level of technology utilized by the peasants, the farm production process relies, basically, on the use of labour power. It is, therefore, pertinent to examine the amount of labour available to the families, how they organise this labour and what alternatives they have to relieve the shortage of family labour power.

1 - Family Labour

As I have already mentioned in the previous chapters, the number of workers available in each family constituted an important factor at the very beginning of the settlement process. In PIC, for example, this factor had a great weight in the criteria adopted by the INCRA in the selection of the colonists. That is, the greater the number of workers, the greater the chance for the family to be selected. In PA-70, the number of workers determines, to a large extent, the size of lot to be occupied by the family. During the first stage of settlement, the greater the number of workers, the easier it was for the family to reach self-sufficiency in its
production system and, in the case of PA-70, to guarantee the possession of the lot occupied.

Having overcome this first period of settlement, however, there was still a need for a better examination of the real importance of the number of workers in the economic performance of the families in both settlements.

Before discussing available labour power among the families, I think that the analysis can be enriched by first examining the amount of work required in the production system. For this reason I took as an example the production of rice which, as already mentioned, is by far the most important product in the diet of the families.

To cultivate one hectare of rice, which in PIC produces on an average 1,500 kgs of rice and in PA-70 2,200 kgs, requires approximately 100 adult-days of work. This production can be enough to supply a family of two members but it is very unlikely that a family with such a production will have any surplus for commercialization. Since the cultivation of rice requires 100 out of 180 days (the average number of days that an adult person works per year)\(^1\), it means that only 80 days are left for the execution of essential tasks for the survival of the family. It was found, for example, that at least 40 adult-days of work are required to cultivate enough manioc (another important product) to supply the needs of a family of two.

Given this, it seems very unlikely that a family with only one worker (whatever the number of its members) could produce enough for its survival. Actually, I found no families with just one worker. It is true that sometimes, especially due to health problems, a family can find itself with just one worker. This situation, however, does not last very long. If it persists for more than 3 or 4 months and if the family does not have enough reserves (either money or products) the family must necessarily move away.

Table 23 presents gives general idea of the amount of labour
The reason I regarded the work performed by adults (either male or female) and young people (for instance those under the age of 18) as equal is based on my observations during field work. It is true that the young as well as the women are sometimes excluded from some hard tasks under the argument, mainly assumed by males, that women have no physical capacity to execute such tasks. However, the absence from the so-called hard tasks is compensated for by the performance of other tasks (which males generally do not execute arguing that such tasks are not "men's work") making the amount of their work equal to that executed by the male adults. It should also be stressed that children under 12 years of age work, especially in domestic production (an aspect that will be focused later on); however, their participation in agricultural production, on which I am basing this analysis, is negligible.

Returning to Table 23, one can see that there are a considerable number of families in both settlements with just two workers. In PA-70, of the 39 families with two workers, 32 are a father and a child. The mother, who at first could be taken as a potential worker in agricultural production or any other form of income-generating activity, in fact does

### TABLE 23

Available Workers and Number of Families

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<tr>
<th>No. of Workers</th>
<th>Number of Families</th>
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<td></td>
<td>PA-70</td>
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<tr>
<td>2</td>
<td>39</td>
</tr>
<tr>
<td>3 to 5</td>
<td>37</td>
</tr>
<tr>
<td>6 to 10</td>
<td>18</td>
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<td>Over 10</td>
<td>6</td>
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<td>100</td>
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a) Including all people (male and female) over the age of twelve.
not participate as she must stay at home, taking care of the young children. In PIC, however, of the 34 families with two workers, 20 have the husband and the wife as workers, that is, either the couple have no children or the children have already moved away. These data, however, are not surprising when taking into account what was mentioned in the previous chapter about the higher number of young children in PA-70 than in PIC. In terms of economic performance, however, these data suggest another consideration; that is, a family whose workers consist of the father and one child probably also have a larger number of dependent members, that is, members who cannot produce, but do, in fact, consume. Therefore, it is probable that the group of families with two workers in PA-70 face a more difficult economic situation than the corresponding families in PIC. The other groups, with more than two workers, show a very similar picture in both settlements; that is, the number of workers in relation to the number of dependents does not differ very much from one settlement to the other.

Division of Labour

Having presented the amount of labour power available to the families, I shall now examine how such labour is organized and utilized within the farm productive process.

In the course of the field work, it was found that the majority of families usually classify the use of their labour power into two activities, that is, those executed within the lot and those performed outside the lot.

A - Activities Within the Lot

The activities within the lot are referred to as being the domestic tasks and the work performed on the "rocado", that is, the area set aside for agricultural production. Domestic tasks are those which involve the care of the house, children and domestic animals.

The division and organisation of domestic tasks falls on the wife, since this is defined locally as being a "woman’s
The domestic tasks are basically carried out by the female members of the family and the children. Children are, at an early age, incorporated into the general execution of domestic tasks. Young boys at the age of 7 may already be given small tasks, such as looking after the chickens, fetching water, gathering wood for the fire, killing chickens and other activities of which running long-distance errands are the most common. A girl is considered really useful by the age of 10, when she is capable of helping the mother in doing most of the domestic chores: washing clothes and dishes, cooking food, keeping house and taking care of children. Any assistance from adult males is taken as "help" and this happens only in the case of lack of women within the family or, in a few cases, due to the background of the family. Regarding the background of the family, it was observed that the men who took part in domestic tasks were those who had had some experience in urban living, who had lived alone, or belonged to families that at some point had had no female members and so had had to undertake domestic work. Even though some of the domestic tasks cannot be left undone, others which are supposed to be of secondary importance, such as cleaning, for example, are only regularly performed if the female labour force is not required on the "rocado".

The organisation and division of work on the "rocado" falls to the father, as this area is considered to be a male domain.

The division of labour in the "rocado" is usually made in accordance with an ideal model based on sex and age. According to this model, the women and young children should perform "easy" or "light" tasks such as sowing and weeding, while the hard or dangerous tasks such as felling trees or working in places where there is the risk of disturbing wild animals, should be performed by adult males.

The application of this ideal model, however, is conditioned by three factors: 1) the amount of labour power available in the family; 2) the family's financial situation; that is, the possibility or not of affording hired labour; 3) the
1 - Regarding the availability of family labour, it was observed that among those families which have only two workers, and when these two workers are the husband and wife, the woman's part in the agricultural production is very similar to that observed in other societies as described by Murdock (1937) and Brown (1970). That is, the extent to which the woman contributes to agricultural production is determined by the compatibility of these tasks with simultaneous domestic or child-care tasks. If, however, one of the workers is a grown-up daughter or son, the tasks reserved for them are almost the same as those executed by the father, although the girls tend to be released from the really heavy and dangerous tasks.

Among those families with 3 to 5 workers, the division of labour by sex is almost non-existent. That is, in practice the ideal model regarding the division of labour by sex is waived due to the need to maximize the available labour force, and therefore all tasks necessary to the productive process are performed equally by men and women. Age, however, is taken into account, with the younger family members working less than the older ones.

When the families have six or more workers available, there is more flexibility in the allocation or use of the family labour power. As a result, and especially during periods of less demand for work, division of labour by sex and age prevails, according to the ideal model.

2 - The economic situation of the family is also a strong factor regarding the extent to which the ideal model is applied to the organisation and division of the family labour force. It was observed, for example, that among some families, employing hired labour is often seen as a means of releasing women from agricultural tasks, rather than answering a real need for a larger work force or increasing the volume of production. And, should the family's economic condition allow, sufficient hired labour is employed to totally free the women of the family from participating in
agricultural production. In this case, fewer tasks are also given to the children, though the boys are less favoured than the girls.

3 - Once the number of workers available meets the demands of the productive process and once the family is in a position to employ hired labour, then the division of labour or the greater or lesser participation of women and children in the agricultural production depends on the family's social and cultural background. It was found, for example, that comparing families in a similar position regarding available labour and economic condition, the women in families from the Northeastern and Central-Southern regions tend to work less than those in families from the Southern Region. Furthermore, it was found that among families with urban experience or those who enjoyed a better social status before coming to the Amazonian Region, the women tend to withdraw from agricultural production tasks as soon as their participation is no longer considered essential for the survival of the family. Participation of children in agricultural production is also determined by the cultural background of the family. Thus, those families with an urban background and those whose parents have a certain degree of formal education tend to give more free time to their children, especially if the time is to be used in school.

B - Activities Outside the lot

Activities off the lot, which basically include working elsewhere for wages, prospecting, hunting, fishing, commercialisation of the produce, shopping and working out contacts with government agencies, are, ideally, an adult man's province.

However, as happens with the activities within the lot, the application of this model depends very much on the available labour force, economic conditions and socio-cultural backgrounds of the family. Nevertheless, it was observed that women are totally excluded, under any circumstances, from activities such as hunting and prospecting. Furthermore, only
four women out of all the families interviewed in both settlements said they had sometimes fished. The male children, however, though excluded from prospecting, usually help the adult men in hunting and fishing.

Regarding working for wages, it was found that women and children are restricted to activities seen as "domestic tasks" or to the less heavy tasks in agricultural production. To a great extent, the exclusion of women and children from taking a major role in hiring out labour power can be attributed to the employers' own attitude, since they will only hire women and children when there are no men to hire.

The working as hired labourers by the women and children is also determined by the amount of workers in the family. When wage labour is essential for the survival of the family, women and men do it indiscriminately. If, however, the working for wages is not that important for the survival of the family, the choice of working as hired labourers is left to the adult males.

It was also found that there are more restrictions on women's work as hired labour among those families from the Central-Southern and Northeastern Regions than among those from the South and those who had had previous urban experience. This is not a surprise since, as mentioned in Chapter VIII, the women who belong to those families from the South and to those who had urban experience have more freedom regarding their social role within and outside the household.

Finally, it should be stressed that the minor participation of women and children in working for wages can also be explained, as stated by the women themselves, by the fact that they always receive lower wages than men for the same task, a fact which is actually found in many different societies and which has been studied by, among others, Phillips and Taylor-1980; Heyzer-1981; Grossman-1979; Young, Wolkowitz and McCullag-1984.

Regarding commercialization, a similar pattern was found
among all the families interviewed, that is, whatever the participation of women in agricultural production, going to the market and negotiating a price for the products is an activity basically done by the father or other adult men of the family. Women only participate in the process of commercialization when it is necessary to sell different products on the same day and there are no adult men to undertake such tasks. Should it be necessary for the women to do so, they are not free to sell any product, since to the men is reserved the right to sell the products which are considered most valuable, such as rice, beans, maize, etc. Women are restricted to the less valuable products such as fruit, vegetables and small quantities of manioc flour.

A woman's participation in decisions regarding the use of the money resulting from the sale of produce is, in the majority of cases, very limited. In general, it is the man who goes shopping and who decides what products and how much of each should be bought on the market for the family consumption. This pattern, however, is less evident in families with a greater participation of women in agricultural production and among the families in better economic conditions. Besides, buying clothes and household equipment is generally a task performed by women.

Finally, I shall point out that contact with government agencies, banks, and visiting agricultural experts are activities basically performed by men, as well as the initial contact with visitors or strangers who come to the house.

Labour Recruitment Outside the Household

Even though the majority of families rely basically on their own labour power to carry out their production system, this amount of labour can, eventually, be insufficient.

Among other reasons, a shortage of family labour can be due to the contraction of a disease by one or more family workers, the parting of one of these workers, or simply
because a family decides to produce more than its available labour is able to cope with. Whatever the reason, the families face two alternatives to meet their demands for labour. The first alternative is to make use of co-operative labour, and the second is to make use of hired labour. Following, some comments are made about these two alternatives.

Labour Co-operation

Labour co-operation within rural communities is usually considered as a manifestation of friendship, solidarity or rules of kinship in these societies. However, recent studies (Moore-1975; Wong-1971) have pointed out that when taking a closer look, one can find that co-operative labour can be, if not essential, then very important for the reproduction of peasant households. Given that, it then seems pertinent to investigate how, and to what extent, co-operative labour is present among the peasants in the Amazonian frontier.

Below, a brief description is given of the main types of co-operative labour found among the families settled in PIC and PA-70.

A - Exchange of Days

Exchange of days occurs when one or more members of family "A" work for another family "B". There is no immediate payment for the work done, but it is assured that the members of family "B" will do the same for family "A" whenever the need arises.

Such labour cooperation generally takes place among families linked by ties of kinship, close friendship or between neighbours.

In PIC, during the agricultural year 1982/83, out of 35 families who utilized the day exchange system, 15 did so with neighbours, 10 with relatives and 10 with neighbours who were also relatives. In PA-70 it was recorded also during 1982/83 that of the 41 families who made use of the day exchange
Exchange of days with neighbours who are not relatives generally occurs when both families involved have a scarcity of cash to pay hired wage labour or when there is no one available to hire out as labour. Furthermore, it was observed that day exchange among neighbours who are not relatives is restricted to families who belong to the same social group or have similar economic conditions. This was more evident in PIC where there were no cases of exchange of days between families from the Northeastern and from the Southern Regions or between families with a great difference in economic condition. Even though the division of groups is less prominent in PA-70, the exchange of days, however, tends to occur among families of similar economic condition. Among relatives, day exchange can occur either due to lack of cash or to the labourers' readiness to work for wages or because it represents an act of solidarity and mutual aid through which the families involved consolidate and extend their existing relationships.

Table 24 below demonstrates the proportion of workdays acquired through exchange of days in relation to those worked by the family labour force in both PIC and PA-70 settlements.

<table>
<thead>
<tr>
<th>Workdays supplied by Day Exchange (%)</th>
<th>PA-70</th>
<th>PIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 3</td>
<td>25</td>
<td>21</td>
</tr>
<tr>
<td>4 - 6</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>7 - 10</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>41</td>
<td>35</td>
</tr>
</tbody>
</table>
(a) The total number of days worked by the family labour force was obtained by multiplying the number of workers by 180, which is the number of days that each member is supposed to work per year.

Even though Table 24 presents a clear idea of the amount of work days supplied within the exchange of days system, it does not, however, in itself, demonstrates the importance of this system for the families with a shortage of labour. That is, more important than the actual number of work days acquired by the day exchange system, is the study of when such exchanges take place, that is, when the execution of a task requires greater speed than the available family labour power can actually cope with. This point is clearly underlined by one peasant's statement:

"my neighbour worked 3 days for me during my harvest and I worked 3 days for him during his harvest. This help was more important than if we had worked 10 days for each other in any other phase of the agricultural cycle".

Finally, it should be stressed that day exchange follows the pattern of division of labour according to age and sex as described in the previous section. That is, when the tasks to be performed are part of the agricultural process, it is generally the men who are involved in the exchange. Day exchange among women only happens for the execution of the so-called domestic tasks or in the processing of manioc flour which most families regard as a woman's work. Although young children do not take part in day exchange proper, they are frequently "borrowed" (in the local idiom) to carry out small tasks or to provide company. In these cases, the obligation of return of "favour" is assumed by the parents while the young children receive small tips in cash or products as payment for their work.
Mutirao is a kind of mutual aid frequently cited in the literature concerning the rural communities in Brazil (Caldeira-1956; Viana-1938; Hutchinson-1966). It consists of the gathering of a large number of workers in order to carry out a task which is urgent or requires the simultaneous efforts of a greater number of persons than the family who receives the aid is able to supply. Generally the participants belong to mutually friendly families, but it is not uncommon to encounter individuals who have ties of friendship with one of the participants but not necessarily with the family being helped. There is no form of immediate payment, but it is expected that the members of the family being helped will participate in any other mutirao involving any of the participants.

In PA-70 as well as in PIC, mutirao was very frequent in the initial period of settlement, particularly in the first phase of forest clearance. The peasants state that during this phase a large number of people working together was essential to ensure protection from the unknown dangers of the jungle and to meet the urgent need of producing food for their survival.

However, with the passage of time mutirao has become increasingly rare. In PIC, this form of mutual aid has practically disappeared. During the year 1982/83 only two mutiroses took place; one to help a family whose head had died and another one to help a family whose head was ill. In both cases, the majority of the participants were related to one another.

In PA-70, however, even though less frequent than before, this form of mutual aid still exists. According to local inhabitants, a mutirao of 10 people was formed to harvest the rice of 8 families in the year 1982. It involved 30 days of work in which each family’s crop was harvested in rotation, according to the maturity of the grain. Even though the
Peasants stressed the benefits of that particular mutirao; there were no plans to repeat the same event the following year. The reason for this, according to some participants, is that the mutirao is, above all, an aid to be given in case of extreme need or when it implies some kind of social entertainment. Actually, the other mutiroes that took place in PA-70 during the year 82/83 were either to help families with serious financial problems or disease or to execute a task, such as the building of a house which often is followed by good food, dancing and general socializing.

Finally, it should be stressed that while the number of mutiroes aimed at executing agricultural production tasks is declining, those organised by women in order to make manioc flour is still very common in both settlements. In this kind of mutirao, two forms of payment were observed. The first, as in day exchange, consists of a promise that whoever receives help will render the same assistance whenever one of her helpers is making manioc flour. The second is to give part of the produce to participants who do not own the necessary equipment to make their own manioc flour.

It is interesting to note that, unlike the mutiroes organized by men, those organized by women tend to bring together women from different social and economic groups. The reason for this, according to some statements, is that the mutirao for making manioc flour is one of the few opportunities the women have to make social contacts.

C - "Encostado"

One further alternative available to the peasants to meet their deficiency in labour force should be mentioned, a method widely practiced in PA-70. This is the utilization of the services of newly arrived migrants who stay in the house of relatives or friendly families while waiting for an opportunity to acquire their own land. These migrants are known in the region as "encostados" (roughly: "leaners"), a term which refers to someone who lives in somebody else's
home. In general, an "encostado" is the head of a family who has come ahead to find land while his wife and children remain in the region of origin or in the nearby township until they can settle. However, it is not uncommon to find entire families living as "encostados".

Should the host family have enough land, they generally cede part of their lots to the "encostado" who works it on a share-crop basis and generally works one or two days per week for the host family. If the host family, however, does not have enough land to share, the "encostado" works for the host family as if he were a permanent member of the family. However, unlike the other members of the family, the "encostado" generally receives part of the produce after harvest as a form of payment or, as several families stressed, as a means of forming his initial capital.

Out of 100 families interviewed in PA-70, 15 had, at the time of this field work, an "encostado" and 5 of these had the "encostado" and his entire family. In this last case, all members of the "encostado"'s family were executing some kind of task for the host family.

In the majority of cases, an "encostado" is welcome, especially among those host families with few workers. In other families, the "encostado" is also welcome because since the work supplied by him very often permits one or two members of the host family to leave their activities in the lot temporarily and earn some extra income either through working as wage labourers or by prospecting.

Even though the supply of labour by an "encostado" is generally taken as very advantageous for the host family, it does not, however, last for long periods. This is because either the "encostado" has to find a place to settle with his family quickly or because should the encostado not be alone, the host family cannot afford to have extra consumers for any long period of time.

As a brief conclusion to this section, I point out that, with few exceptions as in the case of mutirao, the existence and
advantages of co-operative labour in both settlements is almost entirely economic in character. However, this economic argument must be questioned if one takes into account that the co-operative labour occurs mainly between families with ties of kinship or with a similar social and economic position.

2 - Hired Labour

Approximately 30% of the families in PA-70 and 38% of those settled in PIC hire labour at some point in the agricultural cycle, especially during the seasons of peak labour demand. However, as Table 25 shows, for the majority of the families hired labour represents no more than 10% of the total amount of work employed in the agricultural production. In other words, it means that for the majority of the families, including those who use hired labour, family labour power is still the main source of labour for agricultural production.

Seeking for the reasons why the families use hired labour, it was found that for the majority, hired labour represents a way to meet a shortage in the family labour power. Actually, it was found that out of 30 families in PA-70 who make use of hired labour, 15 have only two workers and 6 have only three workers each.

TABLE 25
Proportion of Hired Labour in Relation to the Total Labour Force Employed on the Farm

<table>
<thead>
<tr>
<th>Proportion (%)</th>
<th>No. of Families</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PA-70</td>
</tr>
<tr>
<td>1 - 10</td>
<td>16</td>
</tr>
<tr>
<td>11 - 30</td>
<td>8</td>
</tr>
<tr>
<td>31 - 50</td>
<td>4</td>
</tr>
<tr>
<td>Over 50</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>
Similarly, in PIC, out of 41 families who make use of hired labour, 25 have a maximum of 3 workers each. These data thus confirm the assumption made by Chayanov (1966, 1974) and his followers that, among peasants, the use of hired labour is essentially a way to compensate for lack of family labour power.

However, there are still 16 families in PIC and 9 in PA-70 which actually have more than 3 workers (a number stated by the peasants as being the minimum to guarantee the reproduction of the family) but make use of hired labour. In these cases, the reasons for using hired labour are quite different. For 8 families in PIC and 3 in PA-70, the use of hired labour is essentially a way to free the women from work in agricultural production. Therefore, for these families, much more important than increasing their level of production, which could lead to an improvement in their economic situation, is the preservation of their ideal pattern of division of labour in which the women should be withdrawn from labour in agricultural production.

For the other families, however, that is, 6 in PA-70 and 8 in PIC, the use of hired labour is basically a way to increase their level of production and achieve greater surplus.

Before going any further with the description of hired labour, it seems pertinent to present some information on who supplies this hired labour and what kind of relationship is established between those who employ hired labourers and those who work for wages.

**Suppliers of Hired Labour**

Taking the case of PIC first, it should be remembered that, except for a few families who dropped out of their lots and are now involved in trade activities, all the individuals residing within the area of the project belong to families who have agricultural plots. This means that, strictly speaking, there are no landless workers in this settlement.
Consequently, it greatly restricts the amount of labour available for hire in comparison with other rural areas where the landless workers constitute a guaranteed source of labour. Therefore, finding people willing to work for wages presents a real difficulty in PIC. This was confirmed by several colonists who stated that it was not uncommon for them to find themselves unable to increase their level of production due to lack of hired labour.

Actually, the majority of workers who engage in wage labour are basically labourers who are redundant in their own families, and are available only during the period of less demand for work on their own lots. The available workers, however, prefer to work as hired labourers outside the area of PIC, where they generally get better wages, or engage in prospecting.

Besides the restricted number, the supply of hired labour is also limited by the very kind of social relationship that exists among the inhabitants of PIC. That is, the wage labourers prefer to work for those colonists with whom they have some type of personal relationship, rather than for those whom the labourers claim belong to another social group. Naturally, this attitude can easily be maintained in circumstances of great demand for, but restricted availability of hired labour. The alternative remaining for those who look for hired labour, is to recruit wage labour from other areas. However, this alternative is not an easy one. First of all, the wages demanded by outside workers are much higher. Secondly, the employers have to pay the costs of transportation, and finally, they have to supply food and accommodation for the workers. In the 1982/83 agricultural year, only two families made use of this alternative, and they stated that the higher costs involved in recruiting outside labour did not permit them to make a profit from this transaction.

The situation in PA-70 is very different. A great number of peasants who have lost their land, plus the landless rural
Workers who continue to migrate to the region, already constitute a free proletariat that has no alternative source of livelihood other than that of working as hired labourers. These wage labourers are concentrated in the townships placed along the PA-70 highway and constitute a permanent labour-source. However, it was found that the families interviewed make very little use of this labour source. Instead, the recruitment of wage labour by these families takes place from among themselves; that is, these peasants hire one another's labour. Consequently, it is not uncommon to find a situation where the roles of employer and employee are reversed from one day to the next. Even being restricted to themselves, the offer of wage labour in PA-70 is much higher than in PIC. This is basically due to the fact that, as a great number of families have small lots, the number of redundant workers is also higher. Besides there are a greater number of families in PA-70 than in PIC for whom wage labour power is essential for their survival.

**Forms of Payment of Hired Labour**

Hired labour is generally paid for in cash or on a daily basis. The wage for one day's work, whatever the task, at the time that this research was carried out (1983), was from 1,000 to 1,200 cruzeiros in PA-70 and 1,200 to 1,500 in PIC. This price is very low if one takes into account the price of foodstuffs in the Amazonian Region. Thirty or forty thousand cruzeiros per month does not allow a family of three or four members anything other than their own bare means of survival. On the other hand, for the peasants, especially those with a small-scale production, the price paid for wage labour is considered high, when taking into account the price they receive for their produce. Therefore, as I mentioned before, for the majority of the families interviewed, the use of hired labour is more a question of guaranteeing the minimum level of production required for their survival than anything else.
Even though a daily cash payment is the most usual, it is not uncommon to find other varieties of payment which better suit both the employer and the employee. Sometimes, in cases where a labourer is hired for longer periods, he (she) would ask for payment at the time cash were needed, but otherwise he (she) would prefer to wait until Saturday for a lump payment for the week or fraction of a week that he (she) had been working. Some workers may ask their employer for a cash loan and then work for him the necessary number of days to pay it off. In PA-70 it was observed that it is not uncommon for the employers to offer wages wholly or partly in kind such as beans, rice, manioc, etc. Such payment benefits the employer by assuring him a set prices for his produce but also helps the employee because the price set for these products is normally lower than those found at the shops.

In PIC, the wage also depends on whether or not the labourer receives board from the family who employs him. It is interesting to note that it is the worse-off colonists who prefer to provide food for their employees. Generally, these colonists argue that it is easier to share their own food with the labourers than to pay a higher daily rate. Going a bit beyond this explanation, the preference of the worse-off colonists in giving food to their employees may be justified on the following grounds: first, they not only have less cash available but the food provided (rice, beans, sweet potatoes and game) can be taken from their own lot. Second, it is very probable that the situation could be reversed (although more frequently in PA-70 than in PIC) in the near future; that is, the present employer may soon be working for the very same labourer. Since the supply of food to an employee is a sign of kindness, the employer who does that is actually guaranteeing the same treatment for himself at a later date. Moreover, the personal ties of friendship and, occasionally, kinship which exist between the poor employer and their hired labourers presupposes that the employee should be treated almost like a member of the family.

For their part, the better-off employers neither share the concern that in their turn they will become wage labourers,
nor do they have friendship ties with their employees. Besides, the organisation of their households makes providing food for employees a complicated task. That is, cooking for the workers always implies extra domestic labour which sometimes has to be supplied by hiring a cook. Feeding the workers for the better-off employers can also imply buying extra food from the market, since the level of production of foodstuffs for immediate consumption is generally lower among the better-off employers.

For the employees, it is always more advantageous to be fed by their employers. In the first place, this means that the employee does not need to get up earlier to prepare the day's food nor to carry it for the long distances which generally separate his home from his place of work. Furthermore, he does not have to eat his meal cold, there being no means of reheating it where he works. In short, receiving his food from the employer relieves the labourer of the responsibility for his own well-being while working.

Finally, I wish to point out two other forms of labour contract and payment found in PA-70. They are the piecework system (empreitada) and the sub-contracting system (turmas).

Under the piecework system, a worker is paid according to the quantity of work performed and not according to the time he (she) spends working. This system, according to several peasants' statements, can provide advantages for both the employer and the employee. For the employer, it eliminates slow or inefficient workers and there is no need for close supervision. For the employee, this system can provide an increase in his earnings if he increases his own physical efforts, or, as usually occurs, through the help of his young children in the execution of the tasks.

In this type of labour contract, the value of the work is calculated by both parties (employer and employee), taking into account the volume of work to be carried out. Payment is generally made in two parts; that is, half in advance and half when the work has been completely finished.
Under the sub-contracting system, the wage labourers (composed basically of the landless) establish individual agreements with a kind of gang-boss known in the region as "gato". This gang-boss then acts as intermediary in leasing out the labourers' work to whoever needs it, through a contract based on piecework. The income of the gang-boss is the difference between what he receives from the employer and what he has agreed to pay the workers.

In this form of contract, the labourer has to provide his own food and the wages he (she) receives are, in almost all cases, below the current market rate. Despite these disadvantages, this form of employment is attractive to the labourers because transportation is guaranteed (provided for by the gang-boss) and they are generally assured of work for longer periods.

For the employers, especially for those who have a great amount of work to be done, the sub-contracting system provides them many advantages. Among others, it frees them from supervising, to supply food, problems with absence of workers and they are assured that the work will be done on time.
Very often when analysing the conditions of production and reproduction of the peasantry, authors tend to limit their attention to agricultural production. However, during the field work, it was noted that, although agricultural production is still the main source of income for the majority of the families settled in PIC and PA-70 and consequently the basis of their reproduction, the use of their labour power in activities other than agricultural production is an aspect that deserves further analyses.

In the following section a description is given of the activities that, although not included as part of the agricultural production, are, nevertheless, important for the survival of the families. An attempt is also made to demonstrate the relative participation of these activities in the composition of the families' income as a way of showing their actual importance in the maintenance of the families as small farm producers.

1 - Domestic Production

Domestic production is essentially carried out by the female members of the family, and can be considered as a parallel system of production to the agricultural production of the household. It was noted during the field work that domestic production is often considered by the males as a marginal activity as it is developed, according to them, through the use of redundant (from the agricultural production) labour power or, according to what actually was observed, through the use of extra-work by the women.

Although domestic production covers a great diversity of tasks and activities and a large part of the production itself is immediately consumed by the family, I will limit myself in this analysis to those activities that generated cash income for the families during the period June 82 to June 83. The activities are basically related to: collecting,
gardening, raising livestock and producing manioc flour. Following I examine each of these activities separately.

a) Collecting

As the families improve their knowledge of the forest, they also increase their exploration of its resources. However, it is the women who are more keen on making use of the forest's resources such as wild plants and fruits. The absence of males from such activities, according to themselves, is due to the fact that such tasks require patience and persistence which, they argue, are virtues of women.

If at the beginning the collecting of wild plants and fruit was essentially for the families' own consumption, nowadays the collecting of these products is essentially considered as a source of income. Basically, the fruits collected which have some value on the market are babacu, sapucaia and Brazil nuts. Except for the Brazil nuts, these nuts are generally used for the extraction of oil, which has a better acceptance on the market. Widely collected are also cupuacu, acai, tucuma, genipapo, pupunha and graviola, fruits which are sold in their natural state or transformed into juice when the market is not far away.

Wild plants basically for medical purposes are collected and sold. Even though the collecting of medicinal wild plants generates more income than fruit, only few women actually do this since it requires special knowledge of the environment and the medicinal value of these plants. Besides, the women who have this knowledge keep it secret in order to maintain the high price of these plants on the market. Contrary to what happens to the other domestic products, these plants are generally sent to Belem where specialized shops purchase this type of product.

b - Gardening

This activity is principally developed by women from the Southern and Central-southern Regions. It covers the
cultivation in the yards of the houses of a number of different types of fruit such as oranges, bananas, pineapples, avocados, quavas, jacas, and coconuts, and vegetables such as tomatoes, lettuce, kale, cara, yams, gairoba, cucumbers and a variety of herbs. In PIC this activity has seen a great increase since 1981, when a "feira de vegetais e frutas" (market for vegetables and fruit) was created in Itaituba by a group of students linked to Projeto Rondon. With the commercialization of these products facilitated by the "feira" in Itaituba, it was observed that even the women from the Northeastern Region, who generally are not very keen on gardening, have started to develop this activity more systematically. In PA-70, where the women generally have a strong tradition of gardening, the development of this activity, with an aim at commercialisation, is extremely restricted because of the difficulties in transportation.

C - Livestock

Even though in some families it is the men who are in charge of the care of livestock, in the majority of the cases it is the women who carry out this activity.

Basically, livestock activity consists of raising chickens, ducks, pigs and goats. Of the chickens and ducks, some are sold and some are kept for the production of eggs; goats are raised mainly for milk, although in some cases the animals are sold. The breeding of pigs has become such a lucrative activity that in some cases its commercialisation has been taken over by the men, and therefore is no longer considered by them as domestic production. It is still, however, the women who are mainly in charge of raising these animals.

Finally, it should be noted that the raising of cattle is basically a male task, but when the family owns only a few animals, the transformation of milk into cheese and butter is considered a part of the domestic production since these products are made and commercialised by women.
Although the cultivation of manioc is part of the agricultural production, its transformation into flour is part of the sphere of domestic production since this task is essentially executed by women and the peasants themselves do not consider it a part of "agricultural production".

The lack of seasonality in manioc harvesting allows the women to process it into flour all year round. With few deviations, the process of making manioc flour is as follows: after digging the tubers, they are placed in a stream or tank for two or three days. Then the roots are peeled and grated on a board or by machine. The resulting dough is placed in a press, of which there are several varieties in use among the peasants in the Amazonian Frontier. In one model, which is used mostly by settlers from the Southern Region, a vicelike device squeezes the dough contained in sacks. The families from the Northeast, however, place the grated manioc in a box lined with leaves; the weight of rocks or wood is then applied. It is also not uncommon among the Northeasterners to find the use of the sleeve-like "tipiti" (a kind of tube made out of jute) the traditional method employed by the native peasants to squeeze the liquid from the dough. After having been squeezed, the compact mass is then pushed through a sieve to remove large chunks of fiber. Finally, the dough is stirred with a paddle on a large iron griddle over a fire or stove for a couple of hours until it is dry. Among the families from the Northern and Northeastern Regions, the grated manioc is squeezed to obtain "tucupi", a tasty sauce, and "goma", a high quality manioc starch, both important components of the Amazonian cuisine.

The circular iron griddle is the only purchased instrument used by all the families who make manioc flour. A griddle two meters in diameter can be readily purchased in the Amazonian Frontier for 50,000 cruzeiros (approximately 80 US dollars). Some families, however, though only a few and those who are in a better economic condition possess, a gasoline-fueled grater which can be bought for approximately
such as bricks for the walls of the oven can be prepared from clay, and wood for fuel and the press, are also taken from the lot.

The process of making flour takes place in the "casa de farinha" (flour-making hut) which is located in the yard close to the house. Not all of the families interviewed have a flour-making hut and the equipment necessary for the process. Therefore, it is not uncommon for two or three families to transport their tubers to the "casa de farinha" belonging to a friendly family, where these families assist one another in processing the flour. Actually, it was observed that the "casa de farinha" promotes reciprocal working relationships and provides a great opportunity for social contact for the women.

Besides the activities listed above, others, such as the making of jute baskets, sewing, embroidery and cloth weaving on manual looms, also contribute to increasing the income provided by domestic production.

The organisation of work in domestic production is quite different from that of agricultural production. As I mentioned before, domestic production is basically carried out by women with the help of young children of both sexes, when both the women and children are not needed for agricultural production.

A mother may assume the command of the division and distribution of tasks regarding those activities that require a large number of labourers and simultaneous for their execution as in the case of processing flour. In general, however, the members involved in domestic production freely choose the activities they like and want to perform except for the young children whose tasks are determined by the mother.

The commercialization of domestic production is also a task for the mother, although she may receive help from her children, especially if they are adults. The produce is
normally sold on weekends, especially on Saturdays, at the nearest village or town. In PIC, the women who live in the Northern Branch generally go to Santarem, and those who live in the Transamazon and Southern branches tend to go to Itaituba or Ruropolis Presidente Medici. For the women settled in PA-70, Vila Abel Figueredo is the main commercialization centre, although occasionally, some women may go to Maraba. For those women in both settlements who live on, or in the vicinity of, the highway, the produce is transported to the commercial centre by bus or lifts from trucks which travel along these roads. However, for those women who live in remote areas (as is more frequently found in PA-70), the produce must first be transported to the highway either by pack animal or on the women's own backs.

At the centres of commercialization, the women generally know to whom or where to go to sell their produce. Those who go to Itaituba go to the "Feira de Frutas e Vegetais" where they may sell their products to the ordinary customers who come to the Feira. Those who go to Santarem, Ruropolis and Abel Figueredo, generally sell their produce to either the long-time owners of stalls in the open markets or to private clients within a network of customers gradually established by the women in the townships. This network is generally composed of families with whom the producer women may have some kind of kinship, compadrio or close friendship. Products such as chickens, eggs and fruit are usually sold to these private clients, while manioc flour, pigs, vegetables, etc. are mostly sold to the stall-owners. In both cases, the type of personal relationship existing between the producers and purchasers ensures that the commercialisation of the produce will be rapid and secure. That is, the women generally sell all the produce they have taken to the centre of commercialisation.

Regarding the economic importance of domestic production, Table 26 below presents a good illustration of this aspect, showing the participation of the cash provided by domestic production in the composition of the gross income of the
TABLE 26

Participation of Cash Deriving from Domestic Production in the Gross Income of the Families

<table>
<thead>
<tr>
<th>Participation of Domestic Production on the Total Gross Income (%)</th>
<th>Number of Families</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PA-76</td>
</tr>
<tr>
<td>1 - 10</td>
<td>16</td>
</tr>
<tr>
<td>11 - 20</td>
<td>14</td>
</tr>
<tr>
<td>21 - 30</td>
<td>15</td>
</tr>
<tr>
<td>31 - 50</td>
<td>8</td>
</tr>
<tr>
<td>Over 50</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>58</td>
</tr>
<tr>
<td></td>
<td>PIC</td>
</tr>
<tr>
<td></td>
<td>76</td>
</tr>
</tbody>
</table>

Finally, it seems pertinent to highlight some of the main factors which determine the level of domestic production among the families studied.

First, I should stress that being a female domain, domestic production is very much conditioned by the composition of the family unit according to sex. That is, the greater the number of female members, the greater the domestic production of the family.

The location of the lot is also an important factor. As a large part of domestic production consists of fruit and vegetables (both highly perishable products), rapid access to the highways and, consequently, to the market strongly determine the volume of domestic production of the family.

It was also observed that in PIC domestic production is much lower among those families who live in the townships than among those still living on their agricultural lot. The reason for this is that the small size of the lot in the township does not allow the women to develop the same volume of activities as they would if they were living on the
In PA-70, where there is a considerable difference in the size of the lots, an inverse relationship was observed between the size of the lot and the volume of domestic production. That is, the smaller the size of the lot, the greater the domestic production. This seems coherent since domestic production is composed of activities which do not require a great amount of land.

It is interesting to note that in PA-70 domestic production is also conditioned by the level of security that the family has over the land they occupy. Therefore, in those cases where the family is in danger of losing its lot at any moment, there is little motivation to utilize the entire family labour force in agricultural production or in crops which require longer periods for production. Consequently, domestic production has become a means of occupying female labour, as well as a means of guaranteeing the family’s survival. Thus, the lesser the security of the family over the land, the greater is its domestic production.

Finally, it was observed that domestic production tends to increase as the economic situation of the family improves. This, too, should not be considered as a surprise because, as mentioned before, the better the economic situation of the family the less the women work in agricultural production, therefore having more time to devote to domestic production.

2 - Wage Labour

In general authors involved in studies of rural communities tend to analyse peasants’ wage work on the basis of two main assumptions: the first is that wage labour constitutes a resource or strategy utilized by the peasants to supplement or increase the family income. In this case, wage labour tends to be occasional, mainly occurring at periods of less demand for labour within the family system of production. The second assumption is that wage labour is a sine qua non condition for the reproduction or survival of the peasants as
Analysing the use of hiring out labour among the families included in my sample, I found that 75% of the families settled in PIC and 66% of those settled in PA-70 had incorporated cash derived from sale of labour power in the total income of the family during the period from June-82 to June-83.

However, a better understanding of the importance of wage labour, as well as the applicability of the two assumptions cited above among these families, requires a more detailed analysis. For this reason I have decided to take as a starting point the analysis of three aspects: 1) Under what conditions and in what circumstances the sale of labour occurs; 2) The proportion of hired out labour in relation to that utilized within the family's own system of production; and 3) The proportion of income provided by wage labour in the composition of the family's total income.

1. Regarding the first aspect, it was found that hiring out labour occurs in the following situations:

First, when the potential family labour power exceeds the work required on the lot. This can either be because the family has a large number of workers (generally more than 6), or as happens in PA-70, the lot is too small to absorb all of the family labour power. Whatever the reason, the sale of labor power due to the existence of redundant workers was found in 28 families in PIC and in 20 in PA-70. For these families wage labour power can be considered a supplement or as a strategy to increase their total income, but not necessarily as a form of guaranteeing their existence as autonomous producers. Generally, the older sons are those who work as wage labourers, which they do occasionally and near their homes. It was also observed that only part of the money they obtain is incorporated to the family's total income. The other part they keep for themselves for their own personal purposes.

Second, hiring out labour may occur when the total income of
the family's survival until the next harvest. This was the situation found in 46 families in PIC and 32 in PA-70. In such cases, wage labour offers the possibility of immediate cash relief, thus guaranteeing the family's ability to carry out the tasks required for the production on their own lots. For these families, the sale of labour can be considered as occasional as it is not every year that they have to use this strategy in order to keep their own production system. In these cases, only one or two members of the family are free to engage in wage labour, while the others generally have to increase their physical effort in the work on the lot in order to compensate for the deficiency caused by the absence of those who are working elsewhere as hired labourers. Even though the workers do not consider themselves as permanent wage labourers, some of them actually have to sell their labour all year round.

Finally, hiring out labour takes place when, for whatever reason, the income provided by the activities on its own lot is insufficient to guarantee the family's survival, or is less than can be earned from working as wage labourers. This is the situation faced by 9 families in PIC and 14 in PA-70. In these cases, all the adult workers were engaged in permanent wage labour. The mother, and sometimes an adult daughter, however, remain at home in order to carry out the domestic production, which in these cases is fundamental for the survival of the family.

Although, as mentioned before, there is a great demand for hired labour within the area of PIC and around the PA-70 settlement, those who are forced to engage in wage labour prefer to do so outside these limits, where they can earn better wages. In general, the wage labourers in PIC work for the great agro-industrial enterprises that have been set up in that Region, while those of PA-70 commonly work for the companies building roads and in the hydro-electric plants. In neither settlement do the wage labourers experience any difficulty in finding employment at any time of the year.
2. Regarding the second, aspect Table 27 presents a good illustration of the proportion of the family labour power that is utilized as wage labour.

<table>
<thead>
<tr>
<th>Percentage</th>
<th>No. of Families</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PA-70</td>
</tr>
<tr>
<td>1 - 10</td>
<td>24</td>
</tr>
<tr>
<td>11 20</td>
<td>18</td>
</tr>
<tr>
<td>21 - 30</td>
<td>10</td>
</tr>
<tr>
<td>31 - 50</td>
<td>9</td>
</tr>
<tr>
<td>Over 50</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 27 shows that the families settled in PIC use proportionally less of their potential labour power as wage labour than those settled in PA-70. The difference between the two groups is especially great if one takes into account that, while in PIC only 23% of the families hire out more than 20% of their labour force, in PA-70 it was found that 36% of the families actually use more than 20% of their potential labour force as wage labour.

3. The part played by wage labour in the composition of family income is shown in Table 28. There the data suggest that the cash from wage labour is not merely a supplement for the majority of the families, but a substantial part of income, especially in PA-70 where 22% of the families have
TABLE 28
Proportion of Income Provided by Wage Labour
Composition of the Families' Total Income

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Number of Families</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PA-70</td>
</tr>
<tr>
<td>1 - 10</td>
<td>10</td>
</tr>
<tr>
<td>11 - 20</td>
<td>18</td>
</tr>
<tr>
<td>21 - 30</td>
<td>16</td>
</tr>
<tr>
<td>31 - 50</td>
<td>14</td>
</tr>
<tr>
<td>Over 50</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>66</td>
</tr>
</tbody>
</table>

3 - Prospecting

The discovery of gold fields in the Amazonian Region has constituted an attractive alternative source of income for the peasants settled nearby. This is what happens to the families settled in the PA-70 Region, which is very close to the gold mines of Serra Pelada, and to the families settled in PIC, located near the gold mines of the Tapajos River.

The enormous attraction of prospecting for the peasants from PA-70 and PIC can be explained in terms of the following facts:

a) The daily wages in the mines are high compared to other employment; for example, in 1983, an agricultural day labourer could earn no more than 1,500 cruzeiros a day, whereas in the gold mines he could earn three or four thousand cruzeiros per day. Furthermore, as the peasants themselves stress, work in the mines is relatively free from supervision, in contrast to that on farms with the employer as overseer. Actually, it was following the peasants' own
advice that the work in gold mines was not included in the scope of "wage labour" analysed in the previous item of this thesis. For the peasants there is a great difference between working as a wage labourer as described before, and working in the gold mines.

b) The element of luck inherent in the mining activity holds out a possibility of sudden wealth that is not present for the farmers or for those engaged in wage labour.

The work in the gold mines is generally developed under two different conditions: first, if the peasant can afford it, he buys the necessary tools and establishes himself in the gold mine as an independent prospector. Under this condition, he has to pay only 10% of the total value of his production to the owner of the land where the gold mine is located.

The second condition, in which the majority of the peasants are engaged, is to work for a "fornecedor" (supplier) under the system of "meia-praca". The "fornecedor" supplies this worker his basic food rations, as well as the tools and equipment which are generally more sophisticated than those which an independent prospector can afford to have. For these supplies the "fornecedor" in return receives half of the production after paying off the 10% to the owner of the land. If there is more than one worker the other half is divided equally among the work crew.

A significant number of families are engaged in prospecting. In PIC, 31 families stated that at least one member had worked in the gold mines during the year 82/83. In PA-70 this number was only 20, although a greater number of families had more than one member who had worked as a prospector.

Despite its attraction and the number of people involved in this activity, prospecting has not contributed greatly to the composition of the family's total income as shown in Table 29.
In addition, Table 29 also shows how ambiguous the role played by prospecting as an alternative source of income for the peasants is. On the one hand, one can see that for two families in PA-70 and three in PIC, prospecting did not provide any increase in their total income. In other words, it means that the time the members of these families spent in prospecting was actually wasted. On the other hand, four families in PA-70 and one in PIC had half or more of their total income provided for by their prospecting activities.

Many positive and negative aspects of prospecting can be found in the statements made by the peasants. For example, there are cases where the head of the family went prospecting for months, leaving the running of the lot to wives and small children. Therefore, the production on the lot ceased and the money earned in prospecting was not enough to ensure the family’s subsistence the following year. As a result, those who lived in PA-70 were considering leaving the region and those who lived in PIC had become entangled in debt and were threatened with the loss of their lots. Another negative aspect of prospecting is related to health. Due to the appalling working conditions in the mines, a large number of workers contract serious diseases, particularly malaria. Consequently, a large part of the money earned in prospecting
is actually spent on medical treatment. However, prospecting sometimes may provide some improvements for the families. This is the case of five families in PIC who stated that with the money they earned in the gold mines they could pay their loans to the bank and improve their level of production. In PA-70 three families said they had begun a prosperous cattle-raising activity with the money obtained from prospecting activities.

4 - Hunting and Fishing

Among the peasants, both hunting and fishing activities are much more unusual than one would expect from a population settled in the Amazonian Region. The reasons for this could be either the lack of skill of the peasants (which is not surprising since they come from a different environment) or because the fauna around the settlements have already become scarce. Despite all that, and although in a small proportion, hunting and fishing sometimes do provide some income for the families. From hunting, the peasants can obtain some income by selling the meat of such animals as tapir, capybaras (those are more likely to be found in PA-70), cutia, armadilloes, deer and land turtles. However, it is the selling of wildcat pelts that provides a greater income for the hunters. One single pelt is generally sold for ten thousand cruzeiros (approximately 15 US dollars) and those families with better hunters can catch one or two wildcats each month.

Regarding fishing, only those peasants who have an easy access to the townships and, therefore, are able to commercialise their produce quickly before it perishes, may derive some income from this activity. Besides the problem of transportation, the lack of larger fish species in the small streams that cut through the area of the PIC and PA-70 settlements does not make this activity very attractive for the peasants. Fishing for their own consumption or for sale,
the peasants use nothing more than a simple hook-and-line as equipment, although in PA-70 some families were found making use of fishing spears and some types of fish traps. But even with these more sophisticated methods, the fishing activity still provides a very small income for the families.

Summary and Conclusions

The first section of this chapter gave initially an account of the amount of labour power the families need to carry out their productive system in order to guarantee their condition as small farm producers in the Amazonian Region. Then an detailed analysis was given of how of how the families, relying basically on their own labour power, organize and make use of such labour including the strategies utilized to face shortage of labour, such as co-operative labour and hired labour. The analysis also showed that given the conditions of the Amazonian Region the families which for whatever reasons face a shortage of labour have necessarily to make use of co-operative labour in order to survive.

The second section focused on the utilization of family labour in activities which are not part of the agricultural production. This investigation specially brought out the importance of the so called "Domestic Production" which, probably due to its being developed by women, is in general ignored in studies concerned with an economic analysis of peasant households. Other forms of activities which are not directed related to the agricultural production were also analysed, such as prospecting and wage labour. Regarding wage labour it became clear that a great number of families rely on this activity in order to maintain their hopes of reaching the condition of independent small farm producers.
1 - Taking into account calculations made by peasants from both settlements, it was possible to conclude that each adult member of a family works on an average 8 to 9 hours per day approximately 180 days per year. These numbers, however, can be much higher if the family has less than 4 adult members or if some of the adults work as hired labourers rather than working on their own lots.

2 - Recent feminists analysis have demonstrated that the assessment of women's aptness for some tasks is often based in gender ideology rather than biological capacity. Although I support such an assumption it is out of the scope of this thesis to go further in such a discussion. Nevertheless, I suggest for those who are concerned with such subject, to consult the following works: Yong, Wolkowitz and McCullagh-1984; Oakley-1972; Rubin-1975; Fieldl-1975.

3 - On the question that domestic tasks should be performed by women, see Mackintosh-1984; Rogers-1980; McIntosh-1978.

4 - See note no. 2 above.

5 - Although the assumptions made by Murdock (1937) and Brown (1970) have been often critized by recent feminist writters, in this specifical case I am referring to such assumptions can perfectly be applied.

6 - Interesting analyses regarding the participation of women on the commercialization of the production and their access to the household monetary income is found in Maher-1984 and Belghiti-1971.

7 - It is important to make clear that what I mean for "domestic production" it is not the same as "domestic mode of production" an concept developed by Marshall Sahlins (1972).

8 - Projeto Rondon is a program subsidized by the Federal Government by which students from some Brazilian universities may elect to spend a month in the interior of the country in order to help deprived communities.

9 - A more detailed analysis of the conditions of work on the
gold mines of the Amazonian Frontier and the way the peasants perceive it can be found in Schmink (1982).
Conditions of Reproduction and Differentiation

By reproduction I mean the establishment of conditions by the families for the recreation from one round of production to another of the social and technical elements of production and of the relations among them.

As was shown in the previous chapters, in the case of the Amazonian frontier, among the essential conditions for the reproduction of household production, two require money to be established, that is: the renew of instruments of work, such as tools, etc. and the maintenance of the capacity of working of the labourers. The renew of the instruments of work is made through the purchase of new equipment on the market. To restore the labour capacity the families rely partially on the consumption of goods produced by themselves and partially on the consumption of goods that they do not produce and therefore have to be bought on the market.

In other words the families are not self-sufficient and need monetary income since it is through money that they acquire from other sectors of the society part of the essential means for their reproduction.

In the following sections I examine how this monetary income is generated and the costs of acquiring the means of production which the families can not provide for by themselves.

Income-generating Activities

In making the calculations which aim at guaranteeing their reproduction, the families may find themselves in one of the following situations: 1) The family’s disposable resources (basically land and labour) are sufficient to guarantee its reproduction; when it is the case, the families tend, as much as, possible to utilize these resources in agricultural activities.
2) The family's resources are not sufficient to guarantee its reproduction. Insufficiency of resources can be due to either a shortage of labour or shortage of land. In the case of a shortage of labour the family generally opts for agricultural production since the insufficiency of labour can be solved through the use of mutual aid and other forms of labour co-operation. If, however, there is an insufficiency of land, the families have no alternative but to utilize their labour power in off-farm activities such as wage labour or prospecting in order to obtain the necessary income for their subsistence.

3) When the families have more than sufficient resources for their reproduction they tend to utilize these extra resources in what they interpret to be the most profitable way. That is, in activities that provide high monetary returns. For example, extra land can be used either to increase the scale of production of those products with higher commercial value or through the introduction of cattle. The same principle is applied in the case of extra labour. It can be utilized to increase the scale of agricultural production or in prospecting, domestic production and wage labour. The use of extra resources therefore aims exclusively at making a profit and at increasing the surplus income.

It seems pertinent now to make a more detailed analysis of the combination of diverse income-generating activities in order to identify which activities constitute the central elements in the running of the household economy.

For descriptive purposes I have decided to divide the activities that generate monetary income into farm activities and off-farm activities. In farm activities are included agricultural production which is divided in perennial crops (A), "white" or annual crops (B), cattle (C) and domestic production (D). In off-farm activities are included prospecting (F), hunting and fishing (G) and sale of labour power (I). I shall remind the reader that detailed description of each of the mentioned activities were made in the previous chapters (IX and X) of this thesis.
Tables 30 and 31 show the levels of gross income of the families and the contribution of each activity to the composition of the gross income in both the PIC and PA-70 settlements. Gross income is defined as the amount of money obtained by the families through both farm and off-farm activities. Such a definition does not include the value corresponding to the goods produced for the family's own consumption. It might also be remembered that I am dealing only with the gross income generated during the year 82/83.

**TABLE 30**

**Composition of Gross Income by Source**

<table>
<thead>
<tr>
<th>Number of Families</th>
<th>Levels of Income&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Sources of Income (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>15</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>40</td>
<td>8</td>
<td>38</td>
</tr>
<tr>
<td>26</td>
<td>14</td>
<td>29</td>
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<tr>
<td>7</td>
<td>3</td>
<td>31</td>
</tr>
<tr>
<td>3</td>
<td>26</td>
<td>20</td>
</tr>
<tr>
<td>9</td>
<td>57</td>
<td>1</td>
</tr>
</tbody>
</table>

<sup>a</sup> Levels of income means the amount of money in cruzeiro, the Brazilian currency.

Even though the data shown in Table 30, and in Table 31 that follows, provide a clear picture of the role played by each activity in the composition of gross income, some further comments may be useful for a better understanding of the income-generating activities performed by the families.
TABLE 31
Composition of Gross Income by Source
PA-70

<table>
<thead>
<tr>
<th>Number of Families</th>
<th>Levels of Incomea</th>
<th>Sources of Income (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>36</td>
<td>26</td>
<td>2</td>
</tr>
<tr>
<td>29</td>
<td>41</td>
<td>12</td>
</tr>
<tr>
<td>12</td>
<td>37</td>
<td>21</td>
</tr>
<tr>
<td>13</td>
<td>43</td>
<td>14</td>
</tr>
<tr>
<td>4</td>
<td>45</td>
<td>51</td>
</tr>
</tbody>
</table>

a) Levels of income means the amount of money in cruzeiro, the Brazilian currency.

The first important aspect to be extracted from the above two tables is that, except for 6 families in PA-70 (first line of Table 31) all the families have farm activities as their main source of income. Examining further field-data, it was found that those six families suffer from a shortage of land as their plots are smaller than 10 hectares.

In brief the two Tables show that most families rely predominantly on farm activities for the generation of the necessary income for their reproduction. Actually, the importance of farm activities can be further identified by the fact that in both groups the participation of off-farm activities tends to decrease as the level of income of the families increases. That is, the greater the chance the families have of utilizing their resources in farm activities, the greater their chances of increasing their monetary income.

It is also interesting to look at the role played by each farm activity in the composition of gross income. Taking first the case of perennial crops (A) which are present only
in PIC (for reasons already explained in Chapter IX) Table 30 shows that the participation of this activity in the composition of the income tends to increase as the total income increases. This indicates the profitability of perennial crops and suggests that those families who have the opportunity to dedicate themselves intensively to this activity are very likely to be placed among those with high income.

Similar conclusion can be reached in the case of cattle (C) where again the extent of participation tends to be more significant as the level of income increases in both settlements.

It seems pertinent to stress that although perennial crops and cattle are undoubtedly the most profitable farm activities an intensive dedication to these activities is beyond the simple individual decision of the family. The development of perennial crops, as I mentioned in Chapter IX, depends on the existence of special programmes subsidized by the government which in turn establish conditions such as quality of soils, previous experience, etc. that not all the families can meet. In the case of cattle the families need both large land holdings and surplus income to initiate their activity. It is however important to note that the need for extensive land ownership for the development of cattle production is to some extent relative. It is true that in PA-70 this activity constitutes an important element in the composition of the gross income only among those families with plots of more than 100 hectares. In PIC, however, where the plots are not bigger than 100 hectares, around 9 families placed among those with a higher gross income have an average of 30% of their income provided for by cattle raising.

Moving on to the analysis of annual or "white crops" (B) Tables 30 and 31 show that this activity provides monetary income for nearly all of the families. Actually it was found that only 3 families in PIC (two of them with a very low
The fact that the annual crops provide income for almost all the families indicates the concern of the families in growing crops that are basic to their diet. In other words it shows how keen the families are in guaranteeing, primarily, their self-sufficiency in food production.

Tables 30 and 31 also show that while in PA-70 the participation of the annual crop production increases as the total gross income increases, in PIC it does not. In PIC the importance of annual crops increases up to a certain level of total gross income but decreases when the total gross income reaches high levels. That is, in PIC the importance of annual crops is counterbalanced by a much more significant participation of perennial crops.

In short, one can conclude that although perennial crops are more profitable, the impossibility for some families to dedicate themselves to this activity does not prevent them (as shown in the case of PA-70) from reaching high income levels through the production of annual crops.

Regarding Domestic Production (D) (and here I shall remind the reader that I am talking about that part of Domestic Production that is commercialized), Tables 30 and 31 show that the income provided by this activity tends, in both groups, to decrease as the total gross income increases. In other words this domestic production by itself does not contribute to the families' achieving high levels of income. However, the fact that a large number of families get a substantial part of their income (in PIC 15 families get more than 50% and in PA-70 42 families get around 30%) from this activity implies that domestic production is undoubtedly an essential activity for a great number of families to achieve the minimal level of income necessary for their reproduction.

As far as off-farm activities are concerned Tables 30 and 31 show the absence or relative unimportance of prospecting (F) and hunting and fishing (H) in the composition of the total
gross income for the majority of families. This suggests that the families rely on these activities only as a way of supplementing the income from other sources and not as a principle means of livelihood.

In contrast the sale of labour power (I) has quite a different role. It provides income for almost all the families excluding only those with the highest level of gross income. However although the contribution of sale of labour power is very high among those families with a low level of gross income, its significance tends to decrease as the families' income increases. This indicates that the sale of labour can not in itself produce high income levels. However, it is important to stress that a relatively large number of families (although less in PIC than in PA-70) rely on wages to constitute the necessary income for their reproduction.

In brief the description contained in this section shows that in both settlements farm activities constitute the main source of income for the majority of the families: 67% for the families settled in PA-70 and 73% for the families settled in PIC. Of the farm activities, annual crops are the main source of income, followed by perennial crops and cattle raising in PIC and by domestic production and cattle raising in PA-70. Of the off-farm activities the sale of labour power is undoubtedly the activity that contributes most to the gross income of the families in both settlements, but it is significantly more important in PA-70 than in PIC.

The analysis of gross income has given a detailed picture of how the resources available to the families generate the necessary monetary income for their reproduction and the role played by each activity in this process. However to verify the level or standard of reproduction that such gross income permits I shall first examine the monetary costs that must be met by the families to renew their means of production.
I stated in the beginning of this chapter that the process of reproduction of the household in the PIC and PA-70 settlements implies basically the renewal of the instruments of production and the restoration of the working capacity of the labourers. The costs of renewal of both instruments of work and capacity to work may, however, vary from one family to another according to their level or scale of production and to their demographic composition. Besides this, the costs of renewal the work capacity may also vary according to the cultural and social perception of each family regarding personal consumption.

Given this, I concluded that instead of attempting to calculate the monetary costs of reproduction faced by each family, it would be more logical and precise to calculate the minimal annual monetary costs faced by all households to meet their subsistence requirements. In doing so, I could avoid the inherent difficulties in calculating costs for different scales of production, demographic composition and different cultural and social perceptions of personal consumption found among the families from both settlements.

To calculate the minimum annual monetary costs faced by the families to meet their subsistence needs, I used the following procedure: first of all, I selected those families with the least number of members, that is, two members families, which account for 40 families in all. From these 40 families I chose 20, (12 settled in PIC and 8 settled in PA-70) which, according to a previous survey, presented a very low scale of production. Then, through the use of questionnaires and personal interviews, I was able to calculate the average costs that these families faced to meet their subsistence needs and, consequently, to renew their means of production for the following year. I should make clear that during the interviews I tried to encourage the families to specify what were supposed to be really essential
personal consumption. In doing so, I intended to minimize as much as possible, social and cultural influences that could be present, even when talking about what is supposed to be the minimal requirements needed for the subsistence of an household. By such procedure, I have no doubt that I developed a methodology that makes it possible, with a large margin of precision, to identify the monetary costs that each household has to face to renew the means of production to meet their subsistence requirements for the following year. Table 32 below shows the list of goods that all the families have to acquire and their respective costs.

TABLE 32

Minimal expenditures for the families to meet their subsistence requirements

<table>
<thead>
<tr>
<th>Goods to be acquired</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working tools (axes, hoes, etc.)</td>
<td>35,000</td>
</tr>
<tr>
<td>Processed foodstuffs (oil, sugar, salt, etc.)</td>
<td>50,000</td>
</tr>
<tr>
<td>Fuel (kerosene, candles, etc.)</td>
<td>20,000</td>
</tr>
<tr>
<td>Household equipment</td>
<td>20,000</td>
</tr>
<tr>
<td>Clothing</td>
<td>20,000</td>
</tr>
<tr>
<td>Medicine</td>
<td>45,000</td>
</tr>
<tr>
<td>Transportation</td>
<td>15,000</td>
</tr>
</tbody>
</table>

**TOTAL** = 210,000

* a - not including cases of serious illness.  
* b - This total covers the expenditures for two persons.

As showing in Table 32, any one family needs at least Cr$ 210,000 in cash income to meet the costs of reproduction or renewal of their means of production for the following year. I would, however, remind the reader that given the diversity of the scale of production shown in the analysis of gross income, and given the fact that the majority of the families have more than two members, it is very likely that this amount of money, that is, Cr$210,000 falls below what the majority of the families really need to maintain a level of
production similar to the previous year. Therefore, this amount of money should not be taken as what the families need to maintain their level of production but as what they need to renew the means of production in order to meet their subsistence needs and keeping up the household both as a unit of production and consumption.

Having identified the different income-generating activities and the minimal costs for the renewal of the means of production, I now have the necessary elements to make a more precise analysis of the real conditions of household reproduction and to discuss the issue of differentiation.

**Differentiation**

There has been much debate in recent years on the question of the relationship between capitalism and on the peasantry. More specifically, the main issue is: what effect can have market relationship established between peasants and capitalism over the small farm producers. To summarized, all the scholars involved in such debates argue that the market has a disintegrating effect on "natural" economies. The disagreement comes to light, however, when the issue is to stand whether or not such disintegrating effect can threats the existence of the peasantry while a social group.

Reviewing briefly what was already discussed in Chapter I, two basic opinions have predominated over this issue. The first is taken by those who see peasants as part of the a non-capitalist mode of production (for some writers a specific mode) coexisting with, and articulated to capitalism. For some authors who accept such position, the market rewards new and progressive farmers, that is, commercialization is the solution to the poverty of peasant farmers (Schultz.T-1964) For others, commercialization enables the peasantry to persist, while neither impoverishing nor enriching the peasant farmer (Amin and Vergopoulos-1974; Owen.W-1966).
Those who share the above positions tend to generalize and see the peasantry as a more or less persistent and homogenous social group in class terms. For them, the empirical evidences of inequalities among peasants are taken simply as an index for the stratification of the peasants. The inequalities, they argue, are in general temporary, and can be attributed to circumstantial conditions such as, for example, the demographic cycle of the household. These two cited positions are criticized by some writers (Cox-1983) who argue that a generalisation of the characteristics of the "average" peasant household obscures the nature of relations between households and the degree of differentiation these relations produce.

The second position is sustained by those who assert that the market brings about changes within the peasantry and such changes are actually part of an inevitable long-term process of capitalist development, so that peasants are necessarily undergoing class differentiation (Lenin-1954; Deere and de Janvry-1981); that is, "the development of an expropriated wage-labouring class and a rich peasant (kulak) class, which in hiring wage labour becomes capitalist in orientation and in production logic" (Smith, C.-1984).

Accepting the existence of a process of class differentiation into separate classes of capitalism within peasant societies, the issue for the defenders of such a position is, therefore, how to verify their assumptions by relating them to empirical material on the differentiation of the peasantry.

This task is particularly difficult, if not impossible, if one takes into account that, according to the Marxist definition, social class is partly based on non-economic variables that are difficult to measure, such as the distinction made between "class-in-itself" and "class-for-itself, denoting a class with its own "class consciousness" and autonomous political organisation (Silva-1984). These difficulties have led the Marxist authors concerned with showing social differentiation among peasants
(implicitly abstract from the non-economic dimensions of a Marxist concept of social classes) to propose a classification based on possibly measurable criteria\textsuperscript{6}. As a result indexes like income, value of means of production, extent of use of hired labour, productivity efficiency of farm organisation, etc. have been used to show social differentiation among peasants (Williams-1976).

For some authors, however, these indexes show nothing more than differences between strata and not the relationship between the households at different economic levels and the degree of differentiation these relations produce. As Cox points out

"at best these indexes are indirect indicators. They cannot directly measure relations involving the expropriation of surplus from direct producers nor can they show whether capital is being accumulated by the expropriators" (Cox-1983:214).

A significant attempt to go beyond the simple stratification of the peasants was made by Patnaik. She claims that the labour ratio "E" resulting from the difference between "the use of outside labour in relation to the use of family labour is the most reliable index of categorizing peasants" (Patnaik-1976:84)\textsuperscript{7}. As Shanin points out, Patnaik's method is significant because the labour exploitation index is doubtless central to any attempt to understand the structure and the dynamics of capitalism within peasant agriculture (Shanin-1980). However, Shanin himself stresses that Patnaik's method lacks a workable common denominator to quantify ratios of exploitation (Shanin-1980:87).

Actually, to identify the ratio of exploitation can be a very difficult task since empirical evidence, including the case of the Amazonian frontier peasants, shows that the use of hired labour among peasants does not necessarily characterize an exploitation or extraction of surplus. As Bernstein stresses

"Evidence of the exchange of labour-power is not
sufficient to establish class differentiation. On one hand, it is not uncommon to find peasant households which both sell and buy labour-power for different purposes and at different moments in the annual cycle of economic activity. On the other hand, the exchange of labour-power may be concealed by forms of payment other than money-wages, and may be disguised by ostensibly 'traditional' forms of cooperation and reciprocity" ( Bernstein-1977:68).

In an attempt to take a step forward on the issue of how to identify differentiation among peasants Bernstein claims that there is a distinction between differentiation in the sociological sense and differentiation in the materialist sense. According to him, differentiation in the sociological sense, that is, based on indicators of inequality such as income, consumption of use-values or "demographic variation" as stressed by Chayanov, does not pose class in terms of the social relations of production. In contrast, he argues differentiation "in the materialist sense is tied to the conditions in which wealth becomes capital, when it is not consumed individually but productively through investment in means of production" (Bernstein-1979:430).

From this assumption Bernstein then claims that peasants can be classified as: a) "poor" - those who are unable to reproduce themselves due to a lack of means of production and therefore have to exchange their labour-power on a regular basis; b) "middle", those who have sufficient means to reproduce themselves but in specific relations with other forms of production (which can include the selling of labour power); c) "rich", those who are able to accumulate sufficiently to invest in production through either purchase of superior means of production or labour-power.

Much of the theoretical debate on the effects of market on the peasant societies and upon differentiation has been conducted at a very high level of abstraction which has often served to obscure or over-simplify the complexity of the social structure of peasant societies and also ignore the
diversity of social formations in which the peasants are embedded. Such debate, however, is not without its uses for the discussion of broad theoretical and historical issues. Besides this, it is important to stress that whatever is the position taken by the scholars involved in such debate, it seems that their main concern is whether or not the peasantry would persist within a capitalist context. In this sense, this debate is useful for the present study since the main proposal of this thesis is also to verify whether or not the newly arrived migrants will be able to maintain their condition as small farmer producers.

To be brief, such a debate can be useful while providing some theoretical concepts and a methodological approach that allows us to verify two basic aspects: first, the existence of inequalities among the peasants; and second, to what extent such inequalities represent only circumstantial conditions without major consequences regarding the persistence of the peasantry or if these inequalities actually represent an undergoing process of social differentiation among the peasantry, the outcome of which can affect the expansion of a small farming system within the Amazonian frontier.

### Differentiation among the Peasantry in the Amazonian Frontier

The descriptions in the previous chapters showed that there is a great amount of inequality among the peasants. Such inequalities can be either the cause or effect of the type of settlement developed, the social and cultural background of the families, the demographic composition of the households, the division of labour, the way that the system of production is organized, etc. However, to evaluate or establish the weight of such inequalities, in the short run, over the possibilities of the peasants to maintain their condition as small farmer producers, is a difficult task and requires a methodology which, in my point of view, has not yet been developed. In spite of this, to face such a challenge is not
out of the scope of this thesis. In fact an attempt is made in the last section of this chapter to evaluate the importance of such inequalities on the whole process of expansion of the peasantry in the Amazonian frontier.

At the moment, I am concerned with identifying inequalities that, besides being measurables, can also objectively present the real conditions of the peasants to keep their position as small farm producers. For this I make use of the basic idea of Bernstein on differentiation, but with some alterations. As previously mentioned, Bernstein makes a distinction between differentiation in the sociological sense and differentiation in the materialistic sense. Such a distinction, however, seems applicable only at a very high level of abstraction and with proposals of identifying long range social transformations. Besides this, at the empirical level it seems difficult, if not impossible, to identify differentiation in the materialistic sense without first identifying differentiation in the sociological sense. In my point of view, it is possible to use some indicators of inequality which, if they do not clearly show differentiation in the materialistic sense as claimed by Bernstein, nevertheless provide the basic elements to assert that the differentiation found may or may not lead to significant social changes. Based on empirical grounds, I assert that in the case of the peasantry of the Amazonian Frontier, an indicator of inequality related to the conditions of reproduction fit not only the ideas presented by Bernstein, but also give empirical consistency to the alterations I made to his ideas.

The previous section showed the process and basic conditions that are required for the peasants in the Amazonian frontier to reach a level of simple reproduction, that is, the renewal of the instruments of work and the restoration of the capacity to work to meet their needs of subsistence. The level or scale of this capacity, hereafter called level of reproduction, is what will define the degree of differentiation among the peasants.
To identify the level of reproduction, I took into account that the peasants are not self-sufficient and their reproduction also relies on acquisition of goods from the market. It implies that besides produce for their own consumption, they have to produce a surplus which, once exchanged on the market, generates the amount of money they need to supply their subsistence needs. So, it is the available money that will determine at what level of reproduction the family is placed. Then, by analysing the conditions that determine this level of reproduction, considering also those inequalities or aspects of difficult quantitative measurement, it will be possible to assert to what extent the chosen indicator of differentiation represents not only a static picture of the peasantry, but also the dynamic of the social transformations that have been taking place among the peasantry on the Amazonian frontier.

To identify the available money, it is necessary to take into account the analysis made in the beginning of this chapter where the different activities that generate the gross income of the families were identified and where the monetary costs the families have to face to acquire goods from the market that supply their needs of subsistence were also considered.

I shall remind the reader, however, that I am analyzing the possibilities of reproduction of the families for the next round; that is, whether or not the families at the end of the year 82/83 will have enough money to face the costs of renewal of the means of production for the subsequent year. Therefore, instead of gross income, which includes only the inflow of money obtained by the families, it seems more appropriate to use net income, which means the difference between the amount of money each family obtained and expended. In other words, net income indicates the exact amount of money that each family possesses to cover the expenses of production and consumption during the subsequent year, that is, during the year 83/84.
To calculate net income, I included in the earnings all the money obtained through the activities used to calculate gross income plus the amount of money obtained from credit (E). Included in expenses were the entire amount of money spent on: purchase of tools (H), repayment of loans (J), payment of wages (K) and additional expenses (L). Thus, net income was calculated as:

\[(A + B + C + D + E + F + G + I) - (H + J + K + L)\]

Table 33 shows the frequency distribution of families according to net income.

<table>
<thead>
<tr>
<th>Net Income (1,000 cruzeiros)</th>
<th>Number of Families</th>
<th>PA-70</th>
<th>PIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 100</td>
<td>1</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>101 - 200</td>
<td>11</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>201 - 300</td>
<td>22</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>301 - 400</td>
<td>21</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>401 - 500</td>
<td>17</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>501 - 600</td>
<td>6</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>601 - 700</td>
<td>8</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>701 - 800</td>
<td>2</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>801 - 900</td>
<td>5</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>901 - 1,000</td>
<td>4</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Over 1,000</td>
<td>3</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td><strong>100</strong></td>
<td><strong>110</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Once knowing the net income of the families and the minimum amount of money (that is Cr$210,000) they need in order to replace the means of production for the next round I therefore have the basic elements for classifying the households according to their capacity or level of
For the purpose of description, the families are classified in the following categories: those with a net income of up to Cr$200,000 comprise what I hereafter call lower stratum. Those with a net income between Cr$201,000 and Cr$500,000 comprise the middle stratum and those with a net income above Cr$500,000 comprise the upper stratum. I shall make clear to the reader that for making this classification I took into account the data contained in Table 32 of this chapter where an amount of Cr$ 210,00 was placed as the minimal a family would need to cover its costs of reproduction. Given this, I now move on to analyze and evaluate the conditions of reproduction of the families placed in the three different strata.

The Lower Stratum

With a net income below Cr$200,000 the families placed in the lower stratum are technically unable to meet the necessary conditions required for maintaining the integrity of the household as a unit of production and consumption. According to the peasants' statements, when finding themselves in the lower stratum, the families generally make one of the following decisions: a) move away definitely after selling their lots; b) leave their lots provisionally and go to another place trying to obtain the money necessary to begin their farm activities again or c) simply decide to remain on their lots. Let us see the implications of each of these possible decisions. It is very difficult to predict precisely what happens to those who decide to move away. Based, however, on statements made by families who were facing this decision or who had taken this decision before, it was possible to get the most common steps taken by the families who decide to sell their plots. The great majority of them tend to use the money they obtained by selling their plots to buy a new plot of land in other parts of the Amazonian frontier where they foresee the possibility of
better conditions to carry on their farm activities. Some of them however move to urban areas and try to establish themselves as small traders or simply engage in different activities.

Those who leave their plots temporarily in general engage in wage labour or small trader business in one of the nearby towns. During this time they try to accumulate the necessary amount of money that will permit them to establish themselves again as farm producers. The decision of leaving the plots temporarily has however some risks. In PIC, being an official settlement, an absence of two or three years can cause the families to lose their rights over the plots according to the rules established by the government. In PA-70, unless the families leave someone on their plots (which is not always possible) their absence for a period of more than six months, means doubtless the loss of their plots. The decision taken by some families to remain on their plots generally implies that they will engage in wage labour on a permanent basis and that it will come to constitute their main source of income. The activities that might continue to be performed on the plot become no more than a supplement to their subsistence and are generally performed by those members who can not sell their labour such as the mother and young children. Taking into account the low income offered by wage labour as shown in Tables 30 and 31 of this chapter, one concludes that it is very difficult for these families to engage again in farm production on their own plots. Under such conditions it is very likely that these families will not be able to maintain the ownership of their plots for very long. Whatever the decision taken by these families it is clear that the household as a unit of production is undermined, at least temporarily.

The Middle Stratum

Those families with a net income somewhere between 210,000 and 500,000 cruzeiros, are able to meet the minimum needs for their physical and social reproduction. That is, they can
renew the means of production and, in general, are able to maintain at least the same level of production they had the previous year. To maintain this condition, some of them may have to rely on occasional wage labour (especially those with a high ratio of non-productive members) but farm activities are still their main source of income.

I shall claim however, that the present situation of some of these families, especially those at the bottom of the stratum, is very much at risk. That is, any extra constraint, such as for example disease or a bad harvest, can drive them to the lower stratum. Those situated at the top of the middle stratum can, eventually, meet extra expenses or constraints in their production system without necessarily being pushed into the lower stratum. They may also have access to credit which eventually permits them to deal with extra expenses, hiring labour or even to slightly increase their level of production. In general, however, it is very unlikely given their income that these families will be able to get enough credit or hire the necessary amount of labour to allow them to make any new investment and to experience upward social and economic mobility in the near future. For the time being however, the families of the middle stratum are in a position to keep their plots of land and to extract from it the main resources for their subsistence although at a simple reproduction level.

The Upper Stratum

Those families with a net income above Cr$500,000 are, relatively, in a very comfortable position. They can meet extra expenses for disease or fortuitous decrease in their level of production system without necessarily losing their present economic status. Their net income surplus is immediately identified through a higher level of consumption expenses, making their standard of living (especially in relation to housing) significantly superior to the one enjoyed by families in the other stratum. Even though the majority of the families included in the upper stratum may
still rely on family labour some of them have already been using hired labour on a scale greater than that provided by the members of the family. Besides using their surplus income to raise their standard of living and replace family labour (especially that provided by women) by hired labour, these families, especially those situated at the top of the stratum, do aim at and actually have been making new investments.

Opportunities for new investments vary from one settlement to another. In both PIC and PA-70 however, for those who are just beginning to accumulate a surplus, the main investment opportunity may be that of becoming a "broker" between the local families and the urban market. By opening a small shop in one of the villages or buying a truck they start to buy the commodities produced by the other families and sell it to the middlemen or on the urban market. At the same time they buy goods on the market to sell to the local families. Since the surplus product would initially be small, these new petty traders tend to maintain their own farm activities as well. For this reason a new division of family labour is established. For example, the women can be engaged in the shop activities, or one of the sons can be engaged in the trucking activity while the other members of the family may continue to farm.

Some of these new petty traders have been able to increase their trade activities to the extent that farm activities are no longer their main source of income. Having reached this stage it is not rare that a significant number of them become middlemen themselves although keeping their plots of land and their farm activities. However, as middlemen their profits are no longer realized simply through circulation, i.e., through fluctuations in market price. Instead their main source of profits starts to come from a variety of advantageous partnerships which they establish especially with those families whose reproduction as a household is threatened. The most common of these partnerships is to provide loans for the families in difficult economic situation at a much higher rate of interest or to buy the
families produce "on the leaf" a system already described in Chapter IX.

In neither settlement, however are trade activities always a good investment for generating surplus net income. Actually, the majority of the families who do so tend to lose money with this activity and it is very common that after a short time in trading they return to their farm activities with less money than they had before they started trading.

In PIC, another opportunity for investment for those who have accumulated some surplus is to engage in the production of perennial or export products such as cocoa, coffee and black pepper. However, even though these activities provide an income higher than the so-called "white crops" (such as rice, beans, manioc, etc.) as shown in Tables 30 and 31 in this chapter, many families with a surplus income are reluctant to involve themselves with these products. Their main argument is that to make any profit they have to make an investment greater than their surplus income could provide. Consequently they have to make use of bank credit which generally does not include any kind of assurance. Since these "export products" have unpredictable price fluctuations and are more vulnerable to the effects of natural hazards, the families see a great risk in getting involved in this kind of activity. Nevertheless, besides trading, since they represent the only real opportunity to invest their surplus income, an increasing number of families have been growing "export products". Except for a few cases, the investment in these activities has been relatively profitable for the families. The profits have generally been used to increase the scale of production, basically through the use of hired labour which is partially supplied by the families placed in the lower stratum. Even though some of the families with surplus income would like to invest in livestock and some actually do try to, this kind of investment is extremely limited due to the difficulties in expanding the areas of the plots within the limits of the project.

By contrast, in PA-70, the accumulated surplus net income is
mainly invested in buying lands for the purpose of cattle ranching. The majority of these buyers however do not have enough capital to make an immediate investment in planting pasture grass and in buying cattle. Thus, they generally tend to engage in the system of "trocada pela forma" (roughly "exchange for the formation of pasture") which I have already described in Chapter IX. Through this system they avoid the costs of planting grass while increasing their scale of agricultural production in order to accumulate enough money to buy cattle. The increase in the level of production naturally implies an increase in the use of hired labour which is supplied either by members of the families in the lower stratum or, more usually, by wage labourers residing in the nearby villages.

The analysis made in this section has shown that there is a process of economic inequality or differentiation currently under way among the peasants settled in the PIC and PA-70 settlements.

This process however is still in its formative stage and has been constrained by two basic factors: a) the utilization of different strategies, especially regarding the use of labour, has given the majority of the families a chance to sustain a level of reproduction that enables them to keep their plots of land and therefore to resist full proletarianization. Consequently there is not yet a class of "free" wage labourers a "sine qua non" condition for the existence of the extraction of surplus value which would increase the process of differentiation. b) even though the differences in net income seem to be great when they are taken as an index of the level of reproduction, they actually lose their significance in view of the difficulties to make new investments (reflecting the low level of capitalist development in the region) that could provide a significant increase in the scale of production. This aspect became very clear in the analysis of the chances of new investments reserved for the families placed in the upper stratum. In this sense the differentiation found among the peasantry of
the Amazonian frontier can not yet taken as being "differentiation in the materialistic sense" as defined by Bersntein.

Finally, I shall stress that the differences in net income analyzed in this section aim basically to show the level of reproduction of the families for the next round and as an "indicator of tendencies" for the immediately subsequent rounds. To evaluate to what extent such tendencies will predominate in the long run, it is necessary, as proposed in the framework chosen for the development of this thesis, to consider other elements or aspects whose influence on the actual level of reproduction of the families is not yet very explicit. In other words, such analysis aimed to identify some aspects that, given their influence on the actual economic performance of the families, may change the tendencies suggested by the actual degree of differentiation based on the level of reproduction of the families. After that it will then be possible to assert with greater precision whether or not the methodology utilized to identify the degree of differentiation among the peasantry, through the actual level of reproduction, can actually be considered as a predictor of the possibilities of expansion of the small farming system in the Amazonian frontier.

Predicting the Economic Performance of Families

In this section I attempt to identify some elements that were not included in the identification of the level of reproduction, but according to the theoretical approach of this thesis they may have influence over the economic performance of the families and, consequently, over the level of reproduction the household can reach on a short or long term range.

Some of the variables that I have chosen to analyze are implicitly or explicitly hypothesized in the course of this thesis or cited in other studies about the Amazonian frontier.
as exerting an influence on the economic situation of the families. Others were chosen for having been widely cited in studies of peasantry as important elements in the process of differentiation.

The factors I chosen can be divided into two categories: factors related to the background of the families, and factors related to the conditions and organization of production. In the first category I included place of origin, previous situation and number of migrations. In the second category I included number of working members, size of the family, size of the plot. Besides these variables, I decided to include in this analysis three others, that is, hiring of labour, sale of labour and credit. Although these variables have already been included in the calculation of gross and net income, I understand that they deserve further consideration given their importance in the literature regarding differentiation among peasantry. This being so, I believe that a statistical analysis will help to evaluate their real role over the actual performance of the peasantry in the Amazonian frontier.

I have presented below an explanation of why all the variables cited above were chosen for analysis.

1 - Place of Origin (R). In Part Two of this thesis I mentioned that the place of origin of the families has been taken by both official agencies and academic researchers as an indicator for predicting the economic performance of small farmers on the Amazonian frontier. In short, the official agencies support the view that the families from the Southern Region would be likely to be more "successful" in the Amazonian Frontier than the families from other regions of the country, due to their higher level of education and better technological knowledge. In contrast, authors such as Moran (1980), claim that the families from the Northern Region are those with the greatest likelihood of successfully adapting to frontier living and increasing farm output under a given set of constraints.
when I analyzed the previous situation of the families in Chapter VI of this thesis, I placed them in the following categories a) Owners, b) tenant farmers and sharecroppers, c) free rural laboureres d) urban workers. In this analysis I argue that the owners, having higher capital assets on their arrival in the Amazonian frontier, would be able to proceed quickly with land preparation and other income-generating activities. The influence of the previous employment of the families in their economic performance in the Amazonian Frontier is also shared by Moran (1979) who argues that the tenant farmers and rural workers tend to be less successful due to their lack of managerial skills and personal initiative.

3 - Number of Migrations (T) - The frequency of past migrations by the families is held by authors such as Moran (1979) and Becker and Machado (1982) to be an indicator of the differential economic performance of families settled in the Amazonian Frontier. In brief these authors argue that the families with unstable rural residence have low-skill agricultural experience and generally have been tied to the landowner/patron by symbiotic master-client bonds. As a result of this kind of relationship, families with such a background demonstrate less initiative and ability in farm management. By contrast, however, I claim that previous experience with migration gives the families more ability to cope with the new physical and social environment of the frontier areas and consequently allow them to improve their economic situation more quickly than those families who have had no migration experience at all.

4 - Size of the plot (U) - In a context of low technology as is the case in the Amazonian frontier, the amount of land is immediately taken as an important factor in the improvement of the scale of production of the peasants. Inequality in the distribution of holdings in terms of size is also cited in a large number of studies on peasantry (Patnaik-1976; Harrison-1977; Reinhardt-1983) as an indicator that a process
of economic differentiation among the peasants has been taking place. Such interpretations however can not be totally accepted for a number of reasons. One of them, for example, is that the size of the farm is not by itself an adequate indicator of the economic strength of the unit. Large farms may be in disrepair while small farms may be highly productive.

5 - **Number of working members** (M), 6 - **Size of the family** (P). The choice of these two variables was made basically in order to verify to what extent the demographic composition of the family can influence its economic performance. The importance of the demographic composition of the families was stressed by Chayanov (1966) and since then widely considered by his followers in studies of differentiation among peasants. The basic assumption of this approach is that the higher the ratio between the total number of members of the family and the number of working members, the greater the possibility of the family to be in good economic situation.

7 - **Use of hired labour** (K); 8 - **Sale of labour** (I). Both variables have been widely taken, especially by Marxist authors (Patnaik-1979; Deere and de Janvry-1978; Silva-1984), to explain economic differentiation among peasants. The basic argument of such authors is that the use of hired labour permits families to extract surplus value and therefore accumulate capital. In contrast, by selling their labour, a family will be in an exploited condition and therefore unable to make any accumulation and therefore placed in the lower economic stratum.

8 - **Access to credit** (E) - Many studies on peasantry (Williams-1976; Hunt-1979; Roseberry-1976) emphasize the importance of credit in the process of economic differentiation among peasants. In the Amazonian frontier the role played by credit in the economic performance of the families have been motive for controversy. Authors such as Bunker (1977) and Wood and Schmink (1978), have claimed that
credit is in general has led a large number of families to 
bankruptcy. During the field work, however, I found that 
credit is usually stressed by the peasants as an important 
element in upward economic mobility.

To verify the extent to which the variables described above 
determine the economic situation of the families in the PIC 
and PA-70 settlements I made use of the statistical model of 
multiple regression in which R, T, S, U, M, P, I, K and E 
are the independent variables and net income the dependent 
variable\(^{10}\).

The multiple regression model coefficients show the 
additional effect of each independent variable on the 
dependent variable. In other words, this additional effect 
shows the change in net income that could hypothetically be 
 Obtained with a change in each of the independent 
variables\(^{11}\).

Results

In the first round of the statistical analysis it was found 
that changes in the variables Place of Origin (R), Previous 
Employment (S) and Size of the Plot (U) have no additional 
effect on net income and therefore they were eliminated from 
the subsequent analysis.

Before continuing however with the statistical analysis I 
shall add some more information that may reinforce the 
statistical evidence of no direct influence of the three 
eliminated variables on net income.

Table 34 below shows a relatively homogeneous distribution of 
the families according to their place of origin and their 
present economic situation.
TABLE 34
Distribution of the Families According to Stratum
and Place of Origin

<table>
<thead>
<tr>
<th>Place of Origin</th>
<th>Lower</th>
<th>Middle</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>43%</td>
<td>38%</td>
<td>19%</td>
</tr>
<tr>
<td>Northeast</td>
<td>17%</td>
<td>45%</td>
<td>38%</td>
</tr>
<tr>
<td>Central-South</td>
<td>22%</td>
<td>56%</td>
<td>22%</td>
</tr>
<tr>
<td>South</td>
<td>17%</td>
<td>50%</td>
<td>33%</td>
</tr>
</tbody>
</table>

Further, Table 34 also shows that the two previously mentioned assumptions, that is, better economic performance of the families from the Southern Region over those from the Northeastern Region, as claimed by official agencies, and better economic condition shared by the families from the Northern Region as claimed by Moran (1980) have no empirical consistency. On the contrary, the data in Table 34 show that although not significant, the families from the Northeastern Region actually have a better economic position than those from the South, and the families from the Northern Region are relatively worse-off than all the others.

In brief, statistical tests and Table 34 both suggest that place of origin as a criterion for predicting economic performance of the families in the Amazonian frontier has no empirical foundation.

Regarding Previous Employment, both the statistical tests and Table 35 below contradict my own hypothesis suggesting that owners would be in a better economic situation than the others.
The figures in Table 35 however give rise to some further comments. One can see that in both settlements the owners constitute the group with the highest percentage of families placed in the upper stratum and the smallest percentage placed in the low stratum. This suggests that if the condition of ownership alone is not sufficient to predict the level of net income of the families, it is very likely that other aspects linked to this condition, (such as, for example, the amount of money available to the families on their arrival) certainly do affect the economic position of these families.

The statistical evidence suggesting that there is no direct influence as to the size of the plot on the net income is also reinforced by Table 36 below.
Percentual distribution of the families according to stratum and size of plot

<table>
<thead>
<tr>
<th>Stratum</th>
<th>Size of the plot (Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 - 20</td>
</tr>
<tr>
<td>Low</td>
<td>66%</td>
</tr>
<tr>
<td>Middle</td>
<td>38%</td>
</tr>
<tr>
<td>Upper</td>
<td>4%</td>
</tr>
</tbody>
</table>

a - The families settled in PIC were excluded from this analysis due to the fact that almost all of them have the same size of plots.

The fact that 17% of the families with large plots are placed in the low stratum is clear evidence that having a large plot does not necessarily mean that the family will consequently be placed among those with high net income. However, if the size of the plot does not in itself have a direct effect on the economic situation of the families it certainly has a strong indirect effect. This argument is supported by the figures contained in Table 36 which show that while few families (4%) with small plots are placed in the upper stratum, a great majority (68%) of the families with large plots are placed in the upper stratum. In other words it permits us to conclude that although not having direct effect on net income, size of the plot is a pre-condition for other factors that directly determine the economic situation of the families.

Returning to the statistical analysis, Table 37 shows the regression coefficients corresponding to those variables that have a significant direct effect on the economic situation of the families.
The interpretation of the results in Table 37 is as follows. If the value of a regression variable is increased by one unit, then its corresponding regression coefficient shows the corresponding increase in the family’s net income, measured in 1,000 cruzeiros. The t-test can show how reliable the interpretation of the coefficient is; that is to say, the degree to which the conclusion can be expected to hold for the two settlements in general, and not just for the families included in the sample. The t-test is defined by \( t = \frac{\text{coefficient}}{\text{standard error}} \). If the value of \( t \) is between -2 and +2, the interpretation of the corresponding coefficient is not reliable, though otherwise it is. In the following I look at each variable in turn.

The effect of Number of Migrations (T) in both settlements is that for each additional migration, the net income is increased by about 50,000 cruzeiros. In other words, this means that instead of having a negative effect on the economic situation of the family as claimed by Moran (1980) and Becker & Machado (1982), the number of migrations may actually allow the families to achieve higher levels of net income. This conclusion confirms my own argument in which I
claim that those families with more experience of migration tend to be in a relatively better economic situation.

Regarding Number of Family Workers (M) the statistical tests reveal that there is an increase of Cr$38,000 in net income for each additional worker. In other words this means that the higher the number of workers the higher the net income of the family.

The coefficients found for Size of the Family (P) show that this variable has a positive effect on net income but it is only in PA-70 that this effect is really significant and reliable. In this settlement each additional family member gives an increase in net income of 22,000 cruzeiros while in PIC the increase would not be much over 5,000 cruzeiros.

The results found for both Number of Family Workers and Size of the Family permits us to conclude that Chayanov's theory is not quite suitable to be applied and thereby predict the economic differentiation among the peasants in the Amazonian Frontier. While Chayanov's theory claims that the economic situation of the family is determined by the ratio between number of workers and number of consumers, in the case of the Amazonian frontier the validity of this ratio is undermined by the fact that the total number of consumers, independent of the number of workers, has a positive effect on net income.

Moving on to the role played by Use of Hired Labour (K) Table 37 shows the different effects of this variable in PA-70 and PIC. In PA-70 each 1,000 cruzeiros spent on hired labour increases the net income of the family by 930 cruzeiros. That is, neither a profit nor a loss is made by using hired labour in this settlement. By contrast, in PIC each 1,000 cruzeiros spent on hired labour increases the net income of the family by only 280 cruzeiros; that is, the families actually lose money by using hired labour. These results suggest that at least up to date the use of hired labour is not yet a factor of differentiation among the families settled in PA-70 and
The effect of Sale of Labour (I) on net income is also quite different for the two settlements. The regression coefficients show that for each 1,000 cruzeiros earned through wage labour the net income increases by 950 cruzeiros in PIC but only 20 cruzeiros in PA-70. This means that in PIC the value corresponding to the total amount of money earned through wage labour is actually added to the net income of the family. In other words it indicates that the sale of labour at PIC is no better nor worse than any other income-generating activity developed by the families, and therefore cannot be taken in itself as affecting negatively the economic condition of the families. In PA-70 however, the situation is quite different. For example, hypothetically taking a situation in which two families share the same conditions (that is, they are equal in all the variables that compose the statistical model) except for the fact that one sells labour and the other does not. The statistical results indicate that the net income of these two families will be the same. This permits us to conclude that the sale of labour only occurs in PA-70 when the families have no other alternative by which to gain the necessary monetary income for their reproduction. Therefore, the sale of labour power, at least in PA-70, can be taken as an indicator that the families who make use of such an activity are actually in bad economic situation and lack the possibility of making any increase in their net income.

The effect of Credit (E) on net income also shows a pronounced difference between the two settlements. In PA-70 each 1,000 cruzeiros obtained in credit increases the net income by 1,010 cruzeiros. Thus, besides the fact that only a few in this settlement actually have access to credit, those who do are not able to derive any significant profit from it. In PIC, however, each 1,000 cruzeiros obtained by credit increases the net income by 1,693 cruzeiros. Therefore, at least in PIC, the possibility of obtaining credit can be
taken as a suitable indicator for predicting whether or not the families will be able to achieve an increase in their net income.

In summarizing the last section of this chapter, it became clear that except for a number of migrations, none of the variables related to the background of the families seems to have a direct effect on their economic performance. The fact, however, that the number of migrations can have such a direct effect, reinforces the argument that the analysis of the economic performance and/or differentiation among peasants should not be limited to purely economic or structural approaches but should also include aspects that consider the peasants as active actors, with their own social and cultural characteristics that make them able to create strategies to face economic and structural constraints in order to maintain their condition as small farmer producers.

Next, it is important to stress that the statistical analysis confirmed what was already shown with the calculation of gross and net income; that is, the variable use of hired labour, sale of labour and access to credit do have influence on the economic performance of the families, although in different degrees for each settlement. Especially significant is the positive influence of credit on the economic performance of the families settled in PIC.

Conclusions

The analysis made in this last section showed that there was no new aspect that was not considered in the previous sections of this chapter, that could change, at least at short term, the actual social and economic conditions of the families from both the PIC and PA-70 settlements. This being so, the methodology utilized in this chapter to identify differentiation through the level of reproduction seems correct. The analysis made of each stratum and the possibilities of mobility each family has according to the
stratum in which it is placed also seems correct.

The conclusion that one can arrive at from this chapter is that there is a process of differentiation underway among the peasantry in the Amazonian frontier. However, the dynamics of this process due either to structural constraints (such as the level of capitalist development of the region) or due to strategies utilized by the peasants themselves will not, at least at a short term, attain a level of differentiation in the materialist sense, that is, the peasants will be divided into proletariat and bourgeoisie. The present tendencies actually show that, although few families may experience some economic upthrust and few may lose their condition as independent small farm producers, the majority already settled in the region plus those that are arriving will have possibilities to maintain their condition as independent households and, consequently, expanding the small farming system in the Region.
1 - Although the definition of reproduction requires a distinction between "simple" and "expanded" reproduction I shall make clear that unless I make such a distinction I will always be referring to simple reproduction.

2 - Although Domestic Production includes activities which are not necessarily linked to agricultural production I decided to include this variable in farm-activities since all the activities of Domestic Production is mainly performed within the limits of the plot.

3 - Although in Chapter IX I say that some families in PIC have more than 100 hectares, none of these are included in the nine that I am referring to in this analysis.

4 - Such observation is necessary, since as mentioned in Chapter X, a great part of the Domestic Production is consumed by the families themselves.

5 - Naturally the social and cultural influences are important; however they are difficult to quantify and this specific analysis is dealing basically with quantitative approach.

6 - Such a procedure can be justified as the Marxist theory recognises that social classes are defined principally, though not exclusively, by their economic relationship to the means of production and the disposition of the surplus product. (Silva-1984).

7 - See Partnaik (1976) for a detailed explanation of her method.

8 - In "additional expenses" are included expenditures with medicine, trips, and ceremonial activities.

9 - This is so because, according to the "informal rules" existing in areas of spontaneous colonization, a plot of land is considered to be free to be occupied by squatters when it has left by its former occupants for more than six months.
10 - The variables included in the statistical model have the following definition:
- **Place of Origin** (R) - refers to the Region where the family came from; that is, Northern, Northeastern, Southern and Central-Southern Regions.
- **Number of Migrations** (T) - number of times the family moved before settling in PIC or PA-70.
- **Previous Employment** (S) - refers to which of the following categories the family belonged to immediately prior to settling in PIC or PA-70: 1) Owner; 2) Tenant-farmer and sharecropper; 3) free rural labourer; 4) urban worker.
- **Size of the Plot** (U) - the area of the lot, in hectares, which the family possesses in PIC or PA-70.
- **Number of Workers** (M) - number of members of the family age over 12 years of age.
- **Size of the Family** (P) - total number of members of the family.
- **Sale of Labour Power** (I) - calculated using the amount of money earned by working as wage labour.
- **Use of Hired Labour** (K) - amount of money spent in paying hired labourers.
- **Credit** (E) - total amount of money obtained through bank credit.

11 - A detailed explanation of the process involved in multiple regression can be found in Cohen and Holliday (1982).
This thesis has charted the peasants or small farm producers’ attempts to establish themselves in the Amazonian frontier. Specifically, I was looking for the answer to two questions, that is: is the process of frontier expansion in the Amazon leading to the formation of a viable small farming system? or, does the frontier expansion in the Amazon embody the reproduction of the same typical phenomena of other expansion frontiers in the country? That is, after the pioneering period, the peasants are either expropriated from their lands or engaged in a process of social differentiation with the result that many have to move away and only a few can actually keep their lands and their position as independent agricultural producers.

In order to answer these questions I initially made a review (Chapter I) of the main theoretical approaches concerned with peasants or small farm producers within a capitalist society plus a review of the sociological and anthropological studies made so far about peasants in the Amazonian frontier. Based on this, I then formulated a framework which would guide the development of the present thesis.

Such framework suggests that the pattern of socioeconomic change in the Amazonian frontier is not solely a function of the changing reproductive requirements of the predominant mode of production (structural needs). Instead it is argued that the persistence and/or expansion of a small farming system in the Amazonian frontier depends also on the role of human agency, that is, on the strategies and aggregate actions of individuals and groups developed by the peasants themselves along with socioeconomic structures.

To apply such a framework to the Amazon case two levels of analysis were required: one involving an investigation of the social formation on which the peasants of the Amazonian frontier are inserted in order to understand and evaluate the
main constraints (found in the dominant mode of production including its political and ideological levels) placed on the expansion of the peasantry.

The second level involves an investigation of the peasant household's own internal characteristics, revealing their strategies and tactics to overcome all sort of constraints that the peasant families have to face once in the frontier area. Such analysis implies the consideration of the peasants as active agents, having social and cultural specificities acquired from specific socio and cultural formation, and being able to face not only structural constraints but also to interfere in the rhythm or pattern of the social transformations that may occur in the process of frontier expansion.

The first level of analysis was the concern of chapters II, III and IV included in Part One of this thesis.

Chapter II examined the process of land occupation in Brazil since early times. Such study showed that the process of frontier expansion was the main way to incorporate new lands to a productive system and the small farm producers had a ground-breaking role in this process. However, from the moment these newly occupied areas became attractive for the capitalist sectors - which had support from the State that by means of legislation, imposed constraints on the expansion of peasants forms of production - the peasants were invariably expelled from such areas. Nevertheless, once evicted from one frontier area, the peasants had the opportunity to go ever further to not yet occupied areas where the process of frontier expansion was repeated once again. This continuous process of frontier expansion represented the only possibility of social reproduction of the peasantry and it was only possible, however, due to the abundance of free public lands, then available, in the Brazilian territory.

Chapter III dealt with the history of the Amazonian Region in itself. Such analysis showed how this Region, up to 1940,
remained peripheral to the developments occurring in other regions of Brazil. It became also clear that its cyclical economy, based on the extraction of raw materials for international markets, did not create the necessary conditions for the establishment and expansion of a small farming system.

The integration of the Amazonian Region to the national economy and its present consequences was the main objective of Chapter IV. Such an investigation brought to light the political, economic and social conditions that forced the incorporation of this region into the process of frontier expansion. Special attention was given to the government’s participation through its programmes of directed colonization and tax incentives for large-scale capitalist enterprises; to the increased influx of landless migrants to the region looking for land to work with or without government support; and finally, to the conflicts and violence that have marked the process of occupation and the struggle for land in the region during the last fifteen years.

The contents of this chapter made clear that the process of frontier expansion in the Amazon differs substantially from those earlier occurred in Brazil. Basically, such differences are found in the following aspects:

1) The unprecedent and direct intervention of the Government. The occupation of the Amazon represented a question of national security and to carry out the human occupation of this Region was a priority of the Government then in power. To concretized such objective the Government adopted an political posture that incentived both, landless rural workers and capitalists enterprises to come to the Region. It resulted in: a) the rapid pace in which the process of occupation and its conflicts took place resulting in that some stages, usually found in the early processess of frontier expansion, are either supressed or contain particular characteristics leading to an unprecedent outcome, especially regarding the expansion of the small farming
system; b) the simultaneous presence of peasant farmers and capitalist enterprises incited faster than any other early experience, the antagonism between these two social agents.

2) To invest in the Amazon, especially with the generous tax incentives from the Government, represented an attractive alternative for the reproduction and expansion of the capital then reaching a high level of accumulation in the Southeastern part of Brazil. It not only attracted a large number of capitalist enterprises but also made them to get involved in what turned to be the most lucrative activity, that is, land speculation which led to a premature process of "closing frontier" for the landless rural workers.

3 - The expansion of the Amazonian frontier represented more than an "escape valve" that has happened in earlier processes. Since the Amazon Region constitutes the last frontier to be occupied within the Brazilian territory, the possibilities of the small farmers going further as occurred in the earlier frontier expansion processes are more limited if not impossible.

The three above chapters showed that the social formation in which the several processes of frontier expansion developed, is characterized by the predominance of the capitalist mode of production in which forms not totally capitalist, as the peasants forms of production, have emerged and suppressed according to the structural needs of the capitalist mode of production. In the case of the Amazon, however, such pattern has peculiarities which does not allow us to assert that the outcome of the process of frontier expansion in this Region will be similar to those occurred earlier in other parts of the country and which fit the structural requirements of the dominant mode of production.

To make more explicit the above assumption I stand that the first aspect to be considered is the presence of the large capitalist estates in the process of occupation which are greatly supported by the State. However, if on the one hand this makes easily their access to the process of frontier
acts, which, given the country's economic and political instability, do not assure them total security. Under such conditions it is very much probable that the large capitalists estates will adopt new strategies and forms of action in order to guarantee their interest which, at the end, is the structural requirements for the reproduction of the dominant mode of production.

The second aspect is related to the peasants themselves. It was shown that for being the last available frontier area in the country, the peasants have no other alternative for their reproduction than to stay in the Region. It implies that in the Amazonian case, the possibilities of an expansion of small farming system, is not only conditioned to the structural needs of the dominant mode of production but also to the way the peasants reacts when faced by the structural constraints to the establishment and expansion of peasants forms of production.

The second level of analysis proposed by the framework is an attempt to bring to light how the peasants act and to make an evaluation of their possibilities of keeping up their condition as small farm producers despite the constraints placed by the structural needs of the dominant mode of production on the expansion of the small farming system.

In order to reach such an objective I developed in Part II and III of this thesis a wide investigation over the peasants themselves and over the strategies and tactics more often used by them in order to maintain their condition as small farm producers.

In Part Two, I concentrated on an ethnographical investigation aiming at bringing to light who actually are these newly emerged peasants in the Amazonian frontier.

Taking two groups of peasants, (one settled in the region under the sponsorship of the Government "PIC" and the other settled on its own "PA-70") I began the ethnographical
analysis (Chapter V) by examining the place where the two settlements are located and how the settling process took place.

Regarding location, both groups have faced serious difficulties to reach urban and commercial centres due the lack of transportation infrastructure although those settled under the government sponsorship have less problems. As far as access to land is concerned, those families settled under the government sponsorship had no problem at all receiving one plot of 100 hectares each. In turn, on the spontaneous occupation that took place in PA-70, the process of finding land for occupation was developed under serious threats by landgrabbers and by a large influx of migrants into a relatively small area. Although some of the families could count on areas larger than 100 hectares, around 35% of them have now less than 30 hectares.

It is also interesting to note the type of relationship established among the families during the first period of settlement. While in PA-70 the pattern usually found in traditional rural communities was reproduced (such as the mutual-aid and solidarity among the families), in PIC it was not. The reasons for this - as it was later on confirmed, were either the result of the urb-rural model conceived for the Directed Colonization Projects and/or due to the different cultural and social back-grounds of the families which is more accentuated in PIC.

An analysis of the background of the families was the concern of Chapter VI. Four different aspects of the families’ backgrounds were considered. Initially, attempting to identify the cultural diversities, I made an inventory of their places of origin as a form of identifying the existence of subcultures. While in PA-70 the great majority of the families belonged to the same subculture, in PIC it was not the case. All the main subcultures existing in Brazil are present at PIC. The effects of such a cultural diversity between the two groups are evaluated in Chapter VIII.

Another aspect of the families’ background taken into account
was their previous employment. The analysis showed that the two settlements do not differ substantially in this respect. Both settlements have families which used to be landowners, tenants, sharecroppers, landless rural workers or urban workers. A brief description of each of these categories was made, including some possible advantages that one or another category could have in the process of settlement in the Amazonian frontier. A final evaluation of these possible advantages, however, was left for Chapter XI.

The migration history of the families was another concern of Chapter VI. Regarding to this, it was found that all the families from both settlements had migrated at least once, before settling in the Amazonian Region. In the PA-70 settlement, however, the incidence of migration was much higher than in PIC. Although some implications of this fact on the process of settlement were considered in this chapter, the real importance of such an aspect on the economic performance of the peasants was the concern of Chapter XI.

Finally, Chapter VI gave an account of the reasons that made the peasants migrate to the Amazonian Region. It was found that it varies mainly according to the previous employment of the families. For example, while the former landowners were aiming at not only to recuperate the condition of independent producers but also to attain a scale of production greater than they had had before, the other categories were basically searching for a piece of land by means of which they could guarantee their small farm producers condition.

Chapter VII attempts to throw some light on how these newly arrived peasants coped with the physical and social environment of the rain forest. Three aspects were considered: housing, food intake and health problems. Again the two groups of peasants faced very similar constraints and also used similar strategies to overcome the problems. All the families had adapted to a new pattern of housing, food intake and faced new and unknown health problems. It seems pertinent, however, to stress that the families which came from the Northeastern Region had a slightly easier adaptation
Chapter VIII deals with the institutional and social way of life of the peasants in these newly formed communities. Several aspects were considered, such as the family structure, kinship system, religion, education and social interaction. Besides the simple description of such aspects, which in itself is important from the ethnographical point of view, the analysis also showed that the conditions found in the Amazonian frontier area can reinforce, modify, or even destroy, some aspects of the social and moral patterns brought along by the families and usually found in traditional rural communities throughout Brazil. It was noted, for example, that the family structure in the frontier areas presents a much more opened and flexible hierarchical pattern on which all the members of the family have relevant role. Kinship system is another aspect that in the frontier areas tend to be reinforced rather then to dilute as one could expect at the first moment. Finally, it was observed that the social interaction within a settlement is greatly linked to the cultural similarities existing among the families. It explains, at least in part, the lower level of social interaction existing in PIC where the cultural diversity is higher than in PA-70.

Part Three is basically concerned with the productive system, conditions of reproduction and differentiation among the peasants.

An account of part of the means of production and how the peasants organize and utilize the available resources in their productive system was given in Chapter IX. Initially the availability of land was considered. PIC, due to its being a settlement sponsored by the Government, has been keeping a very homogenous distribution of land. All the families have at least a 100-hectare lot. Around 10% of the families, however, by taking advantage of the looseness of
the government regulations, have managed to obtain more than one 100-hectare lot.

By contrast in PA-70, a spontaneous settlement, the distribution of land is very diversified. Around 50% of the families possess plots with an area equal or smaller than 50 hectares. However, 29% of the families possess plots equal or larger than 100 hectares.

Regarding the use of land it was found that in both settlements the great majority of families do it mainly for the cultivation of the so-called "white crops", that is, for rice, beans, manioc and corn which constitute the base of their alimentation. Parallel to the cultivation of "white crops", around 15% of the families settled in PIC have been developing the cultivation of perennial crops such as cocoa, coffee and black-pepper. In PA-70 those families with plots larger than 100 hectares utilize their land mainly for pasture, the raising of cattle or exploitation of timber.

The agricultural process of production lies basically on the slash-and-burn method and the instruments of work are still very primitive, being labour, therefore, the main input.

Commercialization of the products is a difficult matter for the families settled in either settlement. But in PA-70 it is yet worse due to lack of side-roads and means of transport to commercial centres. Access to credit is basically restricted to the families settled in PIC and this even in a very limited way.

Chapter X deals with the availability and use of labour. An inventory of the family labour showed that 31% of the families settled in PIC and 39% of those settled in PA-70 have only two adult workers ("adults" being those over 12 years of age). Taking into account the peasants' own statement that it is necessary to have at least 4 workers to carry out a minimum scale of agricultural production, thereby assuring the subsistence of one family, one concludes that a great number of families are in a permanent stage labour shortage.
When there is a shortage of family labour the families then use a range of mutual-aid strategies such as "exchange of days" and mutirao. For those families who can afford it, the use of hired labour can also be a way to face up to the shortage of family labour. The use of hired labour, however, is still very insignificant in relation to the use of the family's own labour force. The use of non-family labour, either through mutual-aid or through hired labour, is strictly supplementary, but essential to the functioning of the household unit throughout the year. Thus, it does not negate the family unit of production, but does in fact make it possible.

As for the division of labour within the family it was shown that there is a certain technical division of labour by age and sex, but it is far from absolute.

Chapter X also gave an account of the use of labour in off-agricultural activities. Among these activities, domestic production and wage labour were those that mostly provide income for the household. Domestic production, defined as a group of several different activities performed basically by women and children, can be taken as a parallel system of production to the agricultural production and its participation in the total family income is very significant. Over 30% of the total income of 12% of the families settled in PIC and 13% families settled in PA-70 are provided by the commercialization of domestic production.

Regarding wage labour it was found that 75% of the families settled in PIC and 66% of the families settled in PA-70 make use of wage labour as a source of income. Actually, this activity contributes to more than 30% of the total income of 6% of the families settled in PIC and of 22% of the families settled in PA-70. However, except for a few cases, wage labour constitutes only a way of supplementing the family income, although, for several families, this supplement can be essential to maintain their condition as independent small farm producers. This leads us to conclude that wage labour is not antagonic to the peasant family unit, but, actually, one
The last chapter of this thesis (Chapter XI) is concerned with the analysis of the conditions of reproduction and with identifying the level of differentiation that may exist among the families settled in the PIC and PA-70 settlements.

I began the analysis making an inventory of all the income-generating activities and the participation of each activity in the composition of the families' total gross income. Following I made a survey of the minimal costs all the families have to face to renew their means and/or conditions of production. This last survey gave the minimal monetary income each family would need to renew its condition of production. In order to have a more precise idea of the present condition of the families I decided to make an inventory of all the expenditures the families had during the last agricultural year. Subtracting these expenditures from the gross income I obtained the net income. Having the available net income and the minimal costs the families had to face, I had then the necessary elements to determine the conditions or level of reproduction of the families. It was this level or scale of reproduction that I have used as a key element to identify the differentiation among the peasants.

Those families whose net income was insufficient to cover the minimal costs to renew the means and/or conditions of production were classified as belonging to the lower stratum. Their possibilities in remaining small farm producers in the region are very remote and they will probably either move away or engage definitely in a wage labour. Those families whose net income was more or less equal to the costs of production were classified as belonging to the middle stratum and will probably continue in the same situation the following year but without any chance of facing up to any extra expenses. Those families whose net income is above the costs of production compose the upper stratum and find themselves in a comfortable situation even having chances of increasing their scale of production the following year.
comparing the level of differentiation between the two groups it was found that 22% of the families in PIC and 12% of the families settled in PA-70 belonged to the lower stratum. In the middle stratum are included 17% of the families settled in PIC and 22% of the families settled in PA-70. The upper stratum is composed of 61% of the families settled in PIC and 66% of those settled in PA-70. These figures give us an interesting finding; that is, in the PA-70 settlement there are less families in the lower stratum and more in the upper stratum than in PIC. This shows that, as a whole, the spontaneous settlement has had a slightly better economic performance than the one sponsored by the Government.

The last section of Chapter XI was an attempt at identifying, through the use of statistical techniques, some factors or elements that, given their influence so far, could be taken as indicators for forecasting the families economic performance in the near future.

The results of this statistical analysis showed that factors such as place of origin, previous employment and size of the plots on their own have no influence at all on the net income and consequently on the process of differentiation. Variables such as number of migrations, number of family workers and size of the family have a slightly positive influence on net income. Wage labour contradictorily has a positive influence in PIC but this is not so in PA-70. Finally, the use of hired labour and access to credit highly increases the net income of the families.

Final Comments

This brief summary of the conclusions brought up by each chapter allow us, now, to answer the questions placed in the introduction of this thesis as well as to confirm the consistency of the hypotheses formulated at the beginning and throughout the development of this work.

Three are the factors that have been characterizing the development of the frontier expansion in the Amazon: the
political/ideological, economic and social. It suggests that the structural constraints that may obstruct or delay the expansion of the small farming system in this Region does depend on how these factors have been acting and interacting within the process of frontier expansion as a whole.

At the political/ideological level the Government has been showing its commitment with the capitalist interests, aiding the presence of capitalist enterprises and supporting them, even with a police force apparatus, in their struggle for land against the peasants or squatters. Given, however, the political instability of the Government, this support seems rather insecure for the capitalists estates.

At the economic level, the capitalists enterprises have been unable to create long term conditions for its expansion and consequently for the absorption of a proletariat constituted by the migrants who did not have access to land and by those peasants who may come to be evicted from their land.

At the social level, the important aspect to stress it is the fact that for being the last part of the national territory to be occupied, the Amazonian frontier represents the only alternative for the social reproduction of an increasing number of expropriated peasants and the possibility of survival for millions of landless rural workers spread throughout the country.

Such observations led us to two conclusions: first, the structural constraints, represented by the political/ideological and economic factors show some weaknesses as stressed out above; second, the social impasse represented by the need to transform the Amazon Region into a place for the social reproduction of the peasantry, makes extremelly difficult any attempt to avoid such a process. It is possible, therefore, to conclude that an expansion of the small farming system in the Amazon frontier seems to be inevitable.

It is important, however, to stress that the expansion of the small farming system in the Amazon Region is not only possible due to the weakness of the structural and economic constraints. The analyses of the peasants themselves showed
that the households' own internal dynamics, the strategies and tactics used by the families regarding the available resources and social organization have making them able to face the structural and economic factors and maintain their condition as independent small farm producers.

It is true that an incipient process of differentiation among the peasants is taking place in the Amazonian frontier what it is not surprising since they are inserted and are part of a capitalist mode of production. But, it is also true that a significant development of such a process would require deeper political and economic shifts which, for the time being seem far from happening. For example, as mentioned before, access to credit is basically the only way that some peasant families could move upwards socially and economically; and this is a political and economic factor. Furthermore, although the local economy is still weak, a variety of strategies utilized by the peasants, allows them a certain level of commercialization and income generating activities sufficient for their maintenance as small farm producers. This, consequently, implies that the great majority of the families can go on in an undifferentiated stage for quite a long time.

As a final statement I wish to call the attention for the opportunity that this thesis gives us to make a comparative evaluation of two types of settling, that is, one sponsored by the Government and another developed spontaneously. A comparison of these two types of settlements was not an objective of this thesis. The decision to study to types of settlements as a case-study was taken in order to have in my analysis the most common type of settlements then in progress in the Amazonian frontier, with the thought of getting some basis for a possible level of generalization.

A comparative analyses of these two types of settlements would shed light to many interesting aspects and new dimensions that could enrich tremendously the knowledge of this fascinated phenomenon that the occupation of the
Initially I call the attention for the question of access to land. The model applied to PIC showed that, under the protection of the law and guarantee of the government, all the families have its plot of land. It did not occurred in the spontaneous settling. In PA-70 many were the families which arrived in the PA-70 Region and could not be established due to absolute impossibility to have even a small agricultural plot. These families had to migrated to another areas of the Amazon Region or to urban centres. The analysis of the newly-formed towns in the Region shows that indeed a great number of families that try by themselves to settle down in the Amazon Region ended in these urban centres.

Another aspect to stress regarding access to land is related to the concentration of land ownership. It is interesting to observe that the presence of the government and its regulations have kept, after ten years, that 90% of the families are still having plots of 100 hectares each. The exceptions found due to loopholes on the regulation can easily be controlled. In turn, the PA-70 settlement presents quite a different picture; 30% of the families have more than 100 ha. and 35% of them have less than 30 hectares. Such picture threats to reproduce in the Amazon the "latifundio/minifundio" scheme found in other parts of the country. And as in other parts of Brazil such scheme presents also in Amazonian frontier the same economic and social inviability, that is: neither the great estates presents acceptable economic performance nor the small plots of land can guarantee the family survival through the use of this land with greens, for example, since there is no demand for this type of production within the Amazonian social and economic reality at the present. The ideal seems to be what can be found in PIC, that is, a plot with an area that allows the
family to produce for its own consumption plus an amount for commercialization.

Notwithstanding I am not suggesting that the presence of the government should be restricted only to the distribution of land. The development of a viable small farming system requires much more than that. However, it seems clear that if there is no government mediation in the initial process of settling, it became very difficult to expect that the development of the small farming system in the Region will take place in a peaceful way. Although it is difficult to make a real evaluation of the directed settlement, once the projects were cut off while still in progress, it is clear that, at least regarding the first phase of a settling process, the directed settlement presented great advantages over those settlements developed spontaneously.


ARNAUD, E.

ARRUDA, H.

AUDRIN, J.

AUED, B. W.
1980  "Estrategia e Tatica de Um Movimento que se Pretendeu Unificado - Notas Preliminares sobre Ligas Camponesas", in Encontro Realidade Nordestina, Universidade Federal da Paraiba, Campina Grande.

BALDANZI, G.

BASA - Banco da Amazonia S.A.

BASTIDE, R.

BECKER, B.
BECKER, B. and MACHADO, L.
1982 "Relacoes de Trabalho e Mobilidade na Amazonia Brasileira: Uma Contribuicao". Boletim Carioca de Geografia, Ano XXXII.

BELGHITI, M.

BERNO DE ALMEIDA, A. W.

BERNSTEIN, H.

BOTELHO, V. L.
BOURID, W.

BOURNE, R.

BRADBY, B.

BRANFORD, S. and GLOCK, O.

BRANT, V.

BRASIL
1980 Censo Demografico.

BROWN, D.

BROWN, J.

BROWNE, G.
BRUNO, E. S.
1967 Historia do Brasil Geral e Regional (Vol.5).
Sao Paulo: Editora Cultrix.

BUNKER, S.

BURCH, T.

BURLING, R.

CALDEIRA, C.
1956 Mutirao: Formas de Ajuda Mutua no Meio Rural.
Sao Paulo: Companhia Editora Nacional.
CAMARGO, A. A.

CAMARGO, J.
1973  "Urbanismo Rural". INCRA. Brasilia.

CANDIDO, A.

CARDOSO, F. H. and MULLER, G.

CARVALHO, J. et al.
n/d  "Migracoes Internas na Regiao Norte: Estudo de Campo da Regiao de Maraba". CEDEPLAR. Belo Horizonte.

CARVALHO, M.
1978  "A Guerra Camponesa de Trombas de Formoso" in Movimento, no. 164.

CASALDALIGA, D. P.
1973  "Operacao da Policia Militar e Outras Forcas Armadas na Area da Prelazia de Sao Felix-MT" in Cadernos CEAS, no. 26, Salvador-Bahia.
1977  "Questao Agraria, Uma Questao Politica", in Sedoc, Vol. 10, no. 105

CAVALCANTI, M.
1974 Statement made for the newspaper O Estado de Sao Paulo, March 3.

CEDEPLAR - Centro de Desenvolvimento e Planejamento Regional
s.d. Ocupacao Recente da Amazonia. 3 Volumes. Belo Horizonte: CEDEPLAR.

CEDI - Centro Ecumenico de Documentacao e Informacao
n/d Repressao na Igreja no Brasil. Comissao Arquidiocesana de Pastoral dos Direitos Humanose Marginalizados da Arquidiocese de Sao Paulo, Sao Paulo.

CHAYANOV, A.

CHIBNIK, M.

CIDA - Comite Interamericano de Desenvolvimento Agrario.
1966 Brazil Report
CLIFFE, L.

CNBB - Confederação Nacional dos Bispos do Brasil

COHEN, L. and HOLLIDAY, M.

COLLIER, R.

CONTAG - Confederação Nacional dos Trabalhadores na Agricultura.

CONTINI, E.

CORREA, L. M.  

COX, T.  

CPDA - Centro de Pos-Graduação em Desenvolvimento Agrícola  

CPT - Comissão Pastoral da Terra  

CREIGHTON, C.  
1980 "Family, property and relations of production", Economy and Society, Vol. 9, No. 2.

CUEVA, A.  
1974 "La Concepción marxista de las clases sociales", in Debate & Critica, 3.

CUNHA, E.  

D'AVILA, H.

DAVIS, H.

DAVIS, S.

DEERE, C. and De JANVRY, A.

DEMOS, J.


DIAS, C. V.
1958 "Maraba - Centro Comercial da Castanha", Revista Brasileira de Geografia, No. 4, Ano XX, out/dez.
Dias, G. L.  
n/d  "Colonizacao Dirigida no Brasil: Consideracoes Criticas sobre o Sistema de Implantacao dos Projetos". Fundacao Instituto de Pesquisas Economicas - FIPE - Sao Paulo.

Diegues Jr. M.  

D'Incao E Melo, M. C.  
1978  "Questao camponesa ou questao operario-camponesa?". Em Tempo, No. 3. Sao Paulo.

Doria, P. et al.  
n/d  A Guerrilha do Araquai, Editora Alfa-Omega, Sao Paulo.

Ennew, J.; Hirst, P.; Tribe, K.  

Esterci, N.  
1982  "A Questao da Terra". mimeo.

Faco, R.  
FARENSIDE, P.


FEARNSIDE, P.


FERREIRA, F.


FERTH, R.

FIRTH, R. and YAMEY, B. (Eds.).

FONSECA DO VALE, M.

FORMAN, S.

FOSTER-CARTER, A.

FOSTER, G.

POWERAKER, J.

FRANK, A. G.
FRIEDMANN, H.

FRIEDL, E.

FUKUI, L. F.

FURNEAUX, R.

FURTADO, C.
GALESKI, Z.

GALEY, J. H.

GARCIA LOUREIRO, M. R.

GARRIDO FILHA, I.

GODELIER, M.

GOODY, J.

GOODLAND, R. and IRWIN, H.
GOODMAN, D.

GOODMAN, D. and REDCLIFT, M.

GRAZIANO DA SILVA, J. F. (cood.)
1979 "A Porteira Esta Fechando?" Revista Ensaios de Opiniao, March.

GROSSMAN, L.

GROSSMAN, R.
1979 "Women’s Place in the Integrated Circuit", Southeast Asia Chronicle, No. 66.

GUIMARAES, A.

GUTELMAN, M.
HARRIS, N.

HARRIS, O.

HARRISON, M.

HEBETTE, J. and ACEVEDO, R.

HEBETTE, J. at. al.

HEDLEY, M. J.

479
<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Title</th>
<th>Publisher</th>
</tr>
</thead>
</table>

IANNI, O.

IBGE - Instituto Brasileiro de Geografia e Estatistica
1960 Parana - Censo demografico
1960 Santarem - censo demografico
1970 Parana - censo demografico
1980 Santarem - censo agro-pecuario
Itaituba - censo demografico
Imperatriz - censo demografico
Rondon do Para - censo demografico

INCRA

INDA - Instituto Nacional do Desenvolvimento Agricola
1965 "Estatuto da Terra". Brasilia.

JOHNSON, A.
<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Title</th>
<th>Details</th>
</tr>
</thead>
</table>
KLEINPENNING, J. M.

1975 The Integration and Colonization of the Brazilian Portion of the Amazon Basin. Institute of Geography and Planning, Nijmegen, Holand.

1978 "A Further Evaluation of the Policy for the Integration of the Amazon Region (1974-76)", Journal of Economic and Social Geography, No.69, pp.78-85.

KLEINPENNING, J. and VOLBEDA, S.

1982 "Recent Changes in Population Size and Distribution in Amazon Region of Brazil". 44th International Congress of Americanists, Manchester, September. mimeo.

KORNSHO, R.


KOTTAK, C.


KROEBER, A.

LACLAU, E.

LAMBERT, J.

LARAIA, R. and MATTA, R.

LASLETT, P. (Ed.)

LECLAIR, E. and SCHNEIDER, H. (Eds.)

LENIN, V.

LEWIN, L.

484
LIMA, A.

LINTON, R.

LITTLEJOHN, G.

LONG, N.

LONG, N. and RICHARDSON, P.

LONG, N. and Roberts, B. (Eds.)

LOPES, J. B.

LOVEJOY, T. & SCHUBART, H.

MACLACHLAN, C.

MAGNO DE CARVALHO, J.

MAHAR, D.

MAHER, V.

MANDELL, P.

MARTINE, G.

MARTINS, J. S.
1981 Os Camponeses e a Politica no Brasil. Editora Vozes, Petropolis.


MEGERS, B. 1950 "Caboclo Life in the Mouth of the Amazon". The Anthropological Quartely, No. 23.


MODELL, J.
1971 "Family and Fertility on the Indiana Frontier, 1820". American Quarterly 23 (December): 615-34.

MONIZ, E.

MONTEIRO, D. T.

MOORE, M.

MOORE, M.

MORAES, W.

MORAES, C.
<table>
<thead>
<tr>
<th>Year</th>
<th>Author(s)</th>
<th>Title and Details</th>
</tr>
</thead>
</table>
MUDOCK, G.  
1937  "Comparative Data on the Division of Labor by Sex". Social Forces, No.15:551-553.

MUELLER, C. W.  

NELSON, M.  

NICHOLLS, W.H.  

NIETSCHMANN, B.  

NIMUENDAJU, C.  

NORMANO, J.F.  
NOVAIS, F.

NUGENT, S.
1982 "The Historical Background to Small Production in the Amazon". unpublished paper.

OAKLEY, A.

OLIVEIRA, A.

OLIVEIRA, F.
1972 "A Economia Brasileira: Critica a Razao Dualista" Estudos CEBRAP 2, Sao Paulo.

OSIRIS, L.

PALMATARY, H. C.
PANAGIDES, S. and MAGALHAES, V.

PASSOS GUIMARAES, A.

PATNAIK, U.
1976  "Class Differentiation Within the Peasantry". Economic and Political Weekly, No. 39.

PEARSON, R. WHITEHEAD, A. & YOUNG, K.

PEBAYLE, M. R.

PECHNIK, E. and CHAVES, J.


PEREIRA DE QUEIROZ, M.I.


PHILLIPS, A. and TAYLOR, B.


PIERSON, D.


PINTO, L. F.


1982 "Conflitos de Terra no Sul do Para" Reforma Agraria 12:2 3-12.

POELHEKKE, F. G.

1982 "The Struggle for Land in Brazilian Amazonia, Consequent on the Expansion of Cattle-Raising". Boletin de Studios Latino
POLLAK, R.

POMAR, W.

POMPERMAYER, M. J.

PORTELA, F.
1979  Guerra de Guerrilha no Brasil, Global Editora, Sao Paulo.

PORTES, A.

POULANTZAS, N.

PRADO Jr., C.
PRADO, M. & CAPELATO, M. H.

RADAM - Radar da Amazonia
1974 Levantamento de Recursos Naturais. Vol. 5. de Janeiro: Ministerio de Minas e Energia

RAMOS, A. R.

RAPPAPORT, R.

RAZANI, g.

REDFIELD, R.


REINHARDT, N.


REIS, A.C. F.


REY, P. P.


RIBEIRO, D.

RICARDO, C.

ROSEBERRY, W.

ROSS, E.

RODRIGUES, L.

RODRIGUES, V. L. and SILVA, J. G.
1975 "Conflitos de Terra no Brasil" in Reforma Agraria, no. 3.
1977 "Conflitos de Terra no Brasil" in Reforma Agraria, no. 4.

ROGERS, B.
1980 The Domestication of Women; Discrimination in Developing Societies. London: Tavistock.

ROUSSOMANO, M. V.

RUBIN, G.
"A mulher sob o modo de producao capitalista". Contexto, No. 1.

SAHLINS, M.

Sampaio, A.

Sampaio, Y. et alii
1978 "Politica Agricola no Nordeste: Intencoes e Resultados". Recife: Universidade Federal de Pernambuco-PIMES.

Sanches, et al.

Sanches, P. & Buol, S.

Sanders, J. and Bein, F.

Sanders, T. G.
1973 "Colonizacao on the Transamazonica Highway" in East Cost South America Series XVII, No. 3. American Universities Field Staff.
SANDRONI, P.
1980 Questao Agraria e Campesinato, Editora Polis, Sao Paulo.

SANTOS, R.

SAWYER, D.
SCHMINK, M.
1983 "Social Change in the Garimpo". mimeo.

SEDDON, D.

SEILER-BALDINGER, A.

SERVOLIN, C.

501
SHELTON, H. D.

SIGAUD, L.
1979 "Congressos Camponeses (1953-1964)". Recife. mimeo.

SILVA, E. A.

SILVA, S.

SILVERMAN, S.

SINGER, P.
SINGER, P.

SIOLI, H.

SKIDMORE, T.

SMITH, C.

SMITH, G.

SMITH, N.


1982 Rainforest Corridors: The Transamazon Colonization Scheme. Berkeley: University of
SMITH, T.  
1972  **Brazil: People and Institutions.** Baton Rouge: Lousiana State University Press.

SOLER, N. M.  

SORG, B.  

SORJ, B. and ZAMOSC, L.  
1977  "La reproduccion del capitalismo periferico exportador: estructura y contradiccciones". Cadernos do Departamento de Ciencia Politica No. 4 Belo Horizonte.

SPVEA  

STEWARD, J.  


STEWARD, J. and FARON, L.  
1959  **Native People of South America.** New York: McGraw-Hill.

STRATTON, J.  
SWEET, D.  
1974  

TAYLOR, J.  
1979  

TAYLOR, P.  
1933  

TEPICHT, J.  
1973  

TERRAY, E.  
1972  

TURCHI, L.  
1979  

VARGAS, G.  
1944  

VALVERDE, O. and DIAS, C. V.  
1967  
VELHO, G.

VERGOPOULOS, K.

VERISSIMO, J.

VIANA, O.

VINHAS DE QUEIROZ, M.

VOLBEDA, S.
1982 "Urbanisation in the Frontiers of the Brazilian Amazon and the Expulsion of Pioneers from the Agricultural Sector from 1960 to the Present". Boletin de Studios Latino Americanos y del Caribe. no. 33. Amsterdam.

WADDELL, E.
<table>
<thead>
<tr>
<th>Year</th>
<th>Author(s)</th>
<th>Title</th>
<th>Publisher/Details</th>
</tr>
</thead>
</table>


WOOD, C.

WOOD, C. and SCHMINK, M.

WOODROFFE, J. F. and SMITH, H.
1916  The Rubber Industry of the Amazon. London.

WOLF, E.

WOLPE, H.

WONG, J.
