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A Ruralisation of an Amazonian Frontier ?

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This work is part of a “Zone Atelier” program in Amazonia. Given a quality label by the CNRS in October 2001, the *Zone Atelier* “Amazonian pioneer front” currently brings together staff attached to the Federal University of Pará (UFPA) with teams from the CNEARC¹, CNRS², INRA³, IRD⁴ and the University of the Antilles-French Guyana (UAG). These groups are addressing the conditions for the sustainability of family agriculture in Amazonia, by considering the diversity of the Amazonian biophysical environments along with the practices and skills of the populations using the natural resources, as well as the forms of social organisation, both local and regional, and finally the evolution of the economic and political context.

Especially, the aim of this paper is to wonder about the causes of the deforestation and the possible issues of this situation by the way of a locality monograph.

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Introduction

The current policies of the colonisation of Amazonia can be seen as the nowadays manifestations of eldest policies of Brazilian spatial development and as the reproduction of land concentration characteristic of the Brazilian land tenure. Modelling the evolution of frontiers firstly colonised by family farmers, many authors show that the colonisation policies and the economic contexts lead to the rapid development of extensive cattle ranching and pasture, which significate the deforestation of the forest and the concentration of the lands in the hands of a few landowners. The current policies and economical factors lead to the repetition of the old Brazilian model of spatial expansion, characterised by land concentration and extensiveness.

But the late 90 has been characterized, in Amazonia, both by the emergence of a sustainable paradigm which wishes to organize the policies of regional development and by the importance taken by the family farmers in the public policies. But at the same time, the Amazonia has been more and more integrated into the globalization, which would consolidate the economics patterns linked with the deforestation.

Our aim in this communication is to make, by the way of a multidisciplinary approach, the balance of those contradictories logics in an Amazonian frontier, in the South East of Para, Brazil. A global point of view shows that the predominance of the economic logics leads to the development of cattle ranching. The soil poverty and the socio-economic context explains that this agriculture is, economically speaking, the most profitable. It's supposed to lead to land concentration and rapid degradation of the environment. But using a typology of the farmers adaptations to this context, we show that locally, the growth of cattle ranching is not the only way used by family farmers to stay in the rural area. We think that a new rural area is emerging, combining deep social transformations, strong link with the towns and mixed farming. These dynamics can be seen as a possible path to sustainability.

1. Balance of the nineties : the irresistible development of cattle ranching

1-1. Deforestation and cattle ranching : two faces of the same problem

Most of the authors agree to conclude that during the last ten years, the rates of deforestation increased significantly, linked with the development of cattle ranching. Although the nineties were the years of the emergence of the sustainable paradigm, which aimed to break with the policies inherited of the past, the balance that we can do at the beginning of the 2000 is pessimistic: « Although the alarming high rate of forest loss form 1978-1989 (1.98 million hectares per year) declined somewhat from 1990-1994 (1.38 million ha per year), it rebounded to a high level from 1995-2000 (1.90 million ha per year) » (Laurance et *al.*, 2001 : 305). We can conclude that the deforestation did not stopped neither with the development of an environmental legislation nor with the politics of sustainable development.

The colonisation in Amazonia is characterised by the conversion of the forest into pasture: « On the four million Km² portion of Brazilian Amazonia that was originally deforested (an area of the size of western Europe) the area deforested by 1998 totalled 551 782 Km², an area larger than France. At least 80 % of this is now under cattle pasture or under secondary forest in pasture that have been degraded and abandoned” (Fearnside, 2001: 1362). Understanding the deforestation rates means to explain why do pasture and cattle ranching have such a rapid development. This is the key of the understanding of the reasons of the failure of the sustainable policies failure.

1-2. The three causes of the cattle ranching development

Usually, three explanations of the cattle ranching development are being advanced :

The first one is based on the Brazilian land tenure, and on the opposition between big landowners and family farmers: the deforestation would be the consequence of social relations unfavourable to smallholders. The family farmers are, from that point of view, the land-clearers of the so-called *fazendeiros* (Velho, 1972). Recently, Fearnside showed that the deforestation is due to the Brazilian land-tenure context: while the appropriation of land is not recognized by the State, clear forest is the only way to guarantee land tenure. A policy whose aim would be to guarantee land-tenure should be the way to limit deforestation.

This idea has been contested during the nineties by researchers as Mertens et al. : “It appears that securing land tenure seems to be not sufficient to reduce pasture expansion or promote forest conservation inside the property” (Mertens et al., 2002 : 290). For them, in a context of land speculation as in the Amazon frontiers, pasture is, from the economical and juridical points of views, the best land use: pasture creation increases the land value at lowest cost and for a long term. We observed that in the local land market, the price of an hectare of a pastured land is 5-10 times higher than a forested area. At the more, local market of food is propitious for pasture creation too : the prices of corn and beans decrease relatively to beef, and there are subject to crisis – while beef prices are quite stable. That’s why, “for several economic and technical reasons (such as, particularly, price stability and pasture management flexibility), cattle ranching, and especially fattening, appears to be a very low-risk activity, in comparison with others agricultural activities” (Mertens et al., 2002: 285). The farmers are then seen as economic actors, which develop strategies of land speculation: “Whether for economic, juridical or agricultural purposes, pasture is seen as the best land use in the context of land speculation, even in the absence of a concrete speculation project. These three functions are present and combined in the strategies of most of actors” (Mertens et al., 2002: 284).

This kind of point of view is the base of the development projects which are established in Amazonia: the ONG’s attempt to increase the income of farmers in order to make the migration decision economically irrational. But the rationality of cattle ranching in Amazonia is a subject to great controversy: even when it is not rationale to clear forest to expand pasture, we still observe pasture expansion. That’s why some authors attempt to provide an cultural explanation of tropical

deforestation: “Although economic conditions play the predominant role in the diffusion of cattle ranching throughout both the Brazilian Amazon and other parts of the New World Tropics, cultural and institutional factors are also important (...). Pasture creation is consistent with the frontier “ethic”, an important cultural attitude that views the claiming and preparation of land as an heroic act that imposes civilisation on a passive and unproductive environment” (Walker et al., 2000: 687).

The economics, land tenure and cultural issues of deforestation are most of the time used to explain the deforestation rates in the Amazon Frontiers in the late 1990, in spite of the Brazilian and international efforts to contain it. Combining this issues, there is little way to imagine an other way than deforestation for a cattle ranching use of lands. Our aim in this paper is to look for experiences which can not be identified by sensor remote nor statistical analysis but which can constitute, if supported, a way to imagine an other use of the frontier lands. That is what we called discreet innovations.

2. Sociological issues of the cattle ranching spreading

2-1. Analysing the farmers as “subjects” using a multidisciplinary approach

Our goal need, to be reached, to participate on the debate about the kind of family farmers who are present in the frontier. Indeed, the free issues of deforestation analysed above see the farmers as passive agents or rational actors: The process of decision making is seen as a response to an economical or juridical context or to cultural *stimuli* inherited from the culture of the farmers. We would like to use an other kind of perspective, a geographical point of view which aims to seek a balance between a subject-based and structure-based explanatory frameworks, recognizing that the farmers are able to decide the way they will manage their land; that’s mean that they do not only have objectives which are economically rationales relatively to their context, but that they develop those strategies to reach social goals. The management of the land is a day to day process, that depends not only on the economic and juridical context, but even on the agricultural knowledge of the farmers and their objectives. Explanations of cattle ranching expansion by a “frontier ethos” are not satisfactory to sum up the “cultural” reasons of deforestation.

This comprehensive approach has three consequences on our methodology:

- Firstly, we can not use a statistical nor sensor remote methodology: they are useful for a contextual approach, in order to know what are the tendencies. But they can not been used as explanations of the observed behavioural. So we made idiosyncratic analysis in a case that looked interesting in regard of the Amazonian context, the reference locality of Benfica in the micro region of Marabá (Eastern Brazilian Amazonia)
- Secondly, if neither the context nor the culture are satisfactory to explain the cattle ranching spreading, we must observe different behaviourals, depending on the knowledges and the objectives of the families.

- Thirdly, as we want to understand day to day processes, we used methods of life course research (Giele and Elder, 1998): that means that we did semi structured interviews with some farmers who faith in us and have time to spent to answer to our questions. This limit the number of person with who we can work.

- Finally, we aim to combine an agronomical and a sociological approach. The agronomical approach aims to understand the history of the smallholdings and the main stages of its course; doing so, they purpose a typology of the family farmers of the frontier (Biri Kassoum and Maître d'Hôtel, 2002; Brand and Siscard, 2003). The sociological approach aims to do a typology of the objectives and the social logics of the farmers (Arnauld de Sartre, 2003 a). We will cross in this paper these two points of view in order to explain the cattle ranching spreading.

2-2. The reference locality of Benfica

Benfica is a locality of the micro region of Marabá. Marabá is located at the eastern boundary of the so-called “Arc of deforestation”, which goes from eastern State of Pará to the western State of Acre (map 1). The forest of this region is rapidly converted into pasture: the map 2 shows the evolution of the deforestation of this region from 1988 to 2000.

The *assentamento* of Benfica is even more representative of this situation: table 1 represents the evolution of the land use of the *assentamento* Benfica from 1988 to 2000. The locality has been occupied since 1986, but the immigration began in 1990 and accelerated in 1994. In 1996, the occupation has been consolidated when the locality was chosen as locality of the agrarian reform after 1996. Since then, most of farmers received a bank loan to develop cattle ranching and perennials crops as coco and *cupuaçu*. As one can see into table 1, the perennials crops represent a very few part of nowadays land use of the locality: the farmers explain that the quality of the young plants which were sold to them were poor, and that they didn't receive any adapted training to plant it.

Table 1: Evolution of land use in the assentamento Benfica

	1988		1992		1996		2000	
Forested area (km ²)	64,633	93,82%	66,747	96,88%	66,072	95,90%	56,495	82,00%
Deforested area (km ²)	4,261	6,18%	2,147	3,11%	2,822	4,10%	12,399	17,99%
Pasture (Km ²)	3,33	4,83%	0,305	0,44%	0,36	0,52%	12,353	17,93%
Crops (Km ²)	0,931	1,35%	1,842	2,67%	2,462	3,57%	0,046	0,06%

Source: Naudts (2003)

The locality of Benfica is a good one to describe how do the farmers convert forest into pasture, to understand why they do so and finally to identify others possible path to permit a “ruralisation” of the frontier. Furthermore, Benfica has an important turn over of farmers families who come, stay a few years, before going back to town or to an other frontier.

2-3. *The migration as a way for a social reproduction of family farming*

The agronomical studies observed that there is an important diversity of family farmers in Benfica. If they agree about this diversity, there is a debate about its interpretation. Table 2 exposes the agronomical typology of farmers.

Table 2: Agronomical typology of family farmers in the assentamento Benfica

	Cattle ranching	Number of cattle	Other livestock	Perennials crops	Area (Ha)	Name of the type
Type 1	No	0	No	No	38	Without cattle
Type 2	Yes	80	No	No	70	Annual crops and cattle
Type 3	Yes	400	No	No	250	Specialized in cattle with annual crops for feeding
Type 4a	Yes	400	Yes	Yes	200	Diversified
Type 4b	Yes	90	Yes	Yes	75	
Type 4c	Yes	15	Yes	Yes	50	

Source: Biri Kassoum and Maître d'Hôtel; Brand and Siscard (2003)

For Biri Kassoum and Maître d'Hôtel (2002), this typology is the proof that one can observe an important diversity in the family farming, and that taking this diversity into account opens new ways of finding the conditions for a sustainable agriculture. But analyzing this typology in a temporal perspective, Brand and Siscard (2003) observe that all types, including the types of diversified agriculture, have a rapid evolution into a specialization as cattle ranching: type 1 is beginning a strategy of "*cattelisation*", but it is not possible to observe it yet because they arrived recently and did not receive any bank loan. Type 2 and 3 were yet specialized into cattle ranching, while the diversity of type 4 is reducing: they analyse the case of one farmer who had a diversified plot, but who's developing into a specialisation in cattle ranching. Type 1 and type 4c will probably let their plot to bigger farmers, while only the farmers who can accumulate a sufficient quantity of land will stay in the locality. For them, the turn-over of farmers that have been yet observed is the beginning of the process of land concentration.

To conclude, for Brand and Siscard, even if a synchronic analysis of the family farming shows that it has a great diversity, a diachronic analysis leads to conclude that this diversity is reducing when the farmers adapt their agrarian system to their economical environment. This conclusion is convenient with the analysis seen above.

We can, firstly, show a limit of this conclusion when doing a sociological typology of those farmers. Most of the farmers who went off the locality were not, probably, the same kind of farmers than those who settled. It depends on the definition of family farming. A minimalist definition of family farming would be to say that a family farmer is one who does not use, in his plot, hired labour.

But in Amazonia, this definition is dramatically reducing the reality: a lot of landlords, even in the smallest, do not have any agricultural project nor agricultural past. They've lived most of their life in towns, and decided to go into a rural area when they saw any interest in doing so. The struggle for land is a lucrative activity, not only for the biggest: a small farmer can stay in a plot a few year, time for his land to take advantage of the valorisation of his land on the local market. The initial turn over that has been observed in Benfica is probably due to this kind of land speculation. Those persons can not be confounded with family farmers: even if some of them will probably settle in the locality, maybe as farmers, they do not have the same values than family farmers who have an agrarian tradition.

The farmers who have this tradition are sons and grandsons of farmers, and came in Amazonia looking for land for themselves and for their sons. Their projects are closely linked with agriculture, and the social organisation of this families can be analysed as a peasant one (Mendras, 1976). Most of the time, those family farmers do not arrive at the beginning of the colonisation of a new frontier since this period is a difficult one: not only because the land tenure is not guaranteed yet, but because most of the time the access to school for the children is difficult, there is no road to commercialise the products, etc. That why they buy the land from the first ones.

The problem is to explain why those farmers decided to specialize themselves in cattle ranching, even when they know that this system is not sustainable, that they will not be able to transmit this land to their sons. Indeed, the problem of cattle ranching is that it is most of the time associated with very low densities of cattle (one, or less, cattle by hectare). Hardly can a family sustains itself with one single plot: in this extensive system, they need various plots to develop an economically viable cattle ranching system. All the families can not stay in the same land, and it is already more difficult for them to give a valuable land to theirs sons, especially if they have several sons.

Indeed the problem is to explain why do family farmers develop agrarian systems which would not lead to their family settlement. Brand and Siscard present the cases of two family farmers, one with a sustainable agrarian system, one with a not sustainable one. The first one will settle in the locality with his family, while the sons of the second are already migrating into an other locality which is yet forested. They show that migrating is not necessary, even when one has chosen a cattle ranching system: analysing the case of the farmer who, from their point of view, developed a sustainable cattle ranching system, they show that it can be sustainable if the farmer has capital, knowledge and a real strategy of settlement in the area. This kind of conclusion has been led out by others researchers who worked in Amazonia (Ferreira, 2001): when this density of cattle by hectare is near of 2, and when the farmer uses adapted species of grass, fragments his plot using the different parts at different moments of the year, he can stay in the same area without exhausting the soils. But it demands an important investment in work (using hired work) and in wire fence. But for those farmers, having money and time enough to invest in managing their cattle is difficult.

So why are those two farmers different? Why did one succeed in managing a sustainable farming system while most of the other ones did not succeed in? Those two farmers do not have the same sociological profile: the family of the first one, who's cattle ranching system is not sustainable, can be considered as a peasant family: there is a great number of children, and most of them will be farmers; their all life long they have been farmers, and they have done several migrations yet, including in the State of Pará. Migration looks like a way of reproducing their family: as we said above, it is difficult for a peasant to give a land to each of his sons. Therefore, the Amazonian peasant families want their sons be farmers. It is important for two reasons: the first is that those farmers are not at the bottom of the social scale. They are land owners, and they are relatively independent in relation with bigger land owners. So they want their children be at least as independent as they are; if they go to work into a city, they probably won't concede any independent job, which would be, for them, a descent into a devaluated status. The other reason is even more important for them: these families are characterized by unequal forms of work in the father's favour. Once the children are married, the father manages to maintain labour relations to his own advantage by creating a system of duties regarding the land. The fact that the newly-wed couple uses land provided by the father or works land owned by him places it under a tacit obligation to return his gift (of inestimable value) in the form of labour. This is a way for a farmer to be sure that he would be helped when he will be elder, and currently he has a good help in his land.

Therefore, it is difficult for family farmers to buy any land in an old colonisation area. The land market is closed: while buying a new land for one or two sons is impossible for most of those farmers, they are sure that if they sell a pastured land, they would be able to buy from 5 to 10 lands in a new colonisation area. Even if they have projects to settle in the locality, and knowledge to manage the land in a sustainable way, they won't concede to give this land to their numerous sons. Indeed, those family are very large: the smallest family we met is a 6 children family, while the biggest is a 16 one. Even if they give a land to every son, while the daughter goes to their husband land, it is impossible for them to buy 3 or 8 lands.

From this point of view, migrating should be understood as a peasant strategy who's objective is to ensure the social reproduction of the family (Arnauld de Sartre, 2003 a). The land speculation is a way to reach this reproduction: their strategies are adapted to this context.

Therefore, the other farmer, one with the sustainable system has an other sociological profile. This profile, and other farmers ones, may be interesting to understand the reasons of his possible settlement in the locality.

3. The social condition of the discreet innovations

If migrating is as logic as shown, why do we observe farmers who succeed in settling themselves in the localities? The colonisation is yet too young to allow us observe, in Benfica, family settlements;

but the analyse of Brand and Siscard shows the case of one farmer who's settling in the locality; the field work of others members of our research team allowed us to observe others families who want to stay in the locality and are adapting their strategies depending on this goal, while our PhD work led us to the same kind of conclusion: that's what we called a "ruralisation of the frontier" (Arnauld de Sartre, 2003 b).

Why did we speak about ruralisation? Ruralisation means that a rural society is emerging in the frontier; this society is no more a peasant one, because the social characteristics of the peasants are disappearing. A new kind of family farmer is appearing, most of the time within the new generation (children of the oldest peasants): they are not land speculators, but persons who want to live in the rural area in good conditions. That means that they don't want to do a new migration into a yet forested area, nor to go to the city. They use, to stabilise themselves, some of the innovations of the sustainable agriculture. This is the case of the farmer observed by Brand and Siscard (2003) and Biri Kassoum and Maître d'Hôtel (2002). But they are not only farmers: they work out of their plot, as dairy workers or, most of the time, as skilled workers; and their wife are working, earning money and, maybe for the first time in those rural areas, being recognized as an important part of the household system. Most of all, they do not have as many children as the peasants, and they do not want them to be so farmers.

3-1. The settlement wish

As we said before, even if migrating into a new colonisation area can be interesting from an economical point of view, it has an important social cost. This cost was less important than the benefit of a migration while the most important for those peasant families was to settle their sons. But now, a new perception of this couple benefit/inconvenience leads the youngest to refuse a new migration. This is particularly clear is the case of the women. Usually, the immigration takes place when the young were just married, while they need a new plot to settle: marriage and having a plot are inextricably linked. That's what this farmer explains:

"[...] I thought that she was the right person to build something. I thought that it was the first thing, afterwards I bought a plot, at the same time I bought a plot in the village, 15 km away, and I had the crazy idea of going there, 15 km with no road, nothing. [...] We'd just got married, we'd been married for a month, I'd bought a plot and I'd made up my mind, and when everything was ready to go to the plot she said: "You go alone, I'm staying here, from here I'm not going back to the travessão, I can go to my parents again, but to your plot I'm not going", so I gave up the idea."

This couple did not migrate since he gave up the idea of settling on his plot because his wife refused to live there. In the framework of a farmer's condition it would have been meaningless to go to the plot alone, for farming is a family business. This kind of comportment has been already observed by others researchers (Le Borgne, 1998), and it seems to be generalizing (Arnauld de Sartre, 2003 b). That not means that the colonisation of new lands will stop: firstly because not all the farmers want to settle their family; secondly because there is a great number of landless farmers in Brasil yet, who

want to have access to new lands and are ready to do a migration for that. But it can signify that less and less young farmer do accept to colonize a yet forested area.

3-2. The double and multi activity of the farmers

If migrating is a way, for a family, to reproduce itself, the settlement will be a problem for its reproduction. Two kinds of solutions are being found in order to permit a settlement of the families.

First, the young do accept what their parents avoided: being in employment. For their parents, it is as if they would be reduced to the ranks of the employees after having been in a senior position. But the young do prefer being employed than going into a new frontier (Le Borgne, 1998). One can distinguish three kinds of multiactivity.

The first one is linked with the wish of young farmer to have his own plot: he is working as employee for an other until he earns enough money to buy his own plot. This kind of multiactivity is not a problem for the peasants since the youth do not have the opportunity to work in his parent's plot and since he succeed in buying, even a few years after, his own plot. But we can observe than this situation, perceived as temporary, can last indefinitely. Some farmers did explain us that they prefer this situation rather than migrating into a new land. But some farmers can buy their own plot, and develop their cattle ranching system. This is the case of Noé, who has been interviewed by Brand and Siscard. He is the farmer who has a sustainable farming system: he worked during 20 years as employee of *fazendeiros*, and settle himself as independent farmer recently. He learned how to manage cattle during his past experience, and earned money enough to invest in his plot (he made various parcels of pasture separated by wire fence, he maintains his pasture with hired work and has a sufficient number of cattle by hectare). Today, Brand and Siscard consider that he has a sustainable farming system, and that he can settle himself. Considering that he has only two sons and one daughter, the transmission of the plot will not be a problem since one of his son decide to do an other activity.

The second kind of multiactivity is linked with the farming system too: it concerns farmers who use to hire themselves in order to earn money enough to invest in their plot. If it is a quite common and well known multiactivity, we can observe that it is quite important when the farmer has a skilled work: teacher, mechanic, chain saw operator, driver, etc. Those activities allowed the farmer to earn an important amount of money, that he can invest, as did Noé, in his plot.

The third kind of multiactivity is independent of the farming system: farmers who don't have land enough to be only farmers use to work as hired workers in order to complete their resources. This kind of situation is too well known and developed, but one can observe an important difference between the past situation and the current one: while it was a suffered and shameful situation for the peasants, it is a choice for the "new farmers" we observed. Considering that being so farmers is a painful and non lucrative condition, they decided to confine the agriculture only for the food production; they work out of the plot to buy the consumer goods since they have some urban way of life. The peasant discourses

about this kind of multiactivity, which most of the time condemn it, suggest that it seems to become more and more important in the locality.

As we can observe three kinds of multiactivity, we must note the rapid development of double activity, I mean the work of the wife. Traditionally, in the peasant system, the wife work is usual. But it is shameful, for a peasant, to need the work of his wife (Garcia, 1983). Indeed, the ideal position is when a peasant sustains alone and with his son's work the family. When he needs his wife and daughters work, that's mean that he is "weak". Most of the time, particularly in the frontier, the women use to work in the plot: in our sample, we have been surprised to notice that an important part of the cash money of a plot came from the women's work. But it remains a hide work, and hardly the husband or his wife speaks about it. Now, one can observe that the women are proud to work in the plot with their husband, or outside the plot to earn money for the family; and it does not make the husband feel uncomfortable, specially when the women work is linked with consumer goals.

Double and multiactivity allow the farmers to settle themselves in the locality of Benfica, and do not make the migration as the only solution. That's why we decided to speak about a rural stabilization of the frontier: it is not only by the way of agriculture than the farmers succeed in settle themselves. They use the resources of their environment by working out of their plot. The frontier is not only an agrarian frontier, but a rural one. The peasant way of life looks to be disappearing: their values, as for instance the refusal of hired work or the wife work, are being replaced by other values, influenced by the urban way of life.

3.-3 The fertility rate decline

But the fact that allows us to speak about a decline of the peasant values and the transformation of the frontier is the fertility rate decline. While the peasants had until 16 children, their sons and daughters do not have more than 4 children. Even if we can notice than the eldest women says that they wanted to have a few children, only their daughters do succeed in reducing the number of children in their family. Even if we don't have any general data on the locality of Benfica, we can confirm with our sample that the phenomenon which has been observed in others frontier regions (Hamelin, 1992; Léna and Maciel da Silveira, 1997; Arnauld de Sartre, 2003 b) can be also observed in Benfica. Even if they have 10 or 11 brothers and sisters, the young couples decide to limit at 2 or 3 the number of children of their family.

The reduction of the number of children is a phenomenon which, if we associate it with the discourses about it, has some important consequences on the peasant logics. The couples use to justify their choice as Manoel did:

“Interviewer: And now, do you want more children?”

“Manoel: Listen, I think we're going to stop there. My wife hasn't had an operation and nor have I, but I think that four sons is enough.”

“Interviewer: It's enough?”

“Manoel: Yes, I think so. There are people with many sons, but they don't have the means to take care of them properly. I'm giving my children an education. I'm going to enable them to study for as long as I can, because we can't do everything for the children because we haven't got the means ...”.

From his point of view, it is not possible yet to have as many children as their parents had, because they can't take care of many children as they would like to. It can be explained by the fact that the youth want their children study. This fact reveals at least the transformation of the strategies of the family reproduction: their objective is no more to make the children be independent peasants, but, by the way of the studies, to allow them to be someone else than a peasant. One can say, using the Philippe Aries (1979) theory, that this transformation is the sign of a deep social alteration: the child has a new place in a family, he is no more part of its patrimonial who's in charge to perpetuate it, but he is at the contrary one person who requires a particular care. This fact can be observed when the parents say that they must take a particular care to bring up their children. This would signify the end of the peasant society.

Conclusion

Even if the cattle ranching spreading is rapid and seems inescapable, we can observe social transformations which can mean that family farmers are in process of settling in an Amazonian frontier: extensive ranching systems, which was from economical, juridical and above all domestic reasons, the best land uses, are now problems for farmers who aims to find ways to settle themselves and don't want anymore to migrate in a yet forested area. The case of Benfica allows us to speak about a process of ruralisation of the frontier, even if the movement is yet weak and needs to be supported by adapted politics. Indeed, those farmers did rarely use the sustainable agriculture innovations, and most of the time they succeed in settling themselves by the way of multiactivity and a reduction of the family rates.

But this stabilisation is facilitated by the fact that the localities as Benfica are beneficiating of bank loans which inject cash in the frontier. This is why the development of multiactivity is so easy. We can wonder what will happen when they will have to pay back them: will they have money enough to do so? Will they continue to use hired work to develop their plots?

To conclude, we can say that we identified, in this paper was to identify, two points :

- Firstly, on the issues of deforestation, we argued that even if the migrations and the rapid development of cattle ranching can be sown as a land speculation, this speculation must be replaced into the strategies of family reproduction of the Brazilian peasants. Migrating is, for them, a way to buy a land for their sons and repeat, by that way, relations of a familiar dependence which insure them workers. This strategy must be replaced in his context.

- Secondly, we would like to show that these strategies are being transformed by the modernity: some farmers, especially the youngest, don't want to reproduce the peasant way of life and develop strategies of settlement which include reduction of the number of children and the systematic use of the multiactivity.

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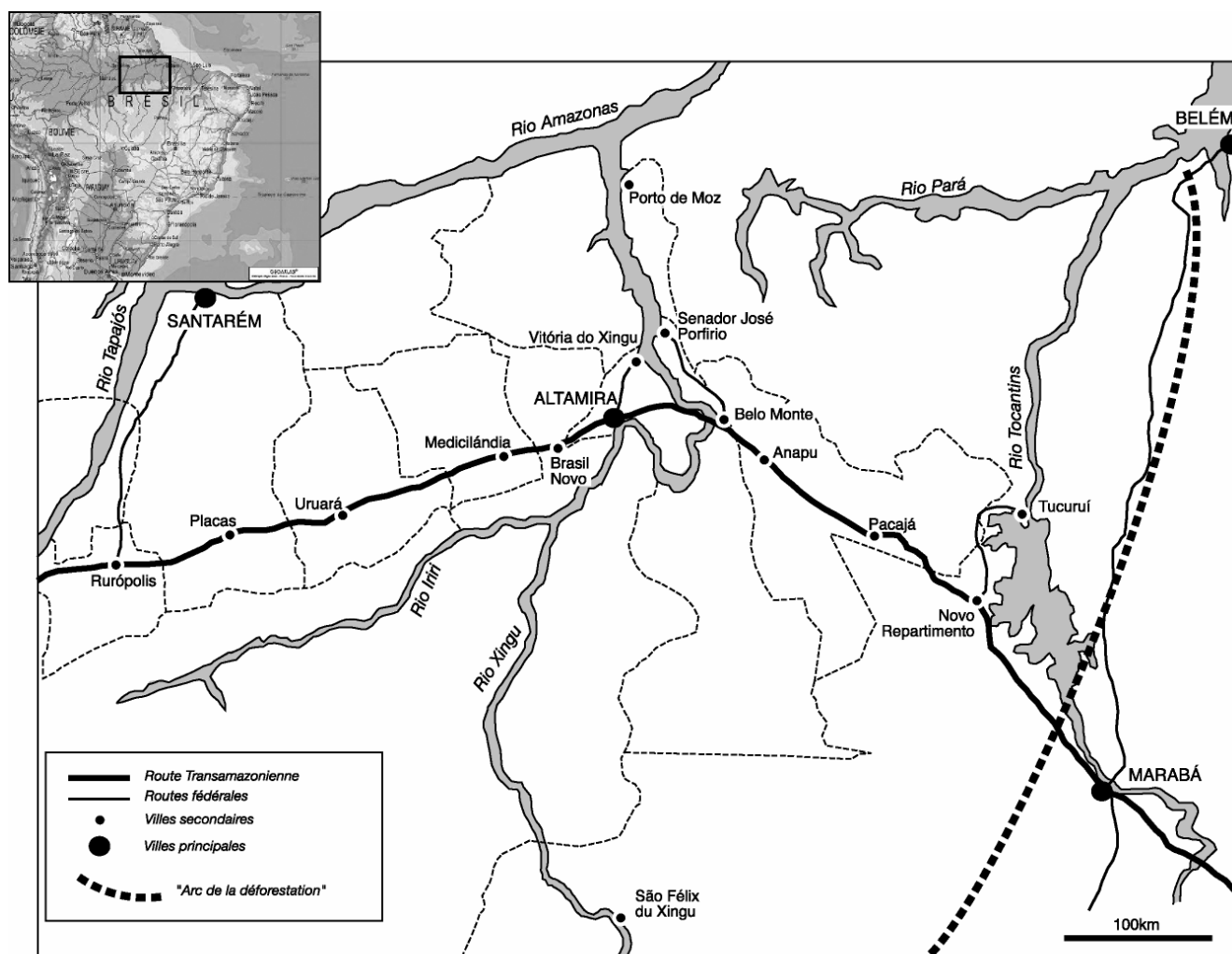
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Map 1



LE FRONT PIONNIER DE LA TRANSAMAZONIENNE,
UN ENJEU STRATÉGIQUEMENT IMPORTANT POUR L'AVANCÉE DE LA COLONISATION

CARTE 1

Carte : LAET (Marc Laigneau et Xavier Arnaud) et Monique Morales (UMR SET)

Map 2

