Doctorate in human, economic and Regional geography from the University of Paris 10, Nanterre (France) 1998

# Structuring process of the frontier areas and marketing network organization in eastern Amazonia

# The study of the Transamazonian territory of Altamira (Pará-Brazil)

Abstract, presentation of the thesis, and contents

Nathalie PARALIEU nparalieu@aol.com

Cirad <u>http://www.cirad.fr/</u>

A translation from French to English by Florence Ribeiro (GREDA, France, 2002) <u>afloribeiro@hotmail.com</u> Supported by the South African Regional Poverty Network <u>http://www.sarpn.org.za/</u> This work was supervised by Pr. Hervé Théry (ENS), and attended on November, 4<sup>th</sup>, 1998, before a Phd examination board the members of which were: Pr. JP Raison, University of Paris 10-Nanterre, and foreman of the jury, Dr. P. Léna, IRD, rapporteur, Dr. A. Garcia, Ehess, rapporteur, Pr. H. Théry, director, and Dr. D. Sautier, Cirad, examinor.

Nathalie PARALIEU is doctorate in geography from the University of Paris 10 – Nanterre, and a specialist in human economic and regional geography. She has been working with multidisciplinary teams for eight years in the field of research and development-based research (Inra –Sad, Cirad –Sar, Gret, Federal University of Pará-Brazil). After teaching at the University of Paris 7, Jussieu, France, she is now coordinating a French and South African Atlas Project at the HSRC (Human Science Research Council), Pretoria, RSA. She is part of the GREDA, a non-profitorganization, which supports a new developing Africa by raising consciousness of the need to develop local abilities and structures.

A copy of the thesis is available at the research department of the Cirad, avenue Agropolis, BP 5035, 34032 Montpellier, Cedex, France.

#### Abstract

It is possible to identify potential solutions to the expansion of agricultural zones and the socio economic problems in the Brazilian frontier by studying the strategies of local actors and the development context? This dissertation is based on a descriptive analysis of the Transamazonian territory of Altamira in the state of Pará (North of Brazil) at the regional, sub regional and local levels. The analysis points out the crucial role of marketing networks and local development strategies in the organization of frontier zones.

The analysis of marketing networks was conducted for four local products: rice, cocoa, cattle, and wood. It consists in assessing interactions among agents involved in the networks: carriers, merchants, cooperatives and producers. The success – or failure – of local actors' enterprises and the understanding of their projects can be evaluated through the study of their life history. The analysis actually underscored elements facilitating permanent settlement of families, such as the access to markets, financial means and family networks.

Each level of analysis contributes to a better understanding of the issue. The regional level shows the importance of the products flows, of Altamira as an urban center, and of the strategies of merchant leaders. The sub regional and micro-local levels show the importance of peasants ' organizations as well as recent administrative units (*municipios*) and family networks.

The development of Altamira's territory is oriented towards a diversification of economic activities and land use under the pressure of a new framework of social, political and economic realizations. As frontier areas develop, the suburban centers tend to hold more and more power, increasing their participation in the entrepreneurial process, which was held by Altamira. Such endogenous policies for structuring a frontier zone may arise as an answer to the problems of access to the markets and land concentration. However, the realization of such strategies depends on the protagonists ' willingness to set up projects for a new rural society.

**Keywords**: frontier area, territory, actors, products, multilevel analysis, marketing networks, socioeconomic life history of individuals and families, projects and strategies.

# Presentation

The aim of this thesis is to study the development of new territories. Supervised by the CIRAD, this study is based on a research, training and development project. It was supported by a French NGO, the GRET (Research and Technological Exchange Group), in collaboration with a number of Brazilian institutions amongst which the Federal University of Pará. The study mainly refers to pieces of information and data from the territory of Altamira, collected from 1993 to 1995 over four different periods in seventeen months. This work was also supported by the members of the French-Brazilian team of the agroecological laboratory of the Transamazonian territory, the LAET, which had been set up for the purpose of this exploratory study.

### PROBLEMATICS

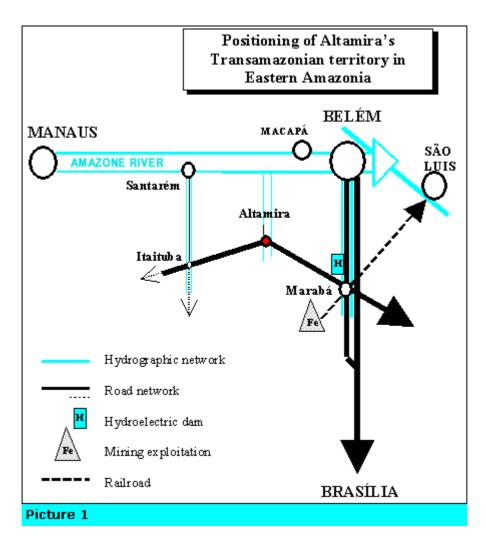
For five hundred years, Brazil has witnessed a migration from the coasts to the inner frontier zones. Amazonia is the last territory to be conquered and is marked by a system of public policies of integration and individual strategies of making profits. Most land pieces of this territory therefore belong to a minority of actors, whereas the former landowners or farmers have to settle in towns or join new clearing zones for cultivation. As previously established by scientists, this process of appropriation leads to the replication of the frontier areas.

The aim of this thesis was to find out and analyze elements, which we thought, would be able to put an end to the damage done to ecological resources, as it affects the quality of life and the well-being of the populations.

In this acceptation, studying the marketing networks and the local actors' plans enables us to know more about the structural, dynamic development process of the frontier areas, in understanding how they evolved into a territory as a whole. The marketing networks and systems characterize and structure the territories. Indeed, the economic activities of the products registering zones, undoubtedly improves the development of the territory. As regards this perspective, all the actors' plans should take these networks into account to improve the situation and standard of living of the local societies.

### POSITIONING OF THE STUDIED TERRITORY

Altamira's territory is situated at the point of intersection between the Xingu river and the Transamazonian road which was opened up in the seventies at the same time with the much less used Cuiabá-Santarem road (picture 1). The Brazilian State policy was aiming at the integration of the Amazonian territory into the country. This road infrastructure, subsequent to the former waterway system has allowed many settlers to come and exploit the territory. It has also induced the planning of agricultural exploitation in Altamira's territory. At the same time, the Federal State policy has favored the communications between the North and the South of the country by developing building sites and mining exploitation, and, as a result, the frontiers of Altamira adjust to the colonization process of Eastern Amazonia.



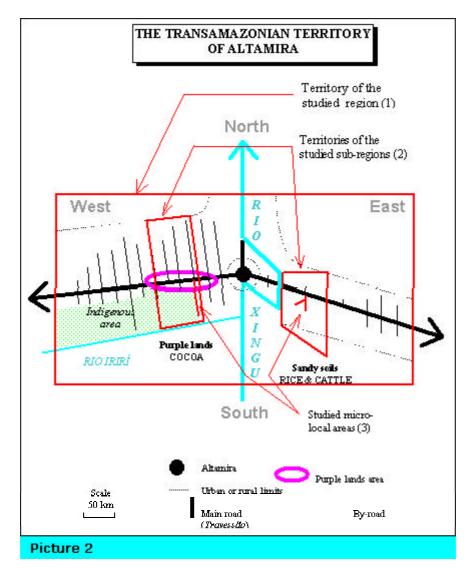
It is worth considering the Federal State Agricultural Program that was set up 25 years ago, in the light of the study of a unique social movement which aims at the preservation of the settlers' installations: *The Movimento pela Sobrevivência da Transamazônica* [A local organization for the preservation of the Transamazonian territory and society]. This organization stands up against land concentration and puts up a resistance to the socio-economic decline subsequent to the lure of a program of equal opportunity and access to lands.

As the Federal State was the first actor in the planning program of this area, the State policy left its mark on the territory:

- By favoring the small colonization granting land pieces of 100 ha, and setting up an agrovillage system to offer basic services to the populations.
- By leaving to the settlers land pieces of 1000 and 3000 ha in the east of the territory, which led to a major colonization.

As a result of the Federal State intervention, and perpendicular to the Transamazonian line, a network of by-roads (currently named *travessões*) has been set up every 5 km (picture 2). In the form of a fishbone, with land pieces distributed along the main road and next to the by-roads, this network is limited south by an Indian reservation.

Unfortunately, the local authorities do not take this frontier into account because it was delimited later on. It is a source of conflicts, as it brings out the question of access to the resources in a clash of interests.



The methodological approach of the study underlines the opposition between the East and the West of the territory, with Altamira's urban center in the middle. Three geographical levels of analysis will reinforce the above approach and the choice of studying an opposition.

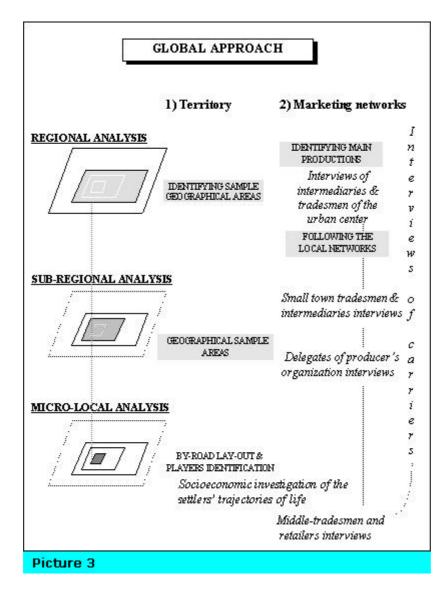
- The region of Altamira with the urban center as mainstay of the regional development.

- The two sub-regions the comparison of which reveals the influence of the Federal State policy in the success of the colonization process (picture 2).
  - The first area, west of the territory, is characterized by its rich soils (*terra roxas* purple lands). These soils have been operational objective for the State Extension Services to develop profitable crops (sugarcane, cocoa, and pepper plantations).

- The second area, east of the territory, has many sandy soils and is not favored by the Federal State policy, and its fertile soils are unfortunately far from the main road. The agricultural policy has induced cattle-ranching and rice cultivation.
- Two micro-local areas within each sub-region the comparison of which reinforces the above analysis.
  Actually, these two micro-local areas are different in their evolutionary process and have a wide range of differences.
  - The first micro-local area is a by-road 75km west of Altamira.
  - The second one is a by-road 100km east of Altamira (picture 2).

### **METHODS**

A methodological and global approach determines the studied areas (picture 3). It follows then that the two subject matters of the study are the development of the territory and the organization of the marketing networks. Finally, there is a related and third subject matter: the role of the local actors and their influence upon a discontinuous and changing evolutionary development process.



The first analysis of the collected information refers to the regional level so as to have an overall view of the area. In fact, this level of analysis has enabled us to show that some significant territories and specific marketing networks (involving four products: rice, cocoa, wood and cattle) played a crucial role in the evolutionary perspective of the territory and in the progress of the settlers' trajectories. The study of these territories and network is essential.

Such analysis is based upon semi-guided interviews in order to collect information from "resourceful people", obviously related to the following matters:

- The commercial activities,
- The transformation of the local products, now and in the past,
- The evolutionary planning process as reported by the INCRA (National Institute of Colonization and Agricultural Reform) engineers,
- The evolutionary process of the forestry scheme, according to the IBAMA (Institute of the Environment and Renewable Natural Resources).

The analysis is based upon varied sources of information:

- Available maps (cartography),

- Available bibliography issued from research institutes: the LAET (thematic surveys on local and family farming) and the Brazilian Agricultural Research Corporation EMBRAPA (surveys on the major local agricultural products),
- Population, commerce and industry statistics,
- Discussions with former inhabitants of Altamira.

This first level of analysis is raised from results of the sub-regional analysis. Two methods were necessary to carry this study out:

- An ambitious but very useful project of interviewing the people living along the by-roads, on whom we could rely for the local level of analysis.
- Local actors' sketches and maps of the area (a useful but insufficient database).

The information collected from "resourceful people" officially or unofficially in charge of territorial development (mayors, agricultural technicians, transporters, tradesmen, community or society leaders) subsequently completed the survey.

In theory, the analysis of the marketing networks studies the flow of products from the micro-local to the regional areas. Yet, Medicilandia's and Altamira's tradesmen have enabled us to understand the whole system even if they do not rely on the local studied marketing networks.

The actors, mainly tradesmen and /or farmers were interviewed or asked questions from a printed form. As regards this investigation, the first prior objective was quality since, in clearing the ground as best as possible, it revealed the actors' implicit or explicit projects, accounting for the means at their disposal.

Ultimately then, and in the light of this methodological presentation, there are a few statements to make, in support of the above principles: To summarize, beyond the study from the regional level to the micro local level, and a study of representative products, it has been necessary to:

- Take into account the course of time during the process of description and analysis of the territorial and commercial trajectories of the actors.
- To compose printed question forms concerned about questions like: Who? Does what? Where? When? How? Why?
- To draw our attention towards "resourceful people" like the authorities officially or unofficially in charge of the control and management of the territory.

# **RESULTS OF THE REGIONAL APPROACH**

In view of this geographical level of analysis, the territory of Altamira may have reserved prospects for the future. Actually, this analysis does not reveal elements that would put an end to the evolutionary process of decline, which is leading:

- To the extinction of the last forest resources, all the more since a third of the conquered areas are fallow lands.

- To the development of landownership along the most well-kept roads, which increases the population of the major urban center to the detriment of public services and administration.

This observation leads us to consider three points:

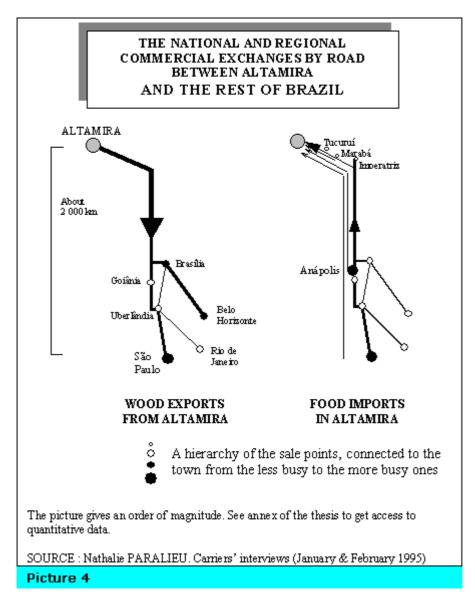
- There is a difficult change from an extractive economy to a productive economy.
- An inadequate development of the urban center does not sufficiently sustain the development of the rural outskirts.
- The organization of the marketing networks is planned by a minority of actors, economically powerful, but not willing to invest in the development of endogeneous policies of marketing networks with a higher exchange value.

#### A difficult change from an extractive economy to a productive economy

For years, Altamira has relied upon a unique fluvial and extractive marketing network, which derived from the space structure of Eastern Amazonia. It remained the only commercial system from the 17<sup>th</sup> century to the middle of the 19<sup>th</sup> century.

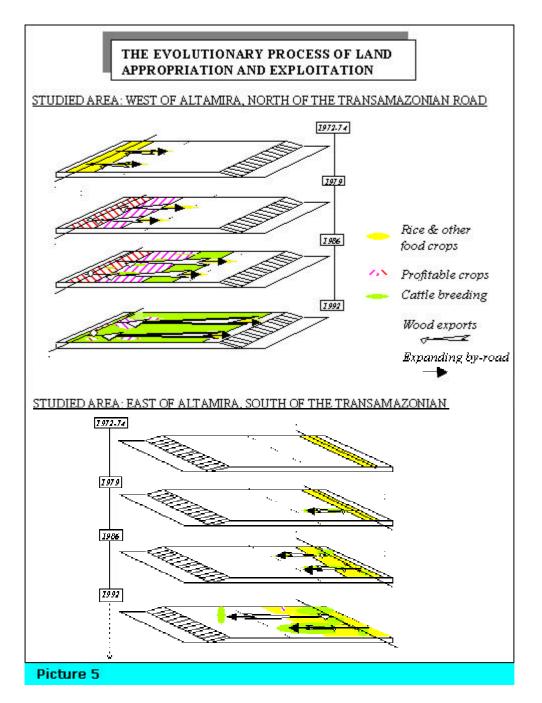
In the beginnings, Altamira was just a minor corporation in charge of a minor flow of products and people. But from the end of the 19<sup>th</sup> century to the middle of the 20<sup>th</sup> century, this town obviously became a strategic area since it made connections easier between the Xingu River and the rubber extraction zones, which were completely enclosed within the lands.

In setting up a new marketing system, both fluvial and terrestrial, the opening of the Transamazonian road has changed the space structure and has also affected the economy and the populations of the area. At first, the road became the main line for the transport of products and, subsequently, the combination of these fluvial and terrestrial networks gave importance to the town of Altamira, since it was located at the point of intersection between these two trajectories. But the endogenous financially profitable marketing networks were at a standstill. As a main consequence to the opening of the road, the extractive economy is favored because of the opening of new areas and a better access to new resources, as exemplified by the trade between Altamira and the south of the country (wood exports southward, food imports northward). Nowadays, the center and the Southeast of Brazil can rely upon the resources of Amazonia, just like some foreign countries did some time ago (Picture 4).



However, the development of agriculture and cattle breeding is closely related to the process of colonization, which occurred along the Transamazonian road. This development leads to the emergence of supplying areas which provide the northern towns (Belém , Manaus, Macapá). The agricultural system in highlands opened for cultivation gives a boost to new regional markets. It must be pointed out that, as a consequence, the development of the transamazonian area has been put to a disadvantage compared with the development of agriculture in the outskirts of the towns. All this goes to show that the exploitation of the Transamazonian territory does not particularly favor intensive cultivation.

The illustrated view of the evolutionary process of land exploitation at the regional level, east and west of Altamira shows the development of both cattle breeding and the lumbering industry (Picture 5). The subsequent profits are induced by an application program of mining exploitation methods.



# The urban center does not strongly intervenes in the development of the rural outskirts

The influence of the town of Altamira is extending over the region because Altamira is a small trade and service center. It is a small urban center. Because of its strategic geographical position at the point of intersection between land and river, it has been subsidized and favored by the Federal State's first credit programs and investment policy. Actually, agricultural installations were subsidized by the Federal State (1971-1974) and from 1975 to 1979, the town was granted 40 % of the profits of the Polamazonia (National Program for the development of Amazonia).

Unfortunately, this investment policy has developed the town's infrastructure to the detriment of the elaboration of new operative production system. The agricultural industry

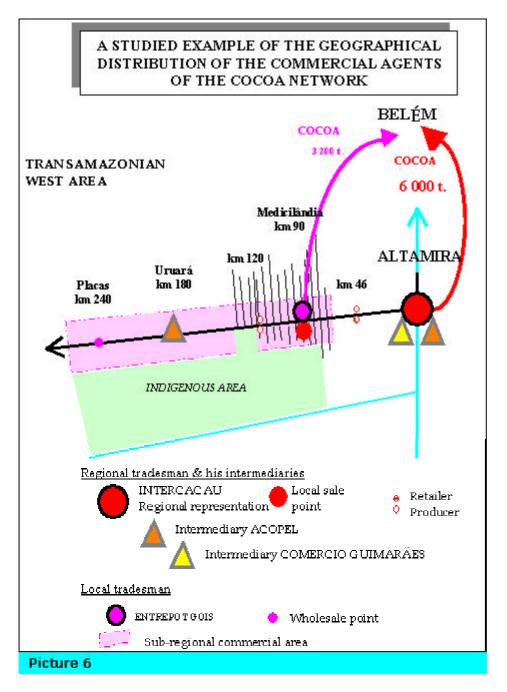
is underdeveloped and lacks sufficient credits to favor continual food crops and their marketing. In this connection, the agricultural products' marketing network is unsettled. Altamira is a reserve of local seasonal workers, of small jobs because of an increased need of services (offered by the recent middle class workers from the public administration and the professions). The suburbs are poverty-stricken and more and more children are on the streets. The town facilities have become obsolete, because the production is not sufficient enough and the commercial benefits of its inhabitants do not provide new marketing activities yet necessary to maintain the process of the improvement of public services.

Altamira does not control the colonization process of the frontier areas expanding up to the frontier of the rainforest. Its rural areas are disadvantaged by a damaged and mismanaged road infrastructure, and differ now from the other rural zones. Their specific development process depends on small urban centers and they are also confronted with huge difficulties of territorial planning. The town of Altamira mainly controls the economy of these areas, because group salesmen and independent tradesmen are in charge of the local and regional marketing networks and of the distributing networks too and they control the cocoa and wood trajectories to the export zones.

## The marketing network depends of a minority of economically powerful actors, who do not invest their profits in the elaboration of profitable endogenous marketing networks

The organization of intermediary marketing networks has changed to face the long distances subsequent to a linear and extensive territorial planning. The marketing networks have been reorganized into a hierarchy depending on their space structure as well as to the level of responsibility of each of its members.

West of Altamira, the case of the marketing networks of the cocoa illustrates the space organization of the marketing networks (picture 6):



- The regional tradesmen of Altamira work with intermediaries situated at every strategic point of the local or sub-regional production. This network is a direct (relying on a local business store, on small retailers or producers) or an indirect one (relying on independent wholesale stores).
- The local tradesmen rely on the same marketing strategy. Within the cocoa production area, they have adopted the direct marketing strategy, and they are not involved in Altamira's network, despite the fact that they work with the same business store as the regional tradesmen.

The main tradesmen control the trajectories of the products and work at strategic points with commercial agents or intermediaries (within the production areas, at the crossroads, by the side of the roads, in small retail shops). They play a key role in the organization of

the territorial management and planning. They connect the production areas and the retailers; they protect the producers' families and guarantee their production. They used to be in charge of allowing bank credits, until the moment when, in 1992, new producers' organizations started to save credit money to the benefit of the small agricultural production. Yet, the tradesmen still have the power to provide their clients health insurance unlike the rural organization, which do not have the necessary corporate structure.

Because of the rapid evolutionary process of the commercial activities and trajectories, the marketing of agricultural products has generated huge profits. The success of merchants gives a boost to individual strategies of making profits. The commercial activities vary from the production to the marketing and sometimes to the manufacturing of products. The development of commercial activities is reinforced by the increased process of landownership and the strategy of diversification of the products outside the area.

To summarize, as they want to favor stock farming, the major tradesmen invest in extensive cattle breeding and in the buying of land. But the region' s economy has subsequently come to a standstill because the main investors (big farmers, cattle breeders, tradesmen, and lumbering industrials) do not break new ground in the agro-industry or forestry fields. As a consequence, the family products are a source of the diversification of income.

As a conclusion of the regional level of analysis, and in spite of reserved prospects for the future of this area, it must however be recognized that the situation is far from being so pessimistic. We must allow for the revival of decisive public works which have brought electricity to the area beyond the Tucuruí dam. All of this leads us to expect that the region will soon be able to make new profits. The construction of a hydroelectric dam is planned. So, will the local actors be able to develop their own strategies, grasping the opportunity on relying upon large Federal State subsidies, which would then give a boost to the rural areas? Or else is the increased selling process of land still favoring the big owners whereas the only job opportunities will be offered by the hydroelectric building site?

# **RESULTS OF THE SUB-REGIONAL APPROACH**

The results show the importance of the Federal State intervention in setting up new territories as well as in controlling the settlers' trajectories. They also show that social and political transformations can give new opportunities to the local actors to widen their strategies. The territories at stake here are in fact very much different in their evolutionary process and their prospects for the future depends on the local actors' ability to manage their projects. This level of analysis leads us to establish three main results:

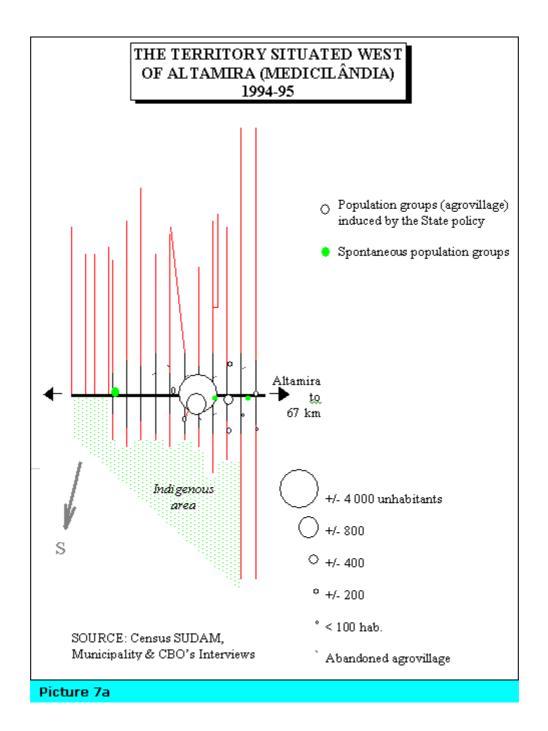
- A difficult management and re-appropriation process of the initial Federal State policy.
- The emergence of a priviledged class of tradesmen.

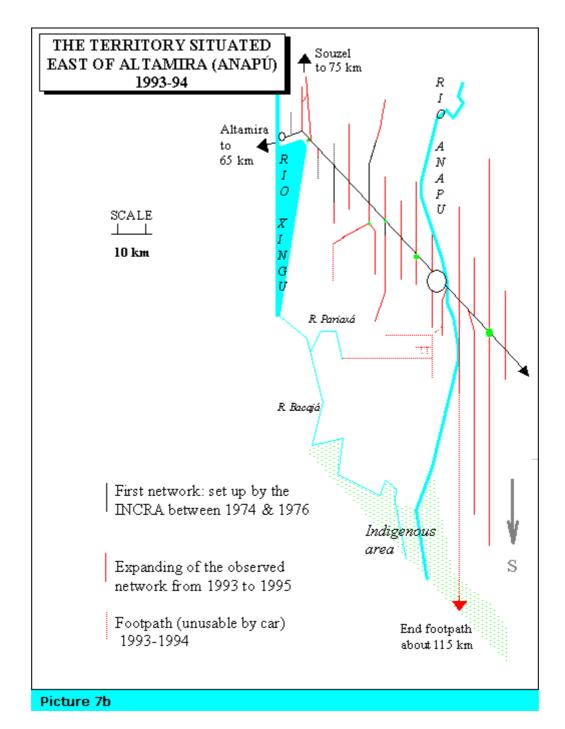
- The emergence of collective organizations (community associations and town councils) counteracting the previous evolutionary process of development.

## The difficult setting and re-appropriation of the State's initial policy

The schematic views of the sub-regional territories illustrate the thesis and give a detailed description of the colonized areas and their management by the local actors. They also point out the human and historical differences between the east and the west of Altamira's territory.

In the east and in the west as well, the linear colonization process and the exploitation system have never been questioned. The populations have settled along a road, whether the State intervened or not. Nowadays, the preservation and management of new installations at the frontier of the rainforest is difficult. The forestry enterprises in charge of the territorial management only open up road tracks. The planning network is expanding, confronting new municipalities to the decisive urban role of the populations that have settled in groups at the points of intersection of commercial trajectories (picture 7). The linear space developing structure hinders the setting up of the connections required for a good transport of products and people.





# The emergence of a priviledged class of tradesmen

Production relies on individual strategies of profit-making and on strategies that have led to the establishment of a priviledged class of tradesmen whose authority of which is now questioned. The analysis of the tradesmen activities and of the marketing networks testifies to an elaboration of a network of intermediaries at the regional level. Yet, the trajectories of the intermediaries underline the differences between the commercial elites of the east and the west of Altamira.

In the west, the initial conditions of the colonization process have enabled small settlers to be more productive, raising continual crops such as cocoa, pepper and coffee. They have subsequently been able to develop their commercial activities. On the contrary, in the east, the settlers (mainly rice cultivators) have tried to set up commercial activities with the operational objective of increasing their production. Such an upstream strategy as opposed to the previous one, most often only works for individuals who can invest capital in cattle breeding and transport activities. In the east of the area, the unsettled pattern of retailers reflects the lack of elaboration of a planning scheme of production.

In the west, the economic crisis of 1987, with a fall in the cocoa prices and deterioration of pepper plantations has checked the production and even stopped the rise of farmers which were not involved in trade activities. It has even started to affect their working capital whereas the local tradesmen and producers have subsequently improved their standard of living.

As a consequence, the producers came into conflict with the tradesmen and they wanted to get rid of intermediaries (*atravessadores*). In actual practice, they have tried to set up new strategies, establishing a network of associations.

The same conflict has happened in the east, but is the result of different economic problems. It has been a long time since the main trade product, rice, is not sold anymore in its untreated form. So, it was replaced by cattle trade because of the lack of husking machines. Such an evolutionary process has set the small farmers apart since they are compelled to rely on many intermediaries such as tradesmen, retailers, transporters, and cattle breeders (*fazendeiros*).

Small organizations of producers progressively gain in power because they elaborate and set up collective development strategies. As a result of a development of these strategies, an innovative agricultural development process is changing the structuration of frontier areas, and particularly as regards the control of the colonization of Altamira, which has always favored the relationships between State and people.

# The emergence of the power of collective small organizations counteracts the evolutionary development process

From the comparative study of the two sub-regions, it follows then that the new networks derived from these collective strategies deal more specifically with social or economic issues. This result should be underlined.

The west, Medicilandia, has been granted State credits in order to develop buoyant products (cocoa, sugarcane, pepper). The allocation of credit to the production has given birth to a middle class of agricultural producers and retailers and has also led to the development of urban areas. This production policy has favored local investments. The crop-raising of food products has given acute awareness, that the actors' strategies could promote socio economic interests. In 1987, the economic crisis and the fall in the prices the cocoa have been the starting point of establishing new economic collective networks in the sub-region (the social projects were traditionally in charge of women). Small organizations of producers have been born thanks to a few leaders supported by their political and family network. The economic community project aims at actualizing the work of individuals involved in the trade and transforming of products. Producers do not rely on the commercial semi-extractive systems anymore.

In the east (Anapú), the State has planned a landownership program with the help of private investments from the big owners who were granted land in return. The lack of a production scheme investing in buoyant products has stopped the process of land exploitation and has led to the settlement of a small spontaneous generation of pioneers because of the development program for unexploited areas. As a consequence a newly born class of producers (rice, cassava) the interests of whom big cattle breeders'. The problem of land appropriation and management (involving main issues such as the problem of isolation, a better access to services, land jurisdiction) has led to the forming of communities of producers.

Yet, the combination of social and economic issues is obviously part of the actors' work. The progressist Catholic Church regulates individual clashes of interests. In bringing out its reflection upon collective interests, it leads to the forming of new associations. The Church interferes with the work of the local actors in a will to stand up for the project of a fair rural society, which may not be the producers' first operational objective.

In the west (Medicilandia) the social project initiated by the Church, seems to have less importance. Yet, the community leaders, who are often militants of the PT, the Labour Party and who have a religious instruction in educational, political and unionist matters, say they are at the root of this project.

In the east (Anapú) the producers have always been under Church supervision, which has enabled them to set up their own community network. But because of their slow economic process, the Church finds profitable ground to build its own social project, which depends its ability to develop economic projects, too.

Unfortunately, the relationships are rather strained amidst the great number of local actors on grounds of a strong opposition between the varied religious, political and economic groups. The fact that the religious communities (catholic or otherwise) act as a substitute for the Federal State leads to a disunity that hinders the territorial management. The combination of social and economic projects is an obvious necessity to agricultural producers. They need to rely on the combination of social and economic projects in order to set up their activities. But the actors' responsibilities and abilities must be defined. The local authorities will have to accept further responsibilities. Either new future or the new independence of the municipalities enables the inhabitants to have more financial means and a better access to public services. It is also a first step towards the legal control of a territory within which the actors' projects would officially be taken into account by the local authorities.

Medicilândia, a municipality build in 1988, commits itself to the grouping of people in order to develop the relationships between local associations, development organizations and the elected representatives. The municipality can be described as an innovative field of social and economic improvements to the territorial management policy. But the elaboration of a common project plan remains an issue despite the fact that setting up collective and economic measures would seriously improve the standard of living of the population. The local administration confines itself to the traditional clientèle networks, being held in check when involved in the development and management of an uncontrolled and inefficient structure. This description reveals

its weakness and lack of efficiency as regards to its responsibility of accounting for common interests.

The young collective structures (municipalities and associations) cannot operate a significant turn in the former evolutionary process because they are insufficiently developed. They highlight the actors' behaviors, ambitions and organizational means at the micro local level.

# **RESULTS OF THE MICRO LOCAL APPROACH**

The study of the opposition between the two micro-local areas testifies to the difficult structural process of the frontier areas. This process is always changing: shifts in populations and land concentration movements.

West of Altamira, the 75 South by-road is fully-occupied, mainly by humble families which have access to the local market of the urban center which is located of 40km from the most remote families. A majority of destitute families are subordinate to patrons or shopkeepers.

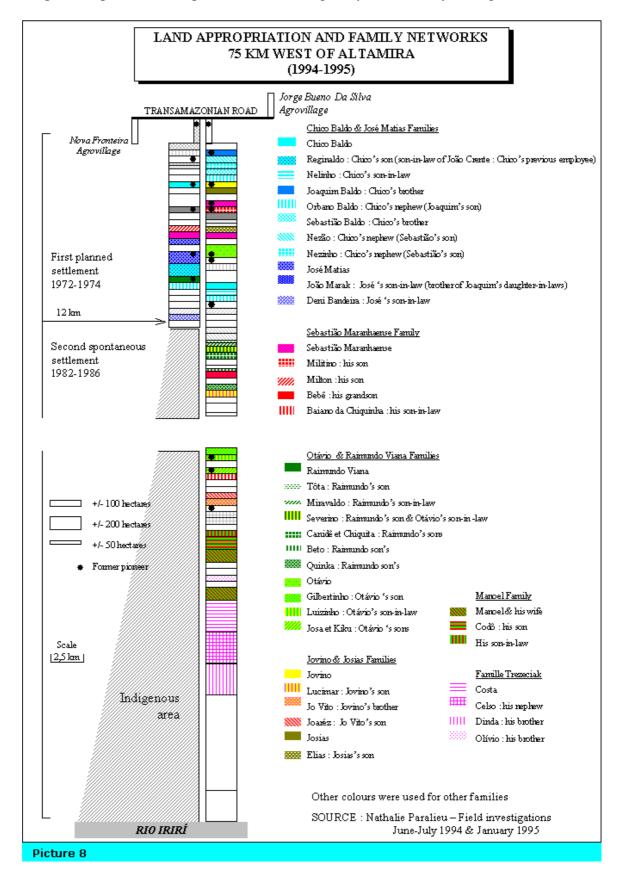
Despite the fact that the settlements occurred at the same time in the two sub-regions east and west of Altamira, the circumstances and rate of the appropriation and development process of the micro-local areas are different. The higher exchange value of the selected crops, the proximity of the markets account for these differences. But beyond economic reasons, let us underline essential sociological reasons, too.

West of Altamira, the trade system is issued from a combination of inner and inter family networks that have developed specific fields of intervention and favored access to the markets.

The commercial and productive functions of the members of a large-scale family network are clearly assigned. Some buy, other ones transport products and the latter are in charge of the manufacturing. This combination of activities also reflects the organization within production units and complement one another in this area. Some develop cattle-breeding, others develop continual food crops and both are more or less far from the Transamazonian road. There is no clash of interests within the family networks. A family will be in charge of the husking of rice while another one will supply industrialized products, or trade agricultural products.

This community network of closed interdependences strike up the commercial relationships with the local tradesmen and keeps them there. In this acceptation, settlers are not isolated, they join family networks.

The former pioneers of these family networks have strengthened their position. They occupy a third of the land pieces of the area. The schematic view of the South 75 by-road depicts these lands in red, green and blue colors (picture 8). The other land pieces illustrate land exploitation and are depicted in yellow, red/green, and pink. Their grouping reflects the patriarchal system, which often combines land exploitation with a patrimonial strategy of territorial management. Subsequently to the appropriation process of the lands by which his children inherited, the patriarch is now retired or is intending to retire. His sons and daughters' behaviors are now going to regulate the



management of the territory. These latter seem to be more and more involved in the cooperative process subsequent to the widening of dynamic family strategies.

**East of Altamira,** social conflicts add further to the poverty of the majority of the families. The study of the by-road 100km south of Altamira, is very similar to the studies of Roberto Araujo (an anthropologist) and Jacky Picard (a socio-geographer). The patriarchal system predominates, inducing relationships of subordination. The land ownership or agricultural program has been set up to the detriment of minor projects of development.

None of the big families of settlers has ever established a network of multidisciplinary competences. The unsettled pattern of the pioneers' projects depends on their means of production (financial means and labor force) and accounts for the present situation. Individual strategies of land appropriation predominate. The small settlers are subordinate to their patron's interests. Their patron is either a shopkeeper involved in farming activities or a cattle-breeder (*fazendeiro*). Even if they choose to rely on their own production and land pieces, they still have to rely on retailers and on the only transporter of agricultural products and people.

The small patrons (cattle-breeders and retailers) rely on associations of producers to be granted credits and to employ agricultural workers. The association sometimes succeeds in challenging the tradesman and transporter on whom everyone relies.

To summarize, along the by-road situated west of the territory, the main question is: Will families issued from the patriarchal system subsequently be able to set up collective or municipality projects? Along the eastern by-road, the question is about the widening of exploitation projects and the setting up of local activities, which complement one another.

In actual fact, the difficulty to set up collective projects in the sub-regions reflects individual and family strategies as well, as shown in the study of the micro-local areas. The study at different geographical levels, of the changing role of actors involved in commercial and territorial network, enables us to understand better the structuring process of the Transamazonian territory and to imagine prospects for the future. But an unanswered question remains: Will the new generation of inhabitants of the frontier zones be interested in setting up the project of a rural society?

# PROSPECTS FOR THE FUTURE IN THE LIGHT OF THE ABOVE ANALYSIS

The detailed study of the life trajectories of the actors and the decisive choice of studying the area at varied geographical levels, underlines the fact that scientific and methodological tools are determining factors for the analysis.

The detailed study of the life trajectories of the actors in the light of specific economic, social and political issues has been a necessary process to understand their projects, strategies and activities, the latter of which are not necessarily induced by economic circumstances. Indeed, the seven questions "Who? Does what? With whom? When? Where? How?" give a meaning to the historical evolutionary process of development.

The meaningful purpose of this study is to reveal what the actors know about a territory, how they structure and organize it, how they make profits with the

exploitation of this area, and how they live within this area. The varied geographical levels, enables us to have a global understanding of the area in order to judge better the results of the analysis. In understanding the preoccupations of the people of this area and in being closed to them, the analysis goes from individual to general points at issue. For instance, the regional level of analysis of the marketing networks testifies to a difficult changing, development process of the endogenous systems. The sub-regional level of analysis shows the influence of these marketing networks on the structural and development process of new territories induced by small urban centers. In the end, the micro-local level highlights the influence of marketing networks on the building of community networks, and underlines the fact that, on the other hand, relationships of subordination may become more pronounced in this context.

The setting up of development policies would undoubtedly be more efficient with an approach at these different levels. In fact, the most interesting level of analysis of the territorial management is the sub-regional level. Indeed, the local policies enable all matters to be brought up for discussion and decision-making. As it is the last stage of the Federal State administration, it could be more involved in the decentralization process. It is necessary to set up a new management process, which would combine local management with a higher level of management, in the hope that, despite a political clash of interests, more and more people would take part in this process.

The development induced by inner and inter family strategies is a key issue amidst the peasants' organizations, and particularly at the micro local level. Yet again, the ambitious plan of setting up a multidisciplinary network within the area of a number of by-roads, remains an issue at stake. It is difficult to think of building a network of interdependences whereas, in the meantime, social organizations are insufficiently developed. In this acceptation, the study at each geographical level, of the evolutionary process of the actors' system within the frontier areas, seems all the more important to the analysis.

The analysis of a territory consists in studying the actors involved in the development process. The aim of this thesis is to study the life of tradesmen and farmers, the development of peasant organizations, and the role of the local authorities. But the further objective of this study is to raise questions about territorial management policies. Research should bring acute awareness that the motives, interests and ambitions of the social, political or economic local actors (mayors and elected representatives, investors, dormant partners) go far beyond agricultural concerns. The development of frontier areas testifies to a combination of issues, which by far outreaches that of the setting up of production and of urban distributing schemes. The actors are challenging the commercial networks' officials. We should therefore recognize their importance, so as not to witness subsequent inappropriate measures.

The field question of developing the actors' collective network of activities by taking up the challenge of a changing evolutionary development process, could remain unsolved because dormant partners have always been subjected to economical constraints.

Research about the future development of the frontier areas will undoubtedly compel economic leaders to be concerned about social matters and social leaders get involved in economic matters, which would make connection between these two research fields. In this regard, education is the best possible means to put such an idea into practice, by intervening at different levels of the actors' responsibility and competence and giving them tools of discussion. Education should give birth to the establishment of mutual respect and community rules.

### Selected bibliography

**ALBALADEJO C., TULET J.C.** (Dir.), 1996. Les fronts pionniers de l'Amazonie brésilienne. La formation de nouveaux territoires. [Frontier Zones in Brazilian Amazonia . The development of new territories]. L'Harmattan, Paris.

**ARAÚJO R.**, 1994. La cité domestique. Stratégies familiales et imaginaire social sur un front de colonisarion en Amazonie brésilienne. [*La cité domestique*. Family strategies and social *imaginaire* of the frontier areas of Brazilian Amazonia]. A thesis attended at the University of Paris 10. Instituto Emilo Goeldi, Cnpq (Belém, Pará), 377 p.

**BRAUDEL F.**, 1979. Civilisation matérielle, économie et capitalisme XVe-XVIIIe siècle. Les jeux de l'échange. [Material Civilization, Economy and Capitalism from the 15<sup>th</sup> century to the 18<sup>th</sup> century]. Tome 2. Armand Collin, Paris.

**BRUNET R., DOLLFUS O.**, 1990. Mondes Nouveaux [New Worlds]. Tome 1, La Géographie Universelle. Roger BRUNET (Dr.). Hachette /Reclus, Paris, 551 p.

**DROULERS M.**, 1995. L'Amazonie. Géographie d'aujourd'hui. [Amazonia. A geography of today]. J-R. PITTE (Dr.). Nathan Université, Paris, 188p.

**GEFFRAY C.**, 1996. Le modèle de l'exploitation paternaliste. [The Patriarchal Exploitation Model]. In : LENA P., GEFFRAY C., ARAÚJO R. (eds). L'oppression paternaliste au Brésil. [Patriarchal Oppression in Brazil]. Karthala, Maison des Pays Ibériques, Cean. Paris. Talence (France). 48ème Congrès international des Américanistes, juillet 1994 (Stockolm), pp 153-159.

**HAMELIN P.**, 1992. Mutations au Brésil. Vue d'Amazonie. [Evolution development processes in Brazil. A picture of Amazonia]. Cahiers des Sciences Humaines, 28 (4): 727-748.

**HAMELIN P.**, 1992. Occupation humaine le long de la Transamazonienne: le cas d'Uruará. [The settlements along the Transamazonian road : the case of Uruará]. Cahiers du Brésil contemporain, 11: 77-94.

**HEBETTE J.** (Org.), 1991. O Cerco está se fechando. [Next to closure] Fase-Vozes-Naea (Upfa), 347 p. **IBGE**, 1979. A organização do espaço na faixa da Transamazônica. [The spatial organization along the Transamazonian road]. Vol. 1, Rio de Janeiro, 258 p.

**LENA P.**, 1992. Trajectoires sociales, mobilité spatiale et accumulation paysanne en Amazonie brésilienne: un exemple en Rondônia. [Social trajectories, spatial mobility, and peasant profits in brazilian Amazonia]. Cahiers des Sciences Humaines, 28 (2): 209-234.

**LENA P., DE OLIVEIRA A.E.** (Org.), 1992. Amazônia: A fronteira agrícola 20 anos depois. [Amazonia: The frontier after 20 years]. Col Eduardo Galvaõ, 2a ed., Belém, Cejup, Museu Paraense Emilio Goeldi. **MILDER R.**, 1986. O desenvolvimento de Altamira e sua região apos a contrução da Transamazonica

(1970-1984). [The development of Altamira and region after the creation of the Transamazonian road]. Tese de Geografia Humana dos países subdesenvoldidos, Nijmegen, Resumo português, Julho de 1987.

**MONBEIG P.**,1952. Pionniers et planteurs de São Paulo. [Pioneers and land cultivators in São Paulo]. Armand Colin, Paris, 376 p.

MORAN E. F., 1981. Developing the Amazon. Indiana University Press, Bloomington.

**MUSUMECI L.**, 1988. O mito da terra liberta. [The illusion of free access to land]. Eds Vértice, São Paulo, 479 p.

**PARALIEU N.**, 1997. Fronts pionniers et organisation économique en Amazonie: Le cas de la région d'Altamira, Pará (Brésil). [Frontier zones and economic networks in Amazonia: The case of the Altamira region, Pará (Brazil). In: Clouet Y., Tonneau JP. (Eds ): Quelle géographie au Cirad? Document de travail du Cirad-Sar n° 10-97, p. 111-129.

**PEBAYLE R.**, 1989. Les Brésiliens: pionniers et bâtisseurs. [Brazilians: Pioneers and Builders]. Coll. Géographes, Flammarion. Paris, 361 p.

**PICARD J.**, 1997. Les marchands de rêves. Représentations sociales de l'échange et développement rural sur un front de colonisation en Amazonie brésilienne. [Merchants of dreams: Social representations of rural development and exchanges within a frontier zone in Brazilian Amazonia]. Thèse de Doctorat. Centre de Recherches sur les espaces tropicaux, Institut de géographie de Bordeaux III, 470 p.

**SMITH N. J H.**, 1982. Rain forest corridors, The Transamazon Colonization Scheme. University of California. Berkeley, Los Angeles, London.

## **Table of contents**

PREFACE AND AKNOWLEGMENTS TABLE OF ILLUSTRATIONS ANNEX

### Introduction

# FIRST PART: PROBLEMATICS AND METHODS.

### Chapter 1. Frontier areas. economic integration and space construction

- 1. The unsettled pattern of the frontier areas
  - 1.1 Territory, space and time as regards to the evolutionary process of the frontier areas
  - 1.2 Schematization of the settlement pattern of the frontier areas
- 2. Marketing networks and actors' projects
  - 2.1 Marketing networks and systems: space structure
    - 2.1.1 Trajectories and registering zones of the products
    - 2.1.2 Commercial agents
    - 2.1.3 Access to the markets
  - 2.2 The actors' projects: a new ground for an evolutionary process of construction of the territory
    - 2.2.1 Actors in the pioneers' system
    - 2.2.2 The influence of individual and family projects
- 3. The analysis of Altamira's territory sustains the purpose of this exploratory study

# Chapter 2. Methods: An approach at different levels. The actors, the trajectories and the commercial activities

- 1. The collecting of information and data
  - 1.1 The territory. The study at different levels and the approach from the micro local to the regional levels
  - 1.2 Time evolution of the actors' trajectories
  - 1.3 The developing of significant products: A territorial management decision
    - 1.3.1 Wood and cattle
    - 1.3.2 A food crop: rice
    - 1.3.3 A profitable crop: cocoa
    - 1.3.4 The role of products in the settlement process
    - 1.3.5 The role of products in the construction process

### 2. Means

- 2.1 Diagnosis
  - 2.1.1 The territory
  - 2.1.2 The marketing networks

- 2.2 Selected areas
- 2.3 Investigations and questioning
  - 2.3.1 At the regional level
  - 2.3.2 At the sub-regional level
  - 2.3.3 At the micro-local level
- 2.4 The conducting of the survey
  - 2.4.1 The support of the Research, Education and development laboratory
  - 2.4.2 On by-roads, within the communities, in the families
  - 2.4.3 The difficulties: Distances, following the marketing network
- 3. Material and equipment for the study
  - 3.1 Available maps
  - 3.2 Information from local people
    - o for the study of the territory
      - o for the study of the actors' role
  - 3.3 Results

# SECOND PART: RESULTS AND IMPORTANCE OF LEADING THE SURVEY AT THREE DIFFERENT LEVELS

### Chapter 3. Reserved prospects for the future of the Transamazonian territory

- 1. A difficult change from an extractive economy to a productive economy 1.1 An extractive commercial system
  - 1.1.1 The emergence of the system: The Jesuits 'initiative from 1636 to 1758
  - 1.1.2 The General Company of Commerce of Grão-Pará and Maranhão 1759-1868 implements extractive commercial systems
  - 1.1.3 The expansion of the extractive commercial system from the end of the 19<sup>th</sup> to the middle of the 20<sup>th</sup> century
  - 1.1.4 The management of the extractive fluvial system
  - 1.2 The semi-extractive fluvial commercial systems
    - 1.2.1 The regional land exploitation process
    - 1.2.2 The road: The main commercial network during the first colonization
    - 1.2.3 The combination of the fluvial and road networks
    - 1.2.4 The actors' progressive involvement
  - 1.3. The emergence of commercial endogenous systems with a higher exchange value
  - Conclusion
- 2. A dissymmetric area in the outskirts of an urban center
  - 2.1 The urban center of Altamira
    - 2.1.1 The development of traditional activities despite new settlements
    - 2.1.2 An urban and dependant society
    - 2.1.3 The future of an urban center: development or decrease?
  - 2.2 The structure of the rural areas reflects the local authorities' mismanagement 2.2.1 A damaged and mismanaged road network
    - 2.2.2 The small urban centers and other areas of settlement: The change in the former structure

# 2.2.3 The land evolutionary process: an unrealistic planning policy and its influence on the territorial management

Conclusion

- 3. The organizational structure of the current marketing networks
  - 3.1 The cocoa commercial network
    - 3.1.1 First step: The tradesmen networks
    - 3.1.2 Second step: The networks
    - 3.1.3 Credits: Their key-role in the commercial system
  - 3.2 The rice commercial network
    - 3.2.1 First step: Urban needs and commercial competition
    - 3.2.2 Second step: The networks
  - 3.3 The cattle -trade network
    - 3.3.1 The stages of an important tradesman's network
    - 3.3.2 The market of Altamira: Cattle trade: Results
  - 3.4 The wood commercial network
    - 3.4.1 The marketing network: first stage
    - 3.4.2 The marketing network: second stage

Conclusion

- 4. Circumstances of the emergence of commercial endogenous systems with a higher exchange value
  - 4.1 The evolutionary process of the salesmen's activities
    - 4.1.1 Agricultural production
    - 4.1.2 Transport
    - 4.1.3 Transformation of agricultural products and wood
  - 4.2 The tradesmen 's projects and investments
    - 4.2.1 Investments outside the area
    - 4.2.2 Investments in the area
    - 4.2.3 The combination of both the investments in and outside the area
    - 4.2.4 The decisions which have induced regional changes
  - Conclusion

Conclusion of Chapter 3

# Chapter 4. Anapú and Medicilândia: two highly contrasted sub-regions

- 1. Oppositions in the evolutionary processes of the territories
  - 1.1 Frontier, populations of the territories and prospects for the future
    - 1.1.1 The administrative space structure of Medicilândia
    - 1.1.2 The small area of Anapú situated between two municipalities
    - 1.1.3 Dissymmetric and expanding areas
    - 1.1.4 Role of the population groups and settlement
    - 1.1.5 Influence of the nature of the soils on the process of land appropriation and exploitation
  - 1.2 History of land appropriation.
    - 1.2.1 Medicilândia: Evolution in the State's landownership program.
    - 1.2.2 Anapú: a rebellion against the operational landownership program
    - 1.2.3 The fight for Indian lands

- 1.3 The expanding network of by-roads and the difficult setting of population groups
  - 1.3.1 The by-road network: a problem of inequitable access to the territory
  - 1.3.2 The urban center of Medicilândia and the small villages of the rural outskirts
  - 1.3.3 Anapú: a new future urban center .An unsettled pattern of small villages

Conclusion

- 2. Tradesmen and marketing networks
  - 2.1 The local commercial elites have become commercial agents of the marketing networks
    - 2.1.1 The role of the State in the emergence of a commercial elite
    - 2.1.2 Anapú: The difficulties of integration of a small commercial elite
  - 2.2 The key-role of retailers in the management of the sub-regions.
    - 2.1.1 The trajectories of men and products
    - 2.1.2 Economic strategies of the town's shopkeepers
    - 2.1.3 Economic strategies of intermediaries and retailers
  - 2.3 New commercial agents: associations of producers
    - 2.3.1 In Medicilândia: the example of the 80km cooperative store
    - 2.3.2 In Anapú: The example of the Pioneira association

Conclusion

- 3. The emergence of a collective organization of actors
  - 3.1 In Medicilândia: The producers' fight for the preservation of their economic interests
    - 3.1.1 Sugarcane
    - 3.1.2 Rice
    - 3.1.3 Cattle
  - 3.2 In Anapú: The pioneers' rebellion against land expropriation
    - 3.2.1 Land ownership: Religious and economic influence of the Church
    - 3.2.2 Collective strategies under Church control
  - 3.3 Is the local community supporting the new development process or is it putting a resistance to it?
    - 3.3.1 Creating their own municipality: The case of Anapú
    - 3.3.2 The local community of Medicilândia

Conclusion

Conclusion of Chapter 4

### **Chapter 5. The micro –local illustrative example**

- 1. West: The 75 South by-road: The key –role of family networks
  - 1.1 An enclosed area
    - 1.1.1 A new pattern of settlement
    - 1.1.2 Land appropriation
  - 1.2 A majority of humble families with easy access to the market.
    - 1.2.1 The different stages of the actors' trajectories
    - 1.2.2 The impact of commercial exchanges on the actors' projects
  - 1.3 A multidisciplinary competence network within a socio-economic organization

- 1.3.1 The distributing network of basic products
- 1.3.2 Organization of a transport and transformation network of products
- 1.3.3 The marketing network of products
- 2. East: Surubim: Social conflict and destitution
  - 2.1 An area which is now opened to land exploitation
    - 2.1.1 Specificity of the Surubim area
    - 2.1.2 The evolutionary settlement and land exploitation processes in the area
  - 2.2 A majority of destitute families are subordinate to intermediaries
    - 2.2.1 Specificity of the families which are involved in territorial management 2.2.2 Circumstances and results of the marketing of products
  - 2.3 Individual projects and unequal opportunities in the process of territorial management
    - 2.3.1 The importance of parallel or derived networks
    - 2.3.2 The community leaders' and their groups' actions

Conclusion of Chapter 5

### **General conclusion**

ANNEX GLOSSARY (Portuguese) SELECTED BIOBLIOGRAPHY INDEX