The Last Move of the *Ribeirinho*: Indigenous Sovereignty and Servitude in the Middle and Lower Rio Negro Basin, Brazilian Amazonia

by

Francisco Boavista Pontual

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Committee in charge:

Professor Claudia J. Carr, Chair
Professor Miguel A. Altieri
Professor Anthony Roger Byrne
Professor Jean Philippe Boubli

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ABSTRACT

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The *ribeirinhos* (mestizo or "generic indian" river dwellers) amount for the largest indigenous contingent in the Pan-Amazonia, yet have remained virtually invisible and unrecognized in spite of being a living and diversified cultural entity undergoing their ethnic transfigurations since the 18th century. During the past decades, many *ribeirinho* households from rural communities located in the Middle and Lower Rio Negro Basin have left behind their subsistence grounds and moved to the nearest towns in what seems to be an anomalous phenomenon of rural-to-urban migration. The observed migrations seem to lack the most common Amazonian push factors — such as land grabs, loss of ecosystem services, and forced displacements; while the common pull factors — such as access to urban-based public services and the job market — are either of very low quality or simply not available.

In this study, I wanted to understand who are the present-day Middle and Lower Rio Negro *ribeirinho*, how their livelihoods have been changing throughout the centuries, why they have such high mobility and how can it serve their long-term survival strategies, and how they seemed to keep a say about their lives after many centuries of service dedicated to a myriad of patrons?

I provide a comprehensive historical background and analysis on the *ribeirinho* ethnogenesis and general history, as well as the origins and evolution of patron-client relationships during the past four centuries. Based on the contexts derived

from this initial analysis, I designed and conducted the first Middle and Lower Rio Negro regional scale household survey of *ribeirinho* families and rural communities to shed light on their present-day identities, socio-political organization, cultural perceptions and expressions, household micro-economy, livelihood dynamics, drivers of mobility and main survival strategies. I argue that the apparently paradoxical exodus from a supposedly "better" rural existence to a "worse" semi-urban or urban one is in fact a present day expression of *ribeirinho* historical survival strategies that kept them alive as cultural entities, and is now delivering a response to opportunistic circumstances of the 21st century.

The future of the *ribeirinhos* and the Rio Negro basin depends on the development priorities and policies yet to be adopted and implemented by the Brazilian government. The *ribeirinhos* have been the main driving force of all Amazonian socio-economic cycles, where they have played roles of servitude as a means of keeping their sovereign capacity to self-determine their own way to survive and take care of their families. This study suggests that — if the coercive patrons are substituted by a supportive and functional State — the *ribeirinhos* seem to be willing to shift their livelihoods and use of their profound ecological and geographical knowledge and regional experience towards socio-economic activities associated with sustainable rural development projects.

* * * * * * * * *

I dedicate this dissertation to the *ribeirinho* who taught me that survival is only truly meaningful when it is used for taking good care of family and friends.

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AKNOWLEDGEMENTS

Nine years ago, as a Brazilian prospective grad student working with the human dimensions of conservation biology projects, I took a deep breath and made a phone call from Rio to Berkeley. The goal was to make the first voice contact with a potential advisor and talk about the perspectives concerning an application to the PhD Program at the Department of Environmental Sciences, Policy and Management. In this first long distance contact, I felt a familiar sensation while talking to the vibrant faculty on the other side, and even more while I struggled to keep track at the super rapid pace of her straightforward and good humored spoken English.

Now, almost a decade later, I want to thank Claudia J. Carr — my guiding professor, chair of my dissertation committee, and friend — for having accepted me as her new grad student back in the Fall 2006 semester and for having "tortured" me, as she likes to say, since then. I am eternally grateful for her to have always pushed me beyond the limits that I was observing, and for remaining determined to show me that I had yet more potential to deal with the complex questions that I had set out for myself. Claudia is probably the only person I ever have met who can think beyond my ongoing wish to have a true sense of the universe. Yet she has offered this in a grounded way that may seem easy when one sees her doing it. To try and place this into a broader perspective, it took me these last eight academic years to reach what I feel is close to my potential.

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Apart from excellent academic support, I was also blessed with a network of friends who were so helpful in preserving my sanity during the grueling pressures of grad school, ever more during the data analysis and writing phases of my work. I wish to thank for the invaluable guidance provided by Brandon Williams-Craig, who worked as my dissertation coach; Jurgen Braungardt and Eduardo Alexander, for emotional support and for always pushing me towards personal and academic growth, and finally a very special acknowledgement for Andrea Fuzimoto, my ex-

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A dissertation can only be accomplished with a great deal of teamwork, and I was also lucky enough to have worked with the best. My immense difficulties in coping with the challenging task of writing in English were made more palatable for me, as well as for the eventual reader, because of the excellent copy editing work performed by Debra Knowles and Lenore Norrgard. All the original maps were created by Laura Daly, who patiently accommodated my never-ending concern with detail. Data entry and analysis were extremely difficult until I received the life saving support of Márcio Maia Vilela, Miguel Quartin. Wei Zhao showed me a means of handling my huge data set, originally collected on paper questionnaires. Wei also guided me through the logistic regressions, showed me how to run them by myself, and helped me to interpret the results.

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CHAPTER 1: THE *RIBEIRINHOS* AND THE RIO NEGRO

> *The population is probably five or six thousand, of which the greater part are Indians and half-breeds; in fact there is probably not a single person born in the place of pure European blood, so completely have the Portuguese amalgamated with the Indians.*
>
> Alfred R. Wallace ([1853] 1994:164)

Figure 1.1. *Ribeirinho* crossing the Rio Negro *(Photo © F.B. Pontual)*

An Interdimensional Transition

Introducing the Problem

In the Middle and Lower Rio Negro basin, located in Northwestern Brazilian Amazonia (see Figure 1.2), indigenous rural-to-urban migration is on the rise while non-governmental and governmental institutions are carrying on a decade-long intermittent process of demarcating three new *Terras Indígenas* (Indigenous Reservations) in the region (MPF/AM 2014a). Many proposals for bilingual indigenous rural schools and community-based rural development projects are being negotiated and implemented. Meanwhile, more and more *ribeirinho*[1] (river dweller) families are leaving behind their subsistence grounds and moving to towns and cities along the basin. Why are these indigenous households abandoning their traditional communities to take chances in the urban sphere?

Fig. 1.2. Northern South America showing the location of Amazonia across the borders of nine countries. The Rio Negro and Rio Amazonas are highlighted (Original map by Laura Daly).

[1] The *ribeirinhos* (aka *caboclos*) are a mestizo traditional people (Harris 2000, Lima 2006, Parker 1985, Wagley 1985) also considered as the Amazonian generic indians (Ribeiro 1995).

Anomalous Phenomenon

I was told that an ever-smiling teenager that I met a couple of years earlier, at the isolated indigenous community in which he used to live, had murdered another young man as part of a failed drug deal. This happened after his entire household had moved from a densely forested rural area to Barcelos, a 16,000-inhabitant town in the middle Rio Negro basin. Making the picture even grimmer, his older sister had become a dancer in a nightclub and, subsequently, a teen prostitute. His parents no longer hunted for bushmeat and had ceased gardening the cassava used to produce *farinha*[2] (roasted flour), their main staple. Only some occasional fishing served as a reminder of their rural livelihood. The entire household was now living on less than $100/month from a family grant (*Bolsa Família*) provided by a conditional cash transfer program from the Brazilian Federal Government.

As part of the conditions for payment, school-aged children had to be enrolled in class so that the family would remain eligible to receive benefits (see Chapters 5 and 6). Although public education is supposedly free in Brazil, the fees for mandatory uniforms and educational materials charged in Barcelos were too high for the household to cope with, and two children could no longer attend school, diminishing even more the family income. It took less than 12 months for a structured, functioning indigenous household that left its traditional community and rural livelihood to disintegrate in the shantytown its members had chosen to move to.

This snapshot of an indigenous agrarian transition in a rapidly changing world has become widespread in the 20th century. Indigenous and other traditional peoples' rural-to-urban migration is on the rise in every continent (Corry 2011, Lall et al. 2006, McCatty 2004). In the Brazilian Amazonia, about 76% of the population is already living in urban areas, and seems to be catching up with the national rate of 85% (IBGE 2012a). In many Amazonian regions, particularly in the frontier development ones, the typical push and pull drivers for migration — land grabs, forced displacement, access to urban public services and jobs — are at work causing the rural exodus (Carr 2009, Robertson and Pinstrup-Andersen 2010). Throughout the arc of deforestation[3] (Lui & Molina 2009) (see Figure 1.3), industrial logging and cattle and soy *latifúndios* are displacing indigenous

[2] *Farinha, farinha-d'água*, or *farinha-puba* is the artisanal roasted flour produced from fermented bitter varieties of manioc or cassava (*Manihot esculenta*).

[3] The arc of deforestation is a belt that comprises most of Amazonia's extractive activities and socio-environmental degradation, starting on the Eastern side of the mouth of the Amazonas river, heading South, and then Westwards until the border with Bolivia, following the ecotone (transition zone) where the Amazonian rain forest and Central Brazilian savannas meet.

families, peasants and small-scale extractivist households (Carr 2009, Bunker 1988, Moran 1981, Wright and Wolford 2003). Gunmen working for the local logging industry have been harassing and chasing nomad hunter-gatherers living inside the Awá Indigenous Territory, one of the last patches of Amazonian forest left in the state of Maranhão (Survival International 2012, Rodrigues *et al*. 2011).

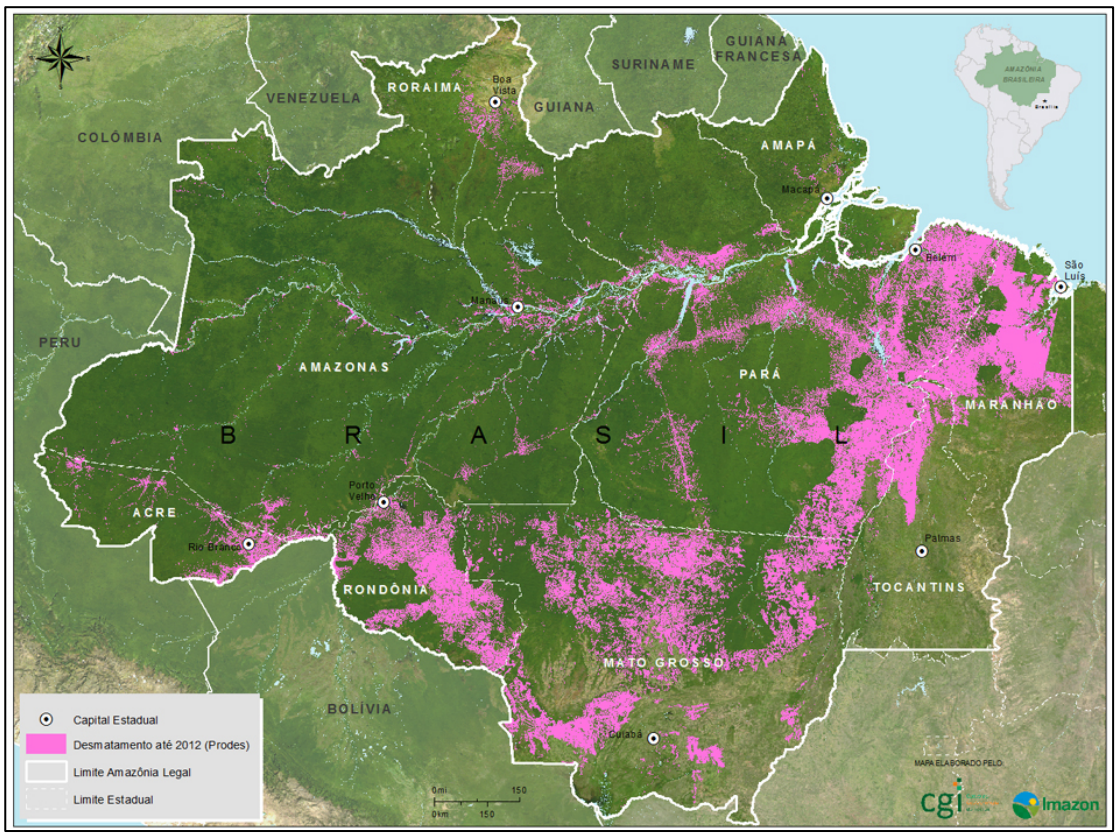

Figure 1.3. The Brazilian Amazonia's arc of deforestation as of 2012. Deforestation is highlighted in pink (Map © Imazon.org).

In the lower Xingu river, Altamira, the 100,000-inhabitant town chosen as the urban headquarters for the construction of the Belo Monte dam is expected to double in size due to the migration of people looking for jobs or other economic opportunities (Brum 2014, Folha 2013). In the state of Mato Grosso do Sul, a "private militia" hired by ranchers killed at least two Guarani leaders who were resisting the invasion of their officially recognized indigenous reservation (Brum 2012, Survival International 2013).

In the Rio Negro basin, by comparison, social unrest motivated by disputes over land and natural resources seems to be much less intense or, at least, apparent (pers. obs.). Throughout the world, the rights of securing and enhancing traditional territory, language, socio-political organization, livelihoods and self-determination

have been the main indigenous lines of resistance against acculturation, encroachment and even physical extinction (Carr in press, Corry 2011, Niezen 2003). The indigenous NGOs working in the Rio Negro reinforce these same rights and goals to the point of turning them into mantras. However, many households of multi-ethnic rural communities seem to be heading in the exact opposite direction, by trading their secure land and sources of subsistence for an uncertain life in the chaotic regional cities. All the families that still live in rural communities that I managed to interview share a similar view of the urban sphere: violence is omnipresent, everything has an expensive price tag, and jobs are almost impossible to find.

In other words, an anomalous kind of rural-to-urban migration seemed to be happening in the middle and lower Rio Negro basin since the typical push factors, such as land grabs, loss of ecosystem services, and forced displacement, are not reported, while the common pull factors, such as access to urban-based public services and job market, are either low quality or not available as described by the families going to the nearest towns and cities. Although their rural communities may be a far cry from ideal places to live, with very limited public services and even fewer job opportunities than the cities, they still arguably provide much safer places to live since households there have secured their access to land that provides them sustenance from the gardens, rivers and forests.

Barraco de Novato

In 2010, about six months before the teenager's household tragic events related above happened, I took a speedboat in Barcelos to pay a visit to their new urban home. A field assistant informed me the family was living in the outskirts of the city, in what had become a poor and entirely indigenous neighborhood, as the city was growing fast and without planning. Although theoretically there should have been a road to their new address, heavy rains had turned it into an unsurpassable muddy obstacle, hence my decision to travel through the calm waters of the Rio Negro to reach their home.

During the short boat ride I recalled the first time I had met the teenager, back in 2008 and the ensuing conversation I had with his grandfather, a Baniwa indian[4]

[4] In this dissertation, I use the noun indian as in *índio*, respecting the way Brazilian indians have chosen to denominate themselves (Ramos 1998). Columbus' men coined the term when they first met Amerindians in the West Indies, hoping they were aborigines from the Indian subcontinent, instead of the New Word (Hemming 1987). Furthermore, in Portuguese, Indian (from India) is spelled *indiano*.

who was the leader of their rural community. Inside the dark, spacious storehouse that was his preferred storytelling place, the grandfather educated me about the vicious cycle that had gripped and doomed many families in his community. In short, those families could not emancipate themselves from the embedded patron-client (*patrão e freguês*) relationships[5] that ruled the extractivism of non-timber forest products, such as ornamental fish and piaçaba palm fiber. "For more than 45 years, I've cut countless tons of *piaçaba*, working for many patrons. Never manage to pay my debts, but made many patrons rich!" After a long pause to light his tobacco pipe, he continued, "Today I'm free, and managed to help my elder son to leave that miserable life too. There is no future for anyone cutting *piaçaba*!"

With that memory fresh in my mind, I arrived at my humble destination. I jumped out of the speedboat and climbed the steep riverbank stairway to the plateau above where the plank wood houses were built. Locals directed me to follow a narrow path across old gardens and second-growth forest until I arrived at the right spot. The family I was looking for was living in a tiny triangular-shaped hut, a mere two-walled wooden structure covered with palm leafs so freshly cut they were still a vivid green that contrasted sharply to the charred trees that had been felled to make the one-acre clearing surrounding the hut. In a best-case scenario, it would take another seven months until the household could be roasting the first baskets of cassava tubers from this field to make their own farinha. When I entered the hut, the family members were eating some crackers and finishing the morning coffee from a battered Chinese thermos. At first, I was not recognized and had to remind them of when and how we had met before. As soon as I mentioned that I was the one who brought some *moqueado de anta* (smoked tapir meat) to their rural household and how we cooked a feast together, the old lady who had been silent in the back stood up, caught my hand, and said "God bless you Sir, welcome back to our house! Please don't mind our poor *barraco*" (hut), and offered me some coffee and crackers. Later, I asked about the kids and was told the older ones were at school while the younger ones were undoubtedly looking for something to eat, either climbing fruit trees or fishing. My visit didn't last long since there was an obvious atmosphere of discomfort surrounding my hosts. I thanked them for the hospitality and walked back to the improvised harbor where the speedboat was waiting to take me back to Barcelos.

Back in 2008, on my first visit to their rural community, I stopped on my way up the river to let them know I would be back a week later to talk to them about my

[5] "One of the most common forms of slavery found throughout the world in both ancient and modern times is debt slavery, also commonly referred to as debt bondage or patron-client relationships" (Rodriguez 2011:225).

prospective research. When I came back, the *moqueado de anta*, a gift from another community up river, acted as my free pass and safe conduct to ask them questions without raising suspicions that I could be working for a repressive institution such as the Federal Police or IBAMA (the Brazilian equivalent to the U.S. Fish and Wildlife Service). Still, this did not mean I was not labeled. Outsiders are always expected to be working for some governmental institution or NGO. In my fieldwork, I would present myself as a teacher from Rio de Janeiro, to identify my work goal as educational as well as to account for the origin of my accent. An outsider not associated with an institution can be considered suspicious, and *fazer pesquisa* (to do research) in Amazonian jargon means "to look for potential new mining fields." Therefore, I never presented myself as a *pesquisador* (researcher). In trying to figure out what I was doing on a nice boat traveling up and down the river, in the highly dichotomized Amazonian rural society, the locals were almost certainly identifying me as a patron at first glance. Although I did not realize it back then, I could also have been considered a "different" kind of patron, one more naïve, perhaps even generous. Regardless of how I was perceived, like everybody else I spent that night on my hammock in the *casa de apoio* (the visitors hut) not far from the river.

At daybreak, a medium-sized *regatão* (commercial boat) arrived at the community harbor. It came from Barcelos and had a *chata* (large cargo canoe) attached by heavy ropes to its port side. The boat belonged to a real *patrão* who was selecting and hiring a large group of *fregueses* (locals that work for credit) to go up-river to collect *piaçaba* for a period of three months or more. Throughout the entire day there was a frenzy of preparations, all to the amusement of a captive audience formed by the community's youngsters, from toddlers to late teenagers, and many adults. Porters were bringing things from land, while the boat staff was reorganizing the cargo canoe and its contents (e.g., fuels, machetes, axes, small outboard engines, farinha and many other food items). Finally, by late afternoon, the boat and cargo canoe were ready. All the *piaçabeiros* (who cut *piaçaba*) would be travelling in their own canoes. Typically, two or three single men would share a canoe, while families would travel on their own, taking their small children with them and leaving behind with relatives the ones old enough to attend rural school. At last, announcing its departure by frantically jingling the board bell, the white boat left port, taking with it the attached cargo canoe plus another dozen client canoes that were being towed like tin cans tied to the back of a newlyweds' car. Each of the tiny canoes was covered with zinc or palm leaf roofs, and packed with fresh fruit, clothes, hammocks, charcoal stoves, shotguns, tobacco, knives, fishing nets, and bony hunting dogs. The scene was so fabulous it was hard to believe. As this Amazonian fleet advanced into darkness and finally faded completely from sight, the rhythmic sound of the massive diesel engine could still be heard for the

next hour or so, due to the sinuosity of the river. Later, even the diesel drumming was gone and the night silence broken only by a few insomniac howler monkeys and busy pink dolphins. It was as if the motley towed assemblage of canoes, clients, and canines had been abducted into another dimension (see Figure 1.4).

Next morning the community was deserted. All adult men were gone except for the community leader and his elder son. Only women, children and teenagers were left behind. Among a group of kids playing with glass marbles was the taller ever-smiling one. It was while watching their game that I first met this boy who would end up in prison for the murder of an acquaintance. It was also on this very day that his grandfather and I had our chat about the *piaçabeiros*' vicious cycle. Hours before our meeting, while walking along the empty alleys and houses, I had noticed a humble hut covered with fresh green palm leaves. I asked him what was the hut used for. Laughing gently, he explained that it was a *barraco de novato* (newcomers hut), which can be quickly built when someone new moves into a community and is still on probation. I later found out that although it is how most people get started in a new place, it is also the lowest degree in the internal hierarchy of an indigenous community in the Rio Negro.

All these images and learning experiences from 2008 returned to my mind while I was navigating my way back to Barcelos after my sad short visit to the teenager's urban house. I realized that part of the difficulty his family had in "remembering" me was possibly due to the fact they were so embarrassed to meet me again, under such dire conditions. I could only imagine how difficult it was for them to have traded the comfort and status of their former rural community for a *barraco de novato* on the city periphery. When I saw the *piaçabeiro* families' canoes vanishing into the darkness, I had the sense they were transported into another dimension, but that was my limited subjective perception as a field biologist born and raised in a big city. Those families, including their small children, were just once more navigating upriver, surrounded by the familiar forest and embraced by the approaching night as they had been for generations. The decision to join another expedition with a *piaçaba* patron was likely both educated and logical, based on their life experiences, the hard realities of the power imbalances they faced, and knowledge of the risks and benefits involved. On the other hand, to what extent was the teenager's household decision to move to the city as well informed? Or was it rather a one-way trip into another dimension whose intrinsic risks most rural families could little imagine? Could they know in advance how to survive in a new world where experiences gathered during their rural existence would be of little value in the urban "jungle?" After attaining his freedom from a life of servitude as a *piaçabeiro*, the ex-community leader had marshaled his entire community to the city, little anticipating that he was probably locking them into

another vicious cycle, starting from scratch in a *barraco de novato* situated in a socioeconomic and cultural universe not fully understood….

Figure 1.4. A patron boat leaving the community towing client canoes (Photo © F.B. Pontual).

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The River of Hunger

The Rio Negro basin is the biggest black water river system of the planet, and the Rio Negro itself is the second largest tributary of the Amazon River, and the 7th largest river of the world in terms of discharge volume (Goulding *et al.* 1988, Prang 1996). The Rio Negro is also an exception to most large Amazonian rivers once it originates in the flat, away from the foothills of the Colombian Andes and the Guiana Shield (see Figure 1.5), one of Amazonia's oldest geological formations dating back to the Pre-Cambrian (Goulding *et al.* 1988). The Rio Negro flow towards the Southeast/South until it meets the middle section of the Amazon River (German 2004). The channel of the upper Rio Negro and many of its tributaries cut through ancient sandy and acidic soils whose mineral composition, low PH (2.9 to 4.2) and lack of a real dry season lead to a continuous lixiviation of humic acids from the forest leaf litter that tint the basin waters (Sioli 1975). The actual colors vary from green tea to dark black tea depending on the concentration of humic acids extracted from the litter. Indeed, the Rio Negro basin could be considered as the world's biggest natural cup of tea.

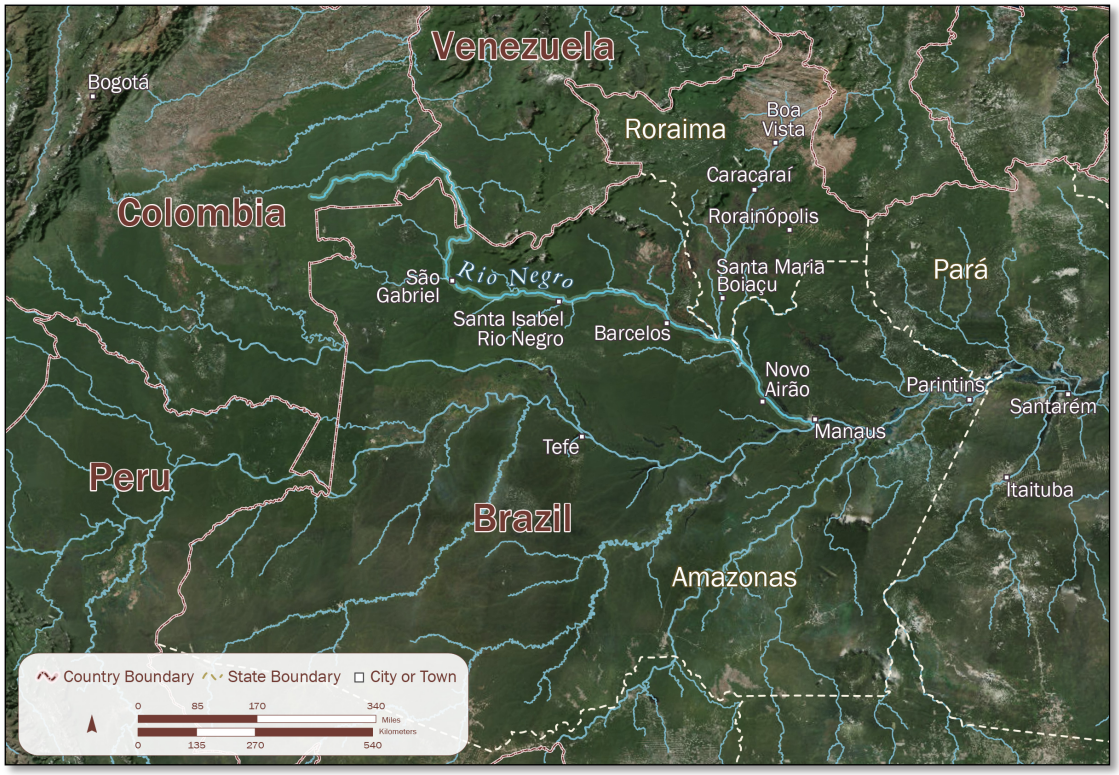

Figure 1.5. Rio Negro Basin in relation to the Amazon and Orinoco basins. Note that the Rio Negro springs are located in the flat, away from any mountainous area (Map by Laura Daly).

More importantly, the Rio Negro basin is comprised of a mosaic of oligotrophic (nutrient poor) environments. Due to the low availability of nutrients in its waters and most soils, the primary productivity is much lower than the average found in Amazonia (Klinge and Medina 1978, Sioli 1975). Being the first level of the trophic chain, the primary productivity acts a limiting factor to the densities of animal populations that feed on the algae and plant biomass, the herbivores, and, consequently, to those which will feed on them, the carnivores. Thus, most of the Rio Negro basin does not sustain the rapid growth or high population densities of fish and game in nutrient-rich regions such as the whitewater basins (Moran 1993). For this reason, the early European explorers nicknamed the Rio Negro as *Rio da Fome* (River of Hunger).

Until the 1980s, this environmental determinism was also applied to suggest a general structural pattern and maximum size limit for indigenous settlements in Amazonia (Meggers 1976, Hemming 1987). According to Meggers' concept of "counterfeit paradise," even high primary productivity areas in Amazonia would still lack sufficient protein supply to make possible the emergence of complex and populous aboriginal societies in the region. Interestingly enough, in pre-conquest times, the River of Hunger basin harbored one of the highest socio-cultural diversities in Amazonia (ISA 2002, Farage 1991, G. Ribeiro 1995, Ribeiro 1995, Wright 2005), and research done in several archeological sites located in the lower section of its main river channel provided concrete evidence that, even in an oligotrophic environment, long-term settlements and villages of more than ten thousand inhabitants once existed in Amazonia (Neves *et al.* 2004, Petersen *et al.* 2001).

Indigenous Diversity

Today, according to the Instituto Socioambiental (ISA 2002), the Rio Negro basin is home to about 30 tribal ethnicities that belong to six different linguistic groups (i.e. Tukano, Aruak, Karib, Maku, Yanomami and Tupi). Apart from these more emblematic tribal groups, there are two other indigenous contingents that share an invisibility to the eyes of the Brazilian society and government (Loebens 2011, Nugent 1993, Wagley 1985). The first is comprised of the so-called “isolated indians” These groups of nomadic or semi-nomadic indians seem to have decided to isolate themselves and actively avoid any formal contact with the non-indigenous society and, quite often, even with other indigenous groups (Feitosa 2011). There is strong evidence to suggest the presence of at least six different isolated, or “uncontacted,” indigenous groups in the Rio Negro basin. Their history, culture, language and precise location continue to be a mystery at the

dawn of the 21st century. Nevertheless, Brazilian official policies towards the "isolated indians" seem to be deliberately aiming at their extinction (Liebgott 2011).

A different type of invisibility is the hallmark of the second and very large contingent, the so-called generic indians or *ribeirinhos* (Adams *et al.* 2006, Hecht and Cockburn 2010, Ribeiro 1995). The *ribeirinho* are considered as the historical peasantry of Amazonia (Nugent 1993, Lima & Pozzobon 2005) and are the product of an amalgamation process that mixed Amerindian, European and African cultural and genetic heritages. *Ribeirinhos* and *ribereños* (how they are called in Spanish-speaking countries) dwell in the Pan-Amazonian region, which encompasses nine South American countries (Ribeiro 1995). The contemporary *ribeirinho* population in Brazil alone is about as large today as that estimated for the entire pre-conquest Amazonian indigenous population, or some six million people (Denevan 1992, IBGE 2012a).

Ribeirinho *Omnipresent Invisibility*

In this research I focused on studying the historical background and formative processes of contemporary *ribeirinhos* as well as their present day identities, cultural and socio-economic contexts, livelihoods and survival strategies in rural communities located in the Middle and Lower Rio Negro basin. Part of my interest was triggered by the fact that there has been very little academic attention paid to the enormous *ribeirinho* contingent, since most anthropological, sociological and rural development literature seems to address either tribal peoples or the modern settlers, frequently portrayed as the opposing human populations of Amazonia (Adams *et al.* 2006, Brondízio 2006, Lima 2006, Wagley 1985). Settlers coming mainly from South Brazil started arriving by the tens of thousands during the 1970's, when the country was under a dictatorial military regime that prioritized the development of the wild Northern frontiers no matter the socio-environmental cost (Bunker 1985, Davis 1984). In order to survive, settlers learned to mimic the *ribeirinhos*' livelihoods, long adapted to the region's realities, which increased competition in the already small regional job market. In all this, the *ribeirinhos* remained hidden, as if they had never been the key actors in any of the many chapters of Amazonian history (Anderson 1999, Nugent 1993, Parker 1985a). On the contrary, the *ribeirinhos*, by far the most numerous human contingent in rural Amazonia (Ribeiro 1995), provided labor for all the economic cycles, fought for freedom and social justice in a bloody regional civil war, supported the rubber needs for the industrial revolution of a hungry world, died isolated in the depths of the jungle to help the allies during WWII, made countless bankers, investors,

businessmen and patrons rich without getting enough to feed their own families, even today continue to provide food and non-timber forest extractive products that supply the domestic and overseas markets, and yet receive very little attention, not even from researchers and indigenous NGOs (Adams *et al*. 2006, Anderson 1999, Hecht and Cockburn 2010, Hemming 1995, Leonardi 1999, Nugent 1993).

Research Approach

In order to contextualize the historical perspectives described in this dissertation, I followed Brazilian anthropologist Darcy Ribeiro's concept of an Iberian Civilizatory Process:

> *[Portugal and Spain] expanded themselves by sea, launching conquest wars, of pillage and evangelization...[and] established...the foundations for the first global economic system, that disrupted the autonomous development of all great civilizations in the Americas. Exterminated, simultaneously, thousands of peoples that lived in prosperity...with their languages and original cultures...morphing themselves into new socioeconomic formations and new historic-cultural configurations that covered areas and subjugated populations infinitely bigger than the European* (Ribeiro 1995:65).

Still according to Ribeiro (1995), the Portuguese conquest and colonization of what became know as Brazil developed a "new people." This new people was neither Amerindian, African nor European, but a complete amalgamation that integrated many of their cultural and genetic traits which failed to reproduce either the original socio-political organization of the conquered Indians and the enslaved Africans or that of the European *conquistador* and colonizer. Instead it emerged as a syncretic Brazilian ethnic entity, culturally differentiated from each of its formative matrixes:

> *A new people, still, because it is a new model of societarian structure, that inaugurates a singular form of socio-economic organization, founded in a renovated type of slaverism and a continuous servitude to the global market. New, inclusive, for the unlikely joy and frightful will to happiness, in a so very sacrificed people, that encourages and moves all Brazilians* (Ribeiro 1995:19).

Conceptual Framework

One of the overarching concepts I have adopted in this dissertation is to understand ethnicities as dynamic, fluid entities, not bound to Eurocentric deterministic tendencies that used to associate them with particular languages, certain genetics, specific territories, and even imposed identities (Hornborg 2005, Hornborg and Hill 2011).

My understanding of the preconquest conditions, as a baseline for the historical perspective provided in this study, was based on recent evidences and interpretations provided by William Denevan (1992, 1998), Alf Hornborg and Jonathan D. Hill (2011), Eduardo Neves (1998, Neves *et al.* 2004) and Charles Clements (2006). These authors suggest that many areas of Amazonia harbored long-term and very populous settlements, for whom the main protein intake would have been provided by much more complex and diversified systems of agriculture and agroforestry than the slash and burn and higher mobility model that became the postconquest standard (Hemming 1995, Roosevelt 1994).

The profound changes initiated after the arrival of the Europeans triggered the ethnic transfiguration, a multi-faceted process through which peoples, as cultural entities, would emerge, develop, transform or die (Ribeiro 1995); and ethnogenesis, the capacity to develop adaptive changes to overcome historical problems or assimilate new contexts to survive (Whitehead 2011). Eugene Parker (1985) labeled one specific set of ethnic transfigurations and ethnogenesis the caboclization process: the post-conquest destruction of Amerindian societies and the subsequent amalgamation that led to the emergence of the *caboclo* (aka *ribeirinho*) and that would, later on, be mimicked by Portuguese colonists as well as modern Amazonian settlers.

To guide the interviews with key informants, interpret all data collected in the field, and develop the questionnaires used in this dissertation, I have applied Claudia Carr's concept of a multidimensional analysis of historical, environmental, political, economic and cultural contexts and perspectives taken from an Anthropological Ecology standpoint wherein the adaptive capacity of survival strategies is seen as the major driver of livelihood changes (Carr in Press, Carr 1977). In my data analysis and discussion, I was also very inspired by Anna Roosevelt's vision of a New Amazonian Synthesis based on a pragmatic research strategy that integrates both qualitative and quantitative research methods, combining "materialist and idealist theoretical approaches, which have sometimes been opposed in the past" (1994:01).

Finally, the overall interpretation of my results leading to my conclusions was framed by Darcy Ribeiro's concept of an Oligarchic Order in Brazil (Ribeiro 1971), according to which the access to land and the modes of production have always been controlled by the oligarchies in a system that replicates the colonial Portuguese *sesmarias* (land grants to noble families). Under this Order, access to land is still controlled by the State through a combination of concessions and the control of the labor force, permitting the displacement and transmigration of old settlers and promoting the occupation or corporatization of the land by a new owner favored by the government. Ribeiro states that, although there have been many changes since colonial times, including the shift from a slavocratic to the free-worker regime, and the incorporation of technological innovations, the Oligarchic Order's "basic structure, as an ordinary institution that models the social system by shaping the whole life of the nation, remains nevertheless intact"(Ribeiro 1971:205).

Guiding Questions

This research was conducted to elucidate three sets of main and subsidiary questions:

Main question 1: Who are the present day *ribeirinho* living in rural communities in the Middle and Lower Rio Negro basin?

- What was the formative process of the *ribeirinho* and how does it help to frame the present context?
- How did the patron-client relations emerge and evolve through time?
- What are today's *ribeirinho* identity, survival strategies and domestic economy in the middle and lower Rio Negro?

Main question 2: Why are *ribeirinho* households abandoning their subsistence grounds to take chances in cities they view as neither offering job opportunities nor any kind of social safety net?

- What are the drivers for the *ribeirinho* rural-to-urban migration in the middle and lower Rio Negro basin?
- How would *ribeirinho* households sustain themselves in the urban sphere?

Main question 3: What may be some of the socio-environmental implications for the future of the *ribeirinho* and the Rio Negro basin if a severe depopulation of the rural areas continues to occur?

- How could rural communities, Terras Indígenas, and protected areas be impacted?
- What may be the future socio-environmental impacts in the event that extractive industries move into the mining concessions already negotiated and approved in the Rio Negro basin?

Why in the Rio Negro?

Context Matters Most

When I started considering the possibility of doing the fieldwork for my doctoral studies in Amazonia, my first concern was to choose an area that I have had some previous contact with. It may seem very exciting to go to a completely unknown area; however, having had previous field experience in Amazonia, I was already aware of the multiplicity of contexts that may vary tremendously from one river basin to the next. Consequently, my first choice was to study households from six rural communities situated in the rivers Aracá and Demeni, both located in the enormous municipality of Barcelos (122,475 km^2), whose main town was the first capital of the state of Amazonas, Brazil (IBGE 2012a, Wright 1995).

From 2003 to 2006, I worked as a field manager for a vertebrate diversity inventory on the Rio Negro and some of its main left margin tributaries. It was while serving in this capacity that I first had the opportunity to visit some rural communities located along the Aracá and Demeni rivers. Since an inventory of vertebrates is a labor-intensive task, the project staff had to hire field assistants from local communities as well as conduct routine interviews with elders and expert hunters and fishermen in order to gain a sense of the local fauna. Staying a few days at a time in these communities granted me a firsthand perspective of the surrounding ecosystems while providing me with a glimpse into the human dimensions in the Rio Negro hinterlands.

My first exploratory fieldwork was carried out in July 2008. Back then, my main research focus was related to understanding the causes and implications of what seemed to be a severe problem faced by those communities: seasonal food shortages during the Amazonian "winter" (i.e. wetter season), when the river water level gets high enough to prevent fishing and make hunting and gardening more difficult and less productive. I was also very concerned with the apparent low productivity of most of the subsistence gardens I manage to visit. In my initial excitement and naivety, I thought of applying agroecological approaches to these

gardens, and even considered writing a dissertation on a community-based project to boost the production of subsistence food items.

With the ensuing years of fieldwork, I realized that my initial perception was missing entirely the context in which agriculture and other subsistence activities were performed in many of the Rio Negro's rural communities. The very fact that I once wanted to facilitate an agroecological conversion of *ribeirinho* subsistence gardens to boost their efficiency now seems completely absurd to me. Apart from any considerations of its applicability to the perceived situation, I was really not aware of my intrusive top-down approach to communities that I, in fact, wanted to study, not change. Above all, I missed completely the fact that any agricultural project would have failed, no matter what conceptual approach or method of implementation it employed. Amazonian indigenous agriculture is entirely manual and is very labor-intensive. Typically, an agroecological conversion demands an intensification of labor during the first years of implementation (Altieri 1995). Well, how would the remaining households cope with extra need for labor when they faced an ever-growing shortage of working hands due to so many family members already leaving the communities for the nearby cities? I was really not paying attention to the exodus that was already underway. The dawning perception of the phenomenon of an indigenous rural-to-urban migration struck me as a much more relevant problem for these communities than what was going on with their cassava gardens. Actually, an increasing shortage of labor could even help explain why the gardens were not as productive as they may have been in the past under different circumstances.

Recorded Memory

One very important fact about the Rio Negro is that the historical record for the basin is comparatively much better than those from other regional basins (ISA 2012, Leonardi 1999, Wright 2005). Dating back to the 16th century, there are early explorers' notes, military reports, slave raid manifests, European naturalists' descriptions, colonial letters, requests and laws, rubber boom memoirs, newspapers articles, scholars' historical research, anthropological monographs and countless books and articles from recent years (Bates [1864] 2005, Benchimol 1999, Carvalho 1983, Ferreira 2008, Humboldt, ISA 2012, ISA 2013, Wallace [1889] 2012, Wright 2005). Nevertheless, very few of these writings pertained to the subject of this study (Adams *et al.* 2006, Murrieta & Neves 2006, Parker 1985b).

Since studying the historical background and formative processes of *ribeirinho* identities, livelihoods and survival strategies was crucial for the development of my research, the existence of a reasonable historical record was not only a very welcome fact, indeed it was a fundamental prerequisite.

Simplified Model

The Rio Negro basin is often portrayed as being pristine, as if all the millennia of indigenous presence followed by the postconquest colonization, boom and bust cycles, and other transformations did not change the landscape. Such assumptions are obviously incorrect. On the other hand, the resilience of regional ecosystems has proved to be outstanding. A two-hour flight on a medium-sized twin turboprop aircraft from Manaus to São Gabriel da Cachoeira presents to a lay passenger what seems to be an immaculate green carpet of different types of equatorial forests interrupted only by a handful of small towns sprinkled amidst the omnipresent jungle. More highly trained eyes will be able to quickly identify entire areas of second-growth forest, namely along the river banks that started to be deforested in the second half of the 19th century in order to fuel steam boat navigation that had just been introduced to the Rio Negro (Leonardi 1999).

Other socio-environmentally impacting activities included small to middle-scale hardwood logging, the tropical carnivores (e.g., cats, otters, etc.) fur trade, manatee, turtle and other bush meat harvesting, and gold and diamond mining of various scales, from purely manual to semi-industrial. Many of these activities were considered legal until the late 1970's, and performed even inside Terras Indígenas (e.g., TI Yanomami, TI Waimiri-Atroari) and other protected areas (ISA 2012b). Some are still being practiced today in spite of having become illegal, like bushmeat trade and illegal mining (pers. obs.).

However impacting these past and still ongoing activities may be, it seems fair to consider the Rio Negro basin as one of the least affected basins of Amazonia, especially if compared to frontier development areas like the Brazilian Deforestation Arc, Ecuador's Yasuní, and Bolivia's Beni, to name a few (Bunker 1988, ECO 2014, Finer *et al.* 2008). In these regions, extractive operations have reached full-blown proportions, with intensive oil and gas prospecting and extraction, industrial mining of bauxite, iron, manganese and other minerals, heavy deforestation for the timber industry and latifundios devoted to cattle ranching and soy monoculture, construction of hydro dams, land reform projects, the opening of new roads, illegal deforestation inside Terras Indígenas, heavy metal pollution of rivers, to say nothing of the ongoing encroachment upon

traditional peoples, such as land grabs, forced displacements, assassinations of rural leaders, etc. (Bunker 1988, Davis 1984, Moran 1981, Rabben 2004, Survival International 2013, Wright and Wolford 2003).

Since each of these impacts and/or socio-economic activities can be seen as an additional layer of complexity when analyzing a given Amazonian region, then, comparatively speaking, the Rio Negro basin could be considered a relatively less complex system for study. I considered this fact to be advantageous since most frontier development regions are expected to have historical backgrounds and formative processes comparable to the Rio Negro. Yet, since most of the traditional push-and-pull drivers do not seem to be at play in the Rio Negro, it may suggest that a different set of drivers, ones embedded in sociocultural and historical processes as well current day challenges, are important in explaining patterns of indigenous livelihoods, survival strategies and mobility in Amazonia.

Past, Present and Future in One Basin

The Rio Negro basin has been frequently divided into three distinct regions according to patterns of socio-political organization, economic orientation, historical roles and environmental characteristics. According to this division, the Upper Rio Negro is the tribal region, concentrating most of the basin's Terras Indígenas and indigenous diversity. Most of the indigenous peoples there still live in a tribal socio-political organization, in what is considered to be the most linguistically diverse region in the Americas with 23 languages belonging to six families still regularly spoken (ISA 2002, Rohter 2005). The Upper Rio Negro has the most bilingual schools in the country, and the only Brazilian city, São Gabriel da Cachoeira, to have three official indigenous languages, Nheengatu, Tukano and Baniwa (IPOL 2012). The region is characterized by the many rapids in its rivers as well as granitic formations along the main channel. It is also known as the *Cabeça do Cachorro* (Dog's Head) region, due to the shape of the tripartite borders between Brazil, Colombia and Venezuela (see Figure 1.5).

The Lower Rio Negro is the peripheral region, due to its historical dependence upon Manaus, the regional metropolis located at the mouth of the Rio Negro, where it merges into the Amazon River (Figure 1.5). This region is the most severely deforested, overexploited and urbanized in the entire basin. Since the rubber boom, Manaus has been a powerful magnet attracting all sorts of people, from the rubber barons of the past to today's newcomers, from São Paulo businessmen looking for economic benefits and tax exemptions of the city's

Industrial Zone all the way to dispossessed families arriving every hour from the Amazonian hinterlands.

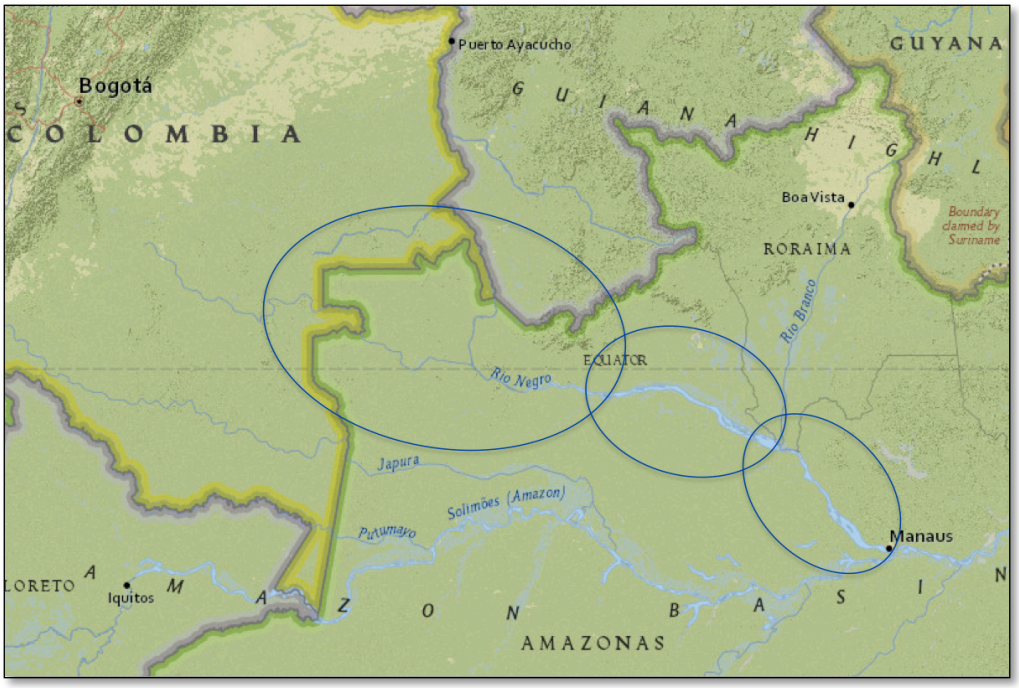

Figure 1.5. Rio Negro Basin's three regions: Upper, Middle and Lower (Map © WWF/TNC)

The Middle Rio Negro is a liminal region, lying between two antagonist universes, the tribal and the peri-urban (see Figure 1.5). The region has a very violent past marked by the conquest wars and centuries of forced displacement, missionary rule, slave trade, and indigenous acculturation. Barcelos, the region's main city, was founded on the site where the most important mission, Mariuá, once existed. The mission in turn was built on top of the central square of the village of Mariuá, the stronghold of the Manao indians, the fierce Aruak warriors who ruled the Rio Negro in pre-conquest times, until they were betrayed by the Portuguese and annihilated to the last soul (Andrello 2006, Wright 2005). The Middle Rio Negro has been the basin's main extractivist region per se. It is the only place in the world where the Amazonian *piaçaba* palm (*Leopoldinia piassaba*), whose fibers fueled a longstanding broom industry, occurs naturally. The Middle Rio Negro was also known as the capital for the collection of dozens of different species of ornamental or aquarium fish, including the popular cardinal tetra (*Paracheirodon axelrodi*) (Oliete Josa 2008, Prang 1996).

Today, both *piaçaba* fiber and aquarium fish are no longer the sources of patrons' instant riches they once were. The advent of plastic fibers and farm-raised fish

mortally wounded yet another set of regional economic cycles (pers. com. key informants). The fact that the region may be entering another bust cycle also presented a rare and very welcome opportunity to analyze adaptations in household survival strategies as they try to cope with ever-changing socio-economic pressures.

These three Rio Negro regions provide a timeline that covers more than a century of multidimensional transformations that shaped the entire basin as we know it today. They provide any attentive researcher the opportunity to undertake a unique comparative analysis where, by simply taking a boat from Manaus to the Upper Rio Negro, one can observe the sequence of environmental, socioeconomic, cultural, and political changes as if partaking in an imaginary time travel.

Dissertation Objectives and Outline

The **primary objective** of this study is to understand the drivers for the rural-to-urban migration of *ribeirinho* households that seem to be abandoning the relative security of the subsistence grounds of their rural communities to take on greater risk in the nearest cities.

The **secondary objectives** of this research are delineated in each of the following chapters:

Chapter Two - *Ribeirinho* Ethnogenesis and History.

Objectives:

- Study the origins and formative process of the *ribeirinho*;
- Characterize the historical chapters of Brazilian Amazonia's rural development, and *ribeirinho* livelihood changes from the pre- conquest period to the end of the rubber boom;
- Describe the origin and historical changes of the regional patron-client relations.

Chapter Three - 20th Century Indigenous Panorama.

Objective:

- Provide a review on the highlights of 20th century Brazilian indigenous challenges, policies and roles of official institutions.

Chapter Four - Research Design and Methods

Objectives:

- Describe the research design and its multi-dimensional nature;
- Detail the research field methods, approach, and household survey.

Chapter Five - Who Are the *Ribeirinho?*

Objectives:

- Present the household survey results;
- Provide comments and analyses as data is presented.

Chapter Six - Patron-Client Relations and Influences

Objectives

- Describe the main historical phases of patron-client relationships;
- Present some social settings of Barcelos to demonstrate the cultural influences of patron-client relationships

Chapter Seven - The Future of the *Ribeirinho* and the Rio Negro

Objectives:

- Analyze the drivers for the rural-to-urban *ribeirinho* migration;
- Summarize the main findings of the dissertation.
- Provide perspectives for the future of rural development in the Rio Negro and Amazonia.

* * * * * * * * *

CHAPTER 2: *RIBEIRINHO* ETHNOGENESIS AND HISTORY

> *The Iberians...threw themselves into the overseas adventure, opening new worlds, inflamed by the most fanatic fervor, the most unstoppable violence, in search of riches that could be looted or produced by the slave mass, convinced that they were the new crusaders serving a salvationist mission to put the whole world under a Roman-Catholic regency.*
>
> Darcy Ribeiro (1995:67)

Figure 2.1. A small village on the Rio Negro by late 19th-century (Wallace 1889).

Historical Perspectives

As mentioned in the previous chapter, the Rio Negro basin has a better-documented history compared to other regions of Amazonia (Leonardi 1999, Wright 2005). In order to understand the present day context it is necessary to refer to the most important phases of the region's recent history, from the preconquest period through the emergence of the generic indians (Ribeiro 1995) (also known as *caboclos* and *ribeirinhos*) (Parker 1985b, Lima & Pozzobom 2000, Gilligham 2002), through the Directorate period, the main economic cycles, the *Cabanagem* revolt, and up to the days after the collapse of the rubber era. Since the 16th-century, Amazonian indigenous peoples have been forced to interact in many capacities with stakeholders as different as Spanish explorers, Portuguese military troops, European mercenaries and slave raiders, various orders of missionaries, early Portuguese colonists, *arigós*, rubber barons, riverbank colonels, governmental institutions, 1970's Southern and Midwestern Brazilian settlers, and since the 1980's, socio-environmental and indigenous NGOs (Alcuña 2005, Anderson 1985, Anderson 1999, Hecht and Cockburn 2010, Hemming 1985, Hemming 1997, Hemming 2003, ISA 2010, ISA 2002, Parker 1985a, Peres 2000, Ramos 1998, Ribeiro 1995, Ribeiro 1996, Wright 1996). Understanding the origins and development of patron-client relations will play a vital role in analyzing the present day contexts and predicting the future of rural development and *ribeirinho* livelihoods in the Rio Negro basin.

Preconquest Rio Negro Socioeconomic Diversity

Until the arrival of the first Europeans in the middle 17th-century, the Rio Negro basin was inhabited by 50 or more different indigenous peoples belonging to Arawak, Karib, Tukanoans, Nadahup, Kakua-Nikak, Yanomami, and other linguistic families (Albert 2001, De Freitas 2011, Epps and Stenzel 2013, Farage 1991, ISA 2002, Koch-Grünberg 2006, Wright 1996). Some of the aboriginal sociopolitical systems were very diversified and had levels of organization and complexity beyond what can be found in today's Amazonian indigenous groups. Silvia Vidal and Neil Whitehead describe an example of such lost diversity as well as an early postconquest adaptation necessary for survival in the new emerging context:

> *From the sixteenth to mid-seventeenth centuries, the Warekena, Baré, and Baniwa were part of the peoples belonging to the Manoa and Omagua (Oniguayal) regional macro-polities. These macro-polities were multilingual, multiethnic social systems with an internal interethnic hierarchy led by a paramount chief*

> *and a powerful elite of secondary chiefs. Internal sociopolitical contradictions and conflicts and the demographic decimation of Amerindian populations through disease and enslavement consequent on European colonization of the region combined to produce radical disruptions in these macro-polities by the end of the seventeenth century. These disruptive processes caused the regrouping of many indigenous peoples such that by the early eighteenth century, in the Rio Negro region, new less hierarchical and more confederated sociopolitical formations emerged* (Vidal and Whitehead 2004:1-2).

These macro-polities connected various indigenous peoples from the Orinoco basin in Venezuela, through the Rio Negro and Japurá basins to the middle Amazon basin; in an immense regional trade system that provides an example of the scale and complexity of preconquest interethnic sociocultural exchanges and political relations (Vidal 1999). About 15 highly flexible multiethnic confederacies were formed after the collapse of the macro-polities. Each confederacy showed a unique ethnic composition and was led by a charismatic shaman chieftain who could mobilize enough political influence and arms among his kinship and allies to buttress its regional trading of goods and indigenous slaves [6] with the Europeans. Some of these confederacies also organized formidable episodes of resistance against the European invasion, either through large-scale open war (e.g. Manao and Mayapena vs. Portuguese Army) or, later and more efficiently, guerrilla warfare well into the second half of the 18th-century (Farage 1991, Vidal 1999, Vidal and Whitehead 2004).

In the early 16th-century, the peoples of the upper Rio Negro formed a multi-ethnic guild, where many different Tukanoan groups practiced interethnic exogamous marriages. Ethnicity of the offspring was determined by the ethnicity of the father, who would mandatorily marry a woman from a related yet different ethnic group. Typically, the children would first learn the language of their mother and later the father's. Throughout their lives, most upper Rio Negro indians spoke at least these two languages but often added others to their repertoire (Andrello 2006, Lasmar 2005, Wright 2005). Silvia Vidal and Neil Whitehead point out that the "Arawakan marriage systems were mainly focused on widening alliances in order to incorporate other groups, who were not part of their traditional affinal kin" (Vidal and Whitehead 2004:5). Trade using barter was very intense among different ethnicities and tribes showed a clear tendency towards specialization as a means of reinforcing their mutual interdependence. For instance, the Tukano were master wooden seat carpenters, the Tuyuka used to built the best canoe, the Bará

[6] Many tribes like the Manao and Mayapena became slave traders soon after the collapse of the macro-polities. Indigenous slaves were mostly prisoners of war that were traded for shotguns, steel tools and other industrialized objects, especially with the Dutch, based on the Guianas' coast (Farage 1991, Whitehead 1994).

had the right and technology to make the *caraiuru* (ceremonial paint), the Baniwa were famous for their ceramics and *bordunas* (war clubs), ceremonial masks were made exclusively by the Kubeo, the Tariana were the best makers of fishing traps like the *cacuri* and *matapi*, the Desana earned a reputation for making the best *ralo* (cassava grinder) as well as valued intricate baskets, and the Maku were the official producers of the *zarabatana* (blow gun) and *aturá* (a backpack like cargo basket) (ISA 2002, G. Ribeiro 1995, Wright 2005). This intertribal specialization in the fabrication of utensils and tools that had both practical and symbolic uses and meanings was directly related to a prevalent regional cosmology and myth of creation of each of the indigenous groups of the upper Rio Negro. The famous Tukano wooden seats had to be painted using *caraiuru* made by the Bará, who would use the *ralos* from the Desana that in turn would carry cassava using the *aturá* made by the Maku. Therefore, the ceremonial cults and worship as well as daily activities of subsistence were equally dependent on the regional network of exchange and reciprocity that fostered and maintained a multi-ethnic integration (ISA 2002, G. Ribeiro 1995) that could have been similar to what once existed during the macro-polities mentioned earlier.

The upper Rio Negro linguistic richness and tendency towards intertribal specialization reflected only partially the socio-economic diversity and complexity of interethnic trade and cultural exchange networks. The Tukanoan, the river people *par excellence*, built most of their settlements on the bluff banks of major rivers and were among the best fishermen and horticulturalists. The Maku group, divided today into the Nadahup and Kakua-Nikak (Epps and Stenzel 2013), were forest peoples, great hunter-gatherers who used both bows and arrows and *zarabatanas* (blow guns) with poisoned darts for hunting. Trading surpluses of fishmeal and *farinha* for smoked bushmeat was a very common practice between river and forest peoples and expands even further the understanding of the level of interdependence and complexity that framed the interethnic trade, short and long term alliances, and 16th-century livelihoods before most of it was dramatically changed due to direct and indirect impacts of the European invasion (Roosevelt 1994, Whitehead 1994).

Meanwhile, Yanomami groups, also considered forest peoples, would still have been living quite isolated in their main homeland in the Parima highlands during this period. Within the next few centuries, however, they would start moving west towards both sides of the foothills of the Parima-Tapirapecó-Imeri-Neblina mountainous chain between Brazil and Venezuela. This migration yet-to-come would have two main drivers: 1) A population boom made possible by a food surplus resulting from the adoption of new food staples (e.g., bananas and plantains) and the increased gardening efficiency made possible by European

metal tools[7]; and 2) the elimination by postconquest epidemics, slave raids, and war of other indigenous peoples from land the Yanomami would end up moving into (Albert 1999, Milliken *et al.* 1999).

The lower and middle sections of the Rio Negro basin were home to other ethnic groups that suffered much harder and direct impacts from the conquest wars to be initiated in the 17th-century. The Manao and their main allies, the Mayapena, were fierce river-based Arawakan warriors whose post-macro-polity territory and area of influence extended from the mouth of the river all the way to the current-day location of the city of Santa Isabel do Rio Negro. Another Arawakan group, the Baré, inhabited some tributaries of the upper Rio Negro, where they practiced cassava agriculture and regional trade of *farinha* and other items, transitioning centuries later to the extractivism of *drogas do sertão* (backland spices), *piaçaba* and other forests products. The Baré would eventually be subjected to forced displacements, by the thousands, down the entire Rio Negro basin as slaves, or later, as clients following their patrons (Figueiredo 2004, Meira 2002, Wright 2005).

The Rio Branco basin, responsible for the main water volume discharge into the Rio Negro, was the land of yet another Arawak tribe, the Wapixana. That basin also harbored a great diversity of Karib-speaking groups, such as the Makuxi, maize gardeners, Ingarikó, cotton weavers, Waiwai, famous for their special hunting dogs, and the Waimiri-Atroari, fierce archers who started using iron and steel arrow heads made from blades traded with other Karib and Arawak indigenous groups long before their encounter with white men (Baines 1991, Farage 1991, Mlynarz *et al.* 2008, Santilli 2004, Zea 2006).

Cultural Forests and Agricultural Systems

> *The lifeways of some peoples in late prehistoric [preconquest] times were significantly different from those of native Amazonians today, who characteristically rely on swidden horticulture and foraging, and live in small and shifting settlements with primarily perishable material culture* (Roosevelt 1994:8).

For thousands of years before the arrival of the belligerent white men, surviving in the Rio Negro had never been an easy task. Most of the basin is comprised of a

[7] Having access to metal tools became an obsession to all indigenous peoples since they improved tremendously the efficiency of performing the same tasks that were previously done using the stone tools Amazonian peoples used in the preconquest period (Denevan 1992).

mosaic of river systems with a dominance of oligotrophic (nutrient poor) black waters and low fertility, acidic sandy soils. As a general rule, living in such an environment is very challenging due to the fact that the low levels of primary productivity under nutrient deprived conditions lead to low densities of game, fish and fruits available for harvest (Klinge and Medina 1978). Therefore, the autochthonous hunting and fishing methods had to address the regional scarcity and agricultural systems and methods had to be adapted to the low fertility and loosely structured soils of the Rio Negro (Clement 2008, Denevan 1992). Indeed, the basin presents "the most demanding environmental conditions found in Amazonia...[where one] would expect to find the most elaborate and effective responses to" allow humans populations to not only survive, but even thrive, in the region (Moran 1993:36).

> *"The short-cropping, long-fallow shifting cultivation so widespread today was uncommon in prehistoric Amazonia because of the inefficiency of the stone axe, especially in the mature hardwood forests of the terra firme. Indian shifting cultivation now has a short cropping period, reflecting poor soil, pest invasion, game depletion, and social friction, but it is made possible by the steel axe which makes clearing new plots a relatively easy process—a matter of a few weeks to create a field large enough (0.5-2.0 ha) to feed a family*." William Denevan (2008:56)

Preconquest agriculture was well adapted to Rio Negro's environmental conditions and was dependent on the social structures and demography of that period. It showed a level of complexity much higher than most present-day *ribeirinho* subsistence gardens are able to maintain. Agroforestry systems were intermingled with diversified gardens of annual crops that included many varieties of bitter and sweet manioc or cassava (*Manihot esculenta*), the main staple for most Amazonian indigenous cultures (Clement 2008). The historical ecology of many Amazonian autochthonous peoples shaped nature into “cultural forests” by managing the floristic and population composition of regional forests to improve the production of foodstuffs, extractive resources and other materials necessary for the sustenance and well being of many different indigenous peoples throughout the preconquest millennia (Balée 1998). There is strong evidence for the partial or complete domestication of more than 80 species of regional plants as well as irrefutable archaeological evidence of large indigenous settlements in the lower Rio Negro that suggest that the preconquest use of natural resources was much more diversified and long-term oriented than what can be seen today in *ribeirinho* rural communities (Clement 2008, Denevan 1992).

Initial Colonization

The colonization of the Brazilian Amazonia did not start until the fourth decade of the 16th-century, when the Portuguese Crown had to respond to the installation of English, Dutch and French exploratory settlements and trading posts located to the North of the mouth of the Amazon river, and in some of its tributaries, like the Tapajós river (Anderson 1999, Parker 1985b). Following the military defeat and expulsion of such European competitors, a sleepy initial colonization was started based on the extraction and overseas commerce of *drogas do sertão* (backland drugs, or spices) that offered a suitable substitute to Southeast Asian spices, the main goal of the Iberian transoceanic mercantile expeditions (Hecht & Cockburn 2010, Ribeiro 1995). However, in Amazonia, contrary to the cultivated sources of Asian spices, the *drogas do sertão* had to be collected *in natura* from the depths of the equatorial jungle, and this endeavor required a profound knowledge of the ecology and geography of the new territory. Therefore, it was based and utterly dependent upon the skills and labor of local indians, who started working seduced by metal tools and other gifts they would get in exchange for their forest harvest. Eventually the indians had enough tools and gifts and decided to go back to their previous lives. Then the true face of the Europeans emerged and hundreds of thousands of indians ended up attracted, captured and forced into slavery in many Amazonian basins (Farage 1991, Hemming 1987, Parker 1985b, Ribeiro 1995).

The Portuguese military and European mercenaries at their service were the initial forces in charge of fighting *indios bravos* (savage indians) and starting the slave raiding expeditions. Nevertheless, as became clear soon enough, while the soldiers were good at killing and severely wounding "the enemy," they failed in capturing and bringing back captives still physically able to work as slaves (Ribeiro 1995, Wright 2005). The horror wreaked on the Lower Amazon river basin, and a century later on the Rio Negro, by the widespread killings during the conquest wars and slave raids was in large part culpable for the socio-cultural, demographic and livelihood collapse of the preconquest indigenous world. Moreover, the limitless savagery of white men was soon dwarfed by the action of an unpremeditated weapon of mass destruction. European and Asian peoples had a long history of coevolution with the so-called Old World diseases to which Amerindians had not been exposed and consequently had not developed antibodies (Denevan 1992, Hemming 1987). The result of rapid exposure to alien microbes was unprecedented decimation (Black 1975, Hemming 2006).

Accounts from early 16th and 17th-century explorers that traveled the Amazon River mention indian settlements so extensive as to spread for league upon league along riverbank bluffs. Those same explorers also mentioned that food was

abundant and diversified (Alcuña [1641] 2005, de la Vega [1542] 2005, Herrera [1540-1] 2005). Some present day authors have suggested that the preconquest Amazonian aboriginal population may have been as large as five to seven million people (Denevan 1992, Clement 2006, Roosevelt 2002). However, the arrival of Europeans in the New World brought vectors of the common cold, measles, chickenpox, conjunctivitis and the dreadful smallpox, among others, and an unintended and uncontrolled pangenocide started taking place. Entire ethnicities may have been wiped out, even before meeting a single European, since contaminated indians would have spread the epidemics while seeking refuge in the hinterlands, where uncontacted groups lived (Denevan 1992, Denevan 2008, Ribeiro 1995). John Hemming (2006:13) mentions a letter written by a Jesuit who witnessed a population of about 60,000 indians in the coastal state of Bahia that, from1550 to 1575, "were reduced to one village of only 300 men — a depopulation of 98%!" A similar death rate might also have occurred in Amazonia and would have been recorded given a sufficient number of European observers to report it. However, even the small European contingent proved to be more than enough to spread wave after wave of deadly epidemics in the region (Hemming 1987, Ribeiro 1995).

The Portuguese colonization started in the mouth of the Amazon River and went westward following the river's main course inland. Exploratory expeditions also spread north and south through its major tributaries. The first Portuguese settlement in the Rio Negro was located on its mouth, where it merges into the Amazon River. A small fortress, named *Forte da Barra do Rio Negro*, was strategically built in 1669 to provide support for the exploration of the Rio Negro basin and, above all, for the much-needed slave raids, since the captive population had been rapidly depleted in Eastern Amazonia (Anderson 1999, Andrello 2006, Parker 1985b, Wright 2005). After the first incursions up the lower Rio Negro, it became clear that the river was infested with "hostile indians." Therefore, the Portuguese managed to build an alliance with the Manaos and Mayapena to defeat, conquer and enslave their common enemies following a similar strategy to that used by Cortez in Mexico, and Pizarro in Peru (Hemming 2003b). After teaching the conquerors how to navigate throughout the Rio Negro basin and having demolished most of the local resistance to the Portuguese expansion, the Manaos became their former allies' main target and were exterminated by the Portuguese in a long and persistent annihilation war (Farage 1991, Wright 2005). The conquest assaults and slave raiding in the Rio Negro are believed to have caused an extraordinary number of deaths both by the sword and disease. At least 20,000 indian slaves were taken from the Upper section of the basin (Wright 2005), and these persecutions triggered waves of defensive migrations of surviving groups who abandoned their traditional territories in a desperate run for their lives, trying

to move as far away as possible from the slave raiders. Many indigenous groups that lived in what is now Brazilian territory would have fled up rivers searching for protection in the territories of Colombia and Venezuela (Whitehead 1994, Wright 2005). The Portuguese military and civil slave raiders were so brutal and greedy that missionaries based on these Spanish colonies complained in official letters that they were eliminating all the indians of the Rio Negro and Orinoco basins since they would not even respect the international boundaries in their unstoppable hunt for more slaves (Vidal and Whitehead 2004).

Conversion of Livelihoods

The massive killings of Amazonian natives did not seem to concern much the Portuguese Crown (Hemming 1987). On the other hand, news from Spanish South American colonies about gold-adoring civilizations, "mountains of pure silver" and the legend of *El Dorado*[8] (Hemming 2001, Hemming 2003, Whitehead 1992) prompted the Crown's decision to engage actively in the search for sources of riches in the Amazon. Since Portugal and Spain were fervent Catholic States, the search for material richness was to be accompanied by the spreading of the Catholic faith, and the forced conversion of pagans, under the rubric that the "heavens" would only be accessible to those not only baptized but also, and above all, obedient to the holy Crown (Ribeiro 1995). The missionaries of the Franciscan Order were the first to arrive in Brazil in 1500, accompanying the fleet captained by Pedro Álvares de Cabral, and were in charge of conducting the First Mass that consecrated the new territory as both a Catholic and Portuguese possession. More than a century later, these disciples of Saint Francis of Assisi were entitled by the Crown to manage the colonial enterprise in Brazilian Amazonia (Parker 1985b). The Franciscans began rescuing indians that were under siege and being massacred by the military and mercenaries at the service of greedy Portuguese colonists. Soon enough, the missionary motto "saving bodies and [taking] souls" started to echo in the Eastern Amazon. However, the settlers' reaction to the missionaries' arrival and tentative establishment of a monopoly over indian labor was immediate and violent (Anderson 1999, Parker 1985b). Missions were invaded and indians were taken as slaves, in a clear sign that tensions would not disappear unless the settlers would get what they considered to be theirs by natural right (Hemming 1987). Therefore, since the Franciscans lacked both the personnel

[8] The legend or myth of *El Dorado* (The Golden One) described a Central or South American king who would bathe daily in a pool filled with gold dust, thus covering his whole body with a golden shine. Since Spanish and Portuguese conquistadores main dream was finding gold and silver in the New World, this fable became a magnet that attracted many explorers and adventurers, many of whom did only a one way trip (Hemming 2001)

and financial support to face the increasing tensions and conflicts, they found themselves forced to withdraw from the region. Although the Franciscans failed to stop or even effectively diminish the slave raids, after less than a decade of work in Amazonia, the Order helped expand the Portuguese domains and territorial control over an immense region by creating a system of mission villages — the *aldeias*, that spread throughout the Amazon and some of its main tributary rivers (Parker 1985a). By the early 17th-century, indigenous slaves were responsible for all the steps in the colonial productive chain, from collecting *drogas do sertão* and other natural forest products, hunting and fishing to make *moqueado* (smoked game or fish) and *piracuí* (fish meal), cultivating the cassava gardens to produce *farinha*, to serving as porters, paddlers, domestic slaves, and anything else that even very poor Portuguese settlers would demand (Ribeiro 1995, Wright 2005). "From the beginning of the European experience in the Amazon, labor was a far more valuable resource than land" (Anderson 1999:11).

After the brief yet frustrating experience with the Franciscans, the Portuguese Crown decided to call upon the missionaries of the Company of Jesus whose duty would be to make the Amazon worth the effort of colonization, i.e., exploitation (Anderson 1999). The Jesuits were already based in the state of Maranhão, not far from the mouth of the Amazon River, where they mastered one of the local indigenous languages, Tupinambá, and combined it with Portuguese grammar to create a pidgin called *Nheengatu*, or *língua geral* (general language) (Parker 1985b). Therefore, when the already powerful Jesuits marched into the Amazon basin, with their military-like hierarchy, strict discipline, and expertise in planning and logistics, they also possessed the ideal tool for ensuring a true monopoly of power and control: a colonial language of their own making that would became so widespread in the Amazon that, even today, it has been mistakenly considered a native language of the Rio Negro basin (Figueiredo 2009, ISA 2002, Wright 2005).

By the late 17th-century, the Jesuits had used their Royal privileges and concessions to manage all natural resources in Amazonia, including, unbaptized indians, who to the eyes of the Crown were no different from the local fauna and flora (Anderson 1999, Ribeiro 1995). Slave-raiding activities were diminished and eventually halted as the Jesuits advanced their area of influence and established their presence in the basin. The Jesuits had long adopted the Franciscan method of building *aldeias* (missions where indians were grouped and forced to work) as they moved deeper into the hinterlands. The main Jesuit mission in the Rio Negro kept the same name and was placed on the very spot that once harbored Mariuá, the former and most important Manaos village (Farage 1991, Wright 2005).

Initially, the Jesuits may have been seen as lesser evil white men. After all, as soon as they arrived, the Jesuits brought the slave raiding conducted by the military, mercenaries and settlers to an abrupt end. The Jesuit strategy was based on capitalizing on the fear of being made slave, shared by all indians that lived terrified by the brutality of Portuguese troops. The Jesuits promised to protect all indians who would move from their own villages to live in Mariuá and other missions. This practice became known as the reduction system. “Reduced” indians from different ethnicities would have to accept the Catholic God, be baptized, follow each and every rule of the Jesuits, never speak their native tongue, or any other indigenous language, nor keep any part of their original culture or worship their earlier deities. All indians had to become part of the new religious “community” regardless of the fact some of them had belonged to groups or villages with historical rivalries, or could even be mortal enemies. The only language that was taught and permitted in the missions, or allowed to be spoken at any time by reduced indians was *Nheengatu*, the Jesuit pidgin (Parker 1985b, Ribeiro 1995, Rohter 2005, Wright 2005). Soon enough, maintaining a steady influx of new indigenous personnel coming of their own will to Mariuá proved impossible. Then, the powerful Jesuits started conducting their own slave raids in the Upper Rio Negro using the expedients of the *guerra justa* (just war). This involved fighting "hostile indians" who hindered the conversion of new souls, and using *tropas de resgate* (rescue or ransom troops) who would be in charge of releasing "friendly indians" from slavery by enemy tribes (Wright 2005). In both cases, all the captured indigenous would be made slaves by the Jesuits who kept detailed notations on the slave trade, sending Rio Negro slaves all the way to Belém do Pará, at the mouth of the Amazon River, or even further, to the state of Maranhão (Anderson 1999). Those rescued by *tropas de resgate* would be considered *índios livres* (free indians), although in order to be really free again they would have to pay for the costs of their rescue and transportation to "safe grounds". In practical terms it typically meant a life of servitude trying to pay back a never-ending debt (Wright 2005).

In spite of all this, the Jesuits may have ended up filling a social-cultural niche left vacant after the reduced indians were taken from their villages. No matter who they once were or where they came from, all Amazonian indigenous cultures were accustomed to living according to a tribal inner hierarchy much less rigid than that of the major Andean and Mesoamerican imperialist cultures, such as the Incas and Mayas (Hemming 2003, Vidal 1999). Although there are some evidences suggesting the existence of a "nobility" class in some groups, like the Omagua, Ticuna and others (Chantre and Herrera 1901 apud Porro 1994), most Amazonian internal hierarchies were more fluid, based on experience, and typically led by *tuchauás* (chiefs) and *pajés* (shamans) who were revered as wise and caring father

figures (Hemming 1987, Ribeiro 1996). The Jesuit missionaries, having acted as protectors and later as teachers and mentors, may have started to be seen as the new father, or chief, figures — powerful, wise, and maybe even as fair, in spite of maintaining the slave raids and a rigid discipline. As time went by, the original Amazonian indigenous socio-economic and cultural diversity was inescapably turned into an amorphous and acculturated mass of forced labor workers whose lives were dedicated to the production of a surplus for export[9]. For almost a whole century, the Amazonian Jesuit missions provided food for colonial towns as well as forest commodities to be exported to Europe (Anderson 1999, Parker 1985, Hemming 1987). This long and severe acculturation and amalgamation process, also referred as missionization (Roosevelt 1994), produced a dramatic fission among autochthonous cultures (Nugent 1993) that culminated in the emergence of the generic indians (Ribeiro 1995), quite distinct from the remaining tribal indians (Corry 2011, Nugent 1993, Parker 1985, Roosevelt 1994, Wagley 1985). This new quasi-ethnic group (Chibnik 1996), later referred to as *caboclos* or *ribeirinhos* (Adams *et al.* 2006, Parker 1985, Nugent 2003, Ribeiro 1996) had no references to traditional territories, aboriginal culture, native languages, or original cosmologies and cosmogonies, which were lost and replaced by the imposed Catholic faith and socioeconomic model of the colonizer (Parker 1985, Ribeiro 1995, Wright 2005).

Indigenous slavery was common in Amazonian and Andean societies before the European invasion (Hemming 1987, Hemming 2003b, Ribeiro 1995, Ribeiro 1996, Whitehead 1994, Vidal 1999, Vidal and Whitehead 2004, Wright 2005). Among the many forms of slavery present in the continent, the relationship between the reduced indians and their missionary masters seem to be aligned with the concept of "selective emulation, a process by which collectivities involved in political or hierarchical relations seek to imitate or adopt some of the practices of another collectivity perceived as being in some way superior" (Santos-Granero 2011:344). Therefore, the "protective father" missionaries became the first white patrons the generic indians were forced to serve and obey, doing their best to follow the new foreign culture and economic models. However, after some generations, this new missionized livelihood became the only socio-economic system known to reduced indians whose cultural roots, oral traditions, and memories had been erased. The only support a generic indian could potentially get, in case of an accident, disease, or any other need, would come from the mission, through the missionaries masters, if they considered it pertinent. Therefore, from inception the generic indian, or, later, *ribeirinho*, identity was associated with an intrinsic relation of dependence with their white patrons.

[9] Surplus production was not an alien concept *per se* to many Amazonia cultures, although it was usually related to festivities and intertribal trade, and would happen on specific occasions or periods of the year (G. Ribeiro 1995, Ribeiro 1995, Ribeiro 1996, Roosevelt 1994, Vidal 1999).

> "*Moreover, despite having adopted —often wholeheartedly—their masters' cultural makeup, they still bear the stigma of their..."captive identities", that is to say, hybrid quasi-ethnic identities marked by the experience of captivity and servitude, which represent a particular form of ethnogenesis situated midway between ethnic assimilation and the mergence of novel ethnic identities"* (Santos-Granero 2011:344).

The Jesuit Order was in charge of most of the Brazilian Amazonia colonial enterprise for about a century. Missions were established along the Amazon River course as well as on most tributaries. Hundreds of thousands of tribal indians were raided, reduced, missionized, and, ultimately, turned into generic indians (Ribeiro 1995), and later, throughout additional miscegenation with descendants of Europeans and Africans and further amalgamation with exogenous cultures, the *ribeirinho*. The Order became immensely rich and powerful and had an inexpugnable monopoly over the indigenous labor, which was one of the reasons most Portuguese settlers used to complain to the Crowns's officials about the unwillingness of the Jesuits to contribute to the wellbeing of the colonizers (Anderson 1999). Ultimately, what doomed the permanence of the Order in the Amazon was the fact that the Portuguese bureaucrats finally realized that the tremendous political power and wealth amassed by the Jesuits did not translate accordingly to the shares sent to the Crown (Anderson 1999, Hemming 1995). The fatal blow was performed by the also politically powerful Marquis of Pombal, who had a number of personal issues against the Jesuits, and was key in gathering the evidence that led to the quick process of expelling the Company of Jesus in 1759, not only from Brazil but also from all Portuguese colonies around the world (Hemming 1995). Apparently, in the eyes of God, it may have been acceptable for the Jesuits to refrain from sharing their immense profits with the missionized indians, but not so from the Portuguese Crown.

The Directorate Period

Since the beginning of the colonization efforts in Amazonia, it became clear that indigenous labor was the most precious resource once all the riches of that vast region were simply not reachable without the strategic use of indian knowledge, skills, and arms (Anderson 1999, Hemming 1987, Ribeiro 1995). Soon after the Jesuits were expelled from Brazil, all the other Orders — Franciscans, Mercedarians, Carmelites, and others — lost their favors with the Portuguese Crown. In a matter of few decades, all the Amazonian missions were put out of

commission and the missionized indians were abandoned by their fleeing former patrons (Garcia 2007, Hemming 1995, Wright 2005).

The missionaries held the Amazonian monopoly over indian labor for more than a century and a half, in spite of all the pressure and complaints from Portuguese settlers. However, things started to change when Spain and Portugal signed the Treaty of Madrid in 1750, trying to put an end to border disputes in South Brazil, where it confronts Argentina and Uruguay. Portugal was aiming at securing the conquered central territories of Goiás and Minas Gerais where most of the gold mines were discovered, as well as the vast forests of the North, and was willing to trade its rights of possession on land in the South to secure the rich Central-North regions (Coelho 2006). Under the Treaty, it was established, for the first time, that geographers and astronomers would be in charged at defining the precise location for the divisionary lines right in the field, thus starting the early cartographic expeditions to the Iberic colonies (Martín 2001). Another important rationale used in the Treat of Madrid was the principle of prior occupation, based on which Portugal was able to claim almost the entire Amazon basin since there were dozens of missions and forts scattered over most of its main rivers and tributaries (Hemming 1987). However, "[the Marquis of] Pombal was quite aware that the missions and the valuable indian labor resident there were under [mainly] Jesuit, not royal, control" (Anderson 1999:12).

On a global perspective, the early 1750's brought many important changes for the Portuguese Colonial Empire. The gold mines from Minas Gerais, in Southern Brazil, were presenting a steady decline in their productivity. Portugal had also lost many colonial territories in Africa and Asia, therefore the American colonies — the once considered of secondary importance — were now expected to boost the global gains of the Empire, by producing a surplus that could compensate for all the other losses (Coelho 2006).

Thus, the Directorate System was created in 1758, by a Royal Letter that established a new set rules to regulate the Royal Freedom extended to indigenous peoples in 1755, when all aboriginal population residing in the Amazonia were recognized as subjects of the Portuguese Crown and under its royal 'protection' (Almeida 1997, Coelho 2006). The Directorate's main goal was to assume direct control of the indian labor, making it available for both Crown interests and private settlers (Anderson 1999). The indian population of all villages should be brought to official settlements and undergo forced acculturation, by adopting civilized behaviors. The use of all indigenous languages, especially *Nheengatu*, was made absolutely forbidden, and all indians had to learn how to answer their new white patrons in Portuguese (Coelho 2006, Garcia 2007). Another goal was to

organize the collection of *drogas do sertão* and many other forests products and commodities that have been exported for the European luxury markets but, from that moment on, should be paying ransom tribute to the Crown (Anderson 1999, Hemming 1987). Once the colonial economy, based entirely on extractive production, was unpredictable, the Directorate made the first attempts on regulating the unstable productivity of subsistence agriculture as well as the first tentative to introduce plantation agriculture in the Amazon basin (Almeida 1997, Anderson 1999, Coelho 2006).

The Directorate regulations also planed the effective occupation of strategic routes, frontier areas, with a special attention to the Lower Amazon River, the region most prone to European invasions (Almeida 1997, Anderson 1999). Still, most of the settlements used to secure the new territories were the old missions and forts. Under this new management very few new population centers were created (Anderson 1999)(see Figure 2.1). Another important colonization policy was to incentivize as many mixed marriages between Portuguese men and native women as part of the plan to populate the settlements while generating more "civilized" families (Hemming 1987).

*Ruthless Patrons and the **Cabanagem** Revolt*

During the 18th-century, when the Portuguese Crown allowed the first Europeans with a scientific background to make expeditions to Amazonia, some of them were finally able to travel through the same sections of the Amazon River where the 16th- and 17th-century explorers described massive population centers. However, less than two centuries after those early reports on the preconquest indigenous population, extensive riverbank villages, and diversified and abundant food stuffs (Alcuña [1641] 2005), it was all gone. The picture had changed so dramatically that the early Spanish and Portuguese explorers' accounts were discredited as romanticized versions of reality. But the hard truth is that, by the end of the 18th-century, the preconquest tribal indigenous world had been inexorably destroyed by wars, slave raids, missionization and devastating epidemic outbreaks (Hemming 1995, Ribeiro 1995, Roosevelt 1994).

After the Jesuits and other missionaries were expelled from Amazonia, the Portuguese settlers took immediate control of their most precious and protected asset — the indigenous labor force (Anderson 1999, Hemming 1995). The missionaries had played the role of a severe yet protective father figure for the fearful indians seeking shelter from the conquest wars and slave raids. Conversely, the Portuguese officials and colonists — or *colonos* — had a worldview much

more similar to that of the *conquistadores*. Most of the *colono* families were very poor but refused to labor the land without external help (Anderson 1985). The Iberians considered themselves as the true Catholics who were guided by the grace of God. To top it of, they were also entitled by the holly Crown to make use of all the resources of the new colony to produce riches (Ribeiro 1995). According to this mindset, the indians were seen as savages, mere components of the surrounding natural landscape. Like the Amazon spices, timber, game and fish, the indians were just another commodity of the new world that the divine providence had made available for them to benefit from (Ribeiro 1995, Hemming 1995).

Under the Directorate and, later, the *colonos* rule, the number of indian deaths, physical punishments and runaways increased exponentially. Many *ribeirinho* families that managed to escape from Portuguese settlements went deep into the headwaters to immersing themselves into a life of subsistence but away from greedy patrons. However, after decades of acculturation by the Jesuit reduction system, the levels of dependence on steel tools and other items of European origin, and maybe even on the entire emerging socioeconomic system, prevented the runaways from going back to their original villages and livelihoods. More importantly, most *ribeirinho* families were so fragmented and poor they did not have enough to make a living completely by themselves (Ribeiro 1995).

Thus, the second half of the 18th-century became an age of ruthless patrons in Amazonia. The main forest commodities for export to European markets were still the *drogas do sertão* (sarsaparilla, cinnamon, peppers, anil, etc.), cocoa, tree gums and resins, parrots and macaws, all highly prized in courts and salons. Apart from these, *moqueado*, *piracuí*, *farinha*, forests fruits and natural fibers were collected to satisfy the ever-increasing demand of the internal markets of Belém and other Amazonian towns and villages (Anderson 1999, Hemming 1995, Roosevelt 2004).

By the turn of the 19th-century however, the European markets were no longer so desirous of these commodities and, within a decade or so, the colonial enterprise had come to a virtual halt in Amazonia. Most European settlers left the hinterlands, moving back to cities with a moderate wealth based on the endless exploitation of human and natural resources. This was one of the biggest bust periods in the history of Amazonian rural development. Left behind by their patrons and as poor as they had ever been, the indigenous population, including *ribeirinho* families, had no choice but to resume a life of mere subsistence. The *ribeirinho* population, once gathered in villages and colonial settlements, had to spread through an immense region, desperately looking for fertile soils and good hunting and fishing grounds. By then, the Jesuit pidgin language *Nheengatu* was not as widely spoken as it had been prior to the Directorate period. Conversely, in

most *ribeirinho* households *of* the Rio Negro Basin *Nheengatu* was already considered as an ancestral indigenous language. The multi ethnic-cultural origin of the generic indians had been homogenized, simplified and merged forever into the so called *caboclo* or *ribeirinho* livelihood (Ribeiro 1995).

The year of 1835 started after decades of depressed economic activities due to bust periods of the main commodities like cocoa and cotton. Generic indians and free slaves, indian and African, and a growing mestizo population were suffering immense pressures from an emerging Luso-Brazilian elite trying to compensate the low market prices with higher productivity. The tensions grew to the point that the starving labor class joined a revolt that had nothing to do with the mob. The initial motivation for the turmoil was a squabble between the landed elite who maintained close ties with Portugal even after the independence, and the so-called *nativistas*, the Brazilian elite (Hecht and Cockburn 2010). What the landless mass wanted was to secure better working conditions not defend the elite, pro-Portugal or Brazilian. However, things took another path as Robin Anderson describes:

> *The caboclo proved to be a poor revolutionary, committed to only short-range local issues, and unable to forge a sustainable attack against those who controlled much of the economic foundation. He provided a classic example of "cannon fodder" for the elite squabblings over post-Independence [*of Brazil*] leadership. Yet, the revolt proceeded to accelerate into a full-fledged civil war with certain racial and class overtones. For some reason, the caboclo became sufficiently politicized over issues which he found relevant to attack a government leadership perceived as inimical* (Anderson 1984:51-52).

The Cabanagem revolt opposed a rebel force of dozens of thousands of free and slave indians and mestizos fighters following commanders from the elite class fighting the Brazilian army loyal to the recently independent country. The rebels received military support from the French while the British Navy helped the Brazilian army. The main violent combats occurred in Belém, capital of Pará, and its surroundings, and lasted only 18 months. After a series of initial rebel victories, however, it spread west through most of the Amazon basin. The assassination of the Governor of Pará and other members of the local elites, a wave of hopes for chance contaminated the region's oppressed masses and the resulting civil war lasted five years claiming some 30,000 lives, or about 20% of the population of Pará (Anderson 1984, Harris 2010, Hemming 1995).

After the Cabanagem — that ended with the defeat of the rebels — "the economy of the Brazilian Amazonia was devastated"(Hemming 1987:228). Even before the revolt turned into civil war, there was an already visible labor shortage that became critical after the carnage. In spite of this severe reduction in the labor

contingent, instead of passive serves what emerged from the ashes of the revolt was "a semi-autonomous labor force...no longer willing to tolerate direct labor coercion or pressed labor" (Hecht and Cockburn 2010:183). However, this emerging "new socio-economic structure was [still] based on much of the old [patronal] structure" and would laid the ground for the rubber boom economic system (Anderson 1984:85).

About 250 years after the first Europeans arrived in the heart of the Amazon basin, the failure of the Portuguese colonial enterprise pushed most of the remain Luso-Brazilians to the regional towns. A small ex-Portuguese garrison, the Fortress of São José da Barra, located at the mouth of the Rio Negro, received so many new inhabitants coming from the rural areas that it soon became a regional urban center (Wallace [1889] 2012, Bates [1864] 2005). In the middle Rio Negro, the village of Barcelos was founded where once was located the mission of Mariuá, which by its turn was created on the same site of the main village of the former *Manaos* chiefdom (Wright 2005). The economy of the region was slowly recovering from the effects of the Cabanagem, and was still mainly based on the extraction of forest products powered by *ribeirinho* cheap labor and now aimed at supplying the internal market (Hemming 1995).

This period of idle rural development lasted until the mid-19th-century when Charles Goodyear and Thomas Hancock patented the process of rubber vulcanization (Hecht and Cockburn 2010). Soon after that, Amazonian towns were to be stormed by waves of immigrants, from rich American and European businessmen and investors to poor Northeastern Brazilian drought refugee workers (Hemming 1995). Latex was well known since prehistoric times and had been used by countless generations of indigenous peoples and *ribeirinhos* to make useful utensils through an artisanal process of turning it into rubber (Ribeiro 1996). However, with the development of the industrialized process of vulcanization, rubber became much more elastic, resistant and durable, and the industrial revolution had already a limitless number of applications for this enhanced rubber (Hecht and Cockburn 2010).

Neither the *ribeirinho* families drawn back to a life of subsistence in the middle of the forest, nor the new urban population of the emerging Amazonian towns could imagine that the decades of bust period were about to reverse like an oncoming tsunami. Overnight rubber became gold, and a "white gold" rush followed. The first of the massive waves of change arrived in the form of a much tighter socioeconomic system for the rural development in Amazonia, the *aviamento* system, the regional version of debt slavery (Hecht and Cockburn 2010, Ribeiro 1995). This new system was to transform the entire region, producing

unimaginable fortunes to very few—the bankers and rubber barons—while driving *ribeirinhos* and other poor workers into yet another cycle of heavy dependence and misery. Repeating the earlier arrival of the conquerors and missionaries, for the poor this was more of the same, the beginning of a new boom period supported by the strong arms and disposable lives of the region's historical peasantry for the enrichment of those who were already wealthy enough (Hemming 1995, Ribeiro 1995).

Ribeirinhos and ***Arigós***

Since the generic indian or *ribeirinho* labor was too scattered in the hinterlands when the rubber boom happened, the Brazilian government devised a plan to solve two problems with one single action. By the end of the 19th-century, the largely semi-arid central part of Northeastern Brazil was undergoing a series of severe and prolonged droughts that devastated virtually all crops and livestock, forcing the local peasantry to migrate in search of their own survival. In spite of the fact that the livelihoods of peoples inhabiting the semi-arid and the equatorial jungle were as completely disparate, the Federal Government conducted a massive transmigration program to bring tens of thousands of men, mainly from the state of Ceará where drought and social unrest were more acute, to the rubber production areas (Hemming 1995, Ribeiro 1995). As an integral part of the deal, the Federal Government would provide food, transportation and full infrastructure to allow the migrants to learn their new profession and prosper in their new working place (Hecht and Cockburn 2010). The newcomers were pejoratively nicknamed *arigós* (unintelligent, ignorant) by *ribeirinhos* as soon as they arrived. Contrary to the official propaganda, the *arigós* were soon to find out that only the nickname and a land governed by water and evergreen forests were expecting them in their new "promised land." The *arigós* were brave and sturdy, a peasant culture battle-hardened after centuries of harsh work in the semi-dry scrubby regions they came from (CIT). The adaptation process to this completely different environment was brutal and the only way to survive was to learn as fast as possible to mimic the *ribeirinho* livelihood and survival strategies. There was yet another barrier that none of the government planners had thought about, though. While *Ribeirinhos* and *arigós* were both generic indians, they were not only from completely different sociocultural and environmental contexts, they spoke different languages as well since most *ribeirinhos* spoke Nheengatu, while *arigós* were Portuguese-speakers (Ribeiro 1995).

The cultural shock between the people of the rivers and the people of the semi-arid could not be more difficult to handle. Many *arigós* simply died of disease, famine,

lack of basic knowledge of local animals and plants, conflict with others, etc. In spite of that, as time went by, another amalgamation process started and many *arigós* ended up marrying *ribeirinho* women. The *arigós* that survived learned how to endure, and even thrive, in Amazonia in what was later named a cabloclization process (Parker 1986). As part of the cultural exchanges, the Portuguese language was brought back to the rural areas of Brazilian Amazonia, eventually becoming widespread once it was taught in a bottom-up process (Ribeiro 1995).

Rubber Socio-economy

Adapting to a completely new socio-environmental context proved to be the lesser of evils faced by *arigós*. The *aviamento* system was the real tourniquet that was to keep their lives under strict control and replicate the historical cycles of poverty. Since both *arigós* and *ribeirinhos* were very poor, they could not provide their own equipment and materials needed in the rubber extraction business. So, in order to be able to reach, work, and survive at the *colocação* (the rubber production area), the *seringueiro* (rubber tapper) would have to make an *aviamento* (a loan of goods by credit) with a *seringalista* (rubber patron). Since the Brazilian State had been historically absent and never provided any support to the Amazonian peasantry, this was the only way the *seringueiros* could have access to tools, food, fuel, shotguns, ammunition, and everything else necessary to perform their work and survive for many months in isolation, alone or with their families, in the middle of the jungle. They would spend most of their time traversing kilometers of forest trails tapping the rubber trees for the latex and patiently producing the *pélas* (90lbs smoked rubber balls) that would be stocked until the patron, or one of his employees, would come up the river every three months or more. Upon the arrival of the *regatão* (commercial boat), the *seringueiro* would deliver his production and acquire more working tools and supplies as well as subsistence items. Everything was meticulously written in the *caderno*, the feared notebook patrons, or their representatives, would use to keep record of the debt and payment transactions. Almost all the *seringueiros* and other clients were illiterate which made it easier for patrons to change amounts, prices and interest rates at will so that, no matter how hard working the *freguês* (clients) were, they would almost never be able to pay their debts and walk out of the *aviamento* ties with the patron (Anderson 1999, Hecht and Cockburn 2010, Leonardi 1997, Ribeiro 1995, Ribeiro 1996). In fact, more than one key informant told me the same anecdote about how a certain mid-20th-century river bank colonel that would tell his gun men to kill the few clients who managed to pay their debts and dare to leave the *colocação* with some cash in their pockets.

Some patrons became so rich and powerful that they started been called rubber barons (Hecht and Cockburn 2010). Most rubber barons were city dwellers who owned the big *aviamento* houses that loaned to smaller regional *aviamento* houses or even directly to some rural-based patrons (Leonardi 1997). Among those were the *coronéis de barranco* (riverbank colonels), fierce and brutal patrons who would travel to the *colocações* and personally check how things were doing (Leonardi 1997). The riverbank colonel soon became a mix of marshal, judge, banker, doctor and godfather providing physical, legal, emotional and personal support to his client families. Developing family ties with clients was a frequent strategy to keep social unrest under control (Futemma 2006, Ribeiro 1996). After all, if a tyrannical patron was also the godfather of the client's children he would be considered as extended family before he could be seen as a tyrant and manipulator (Ribeiro 1995).

At the climax of the rubber boom, the patrons became so voracious that extra pressure was put on their clients' shoulders (see Figure 2.2). The *seringueiros* were forced to work so hard and for so long that in order to reach the expected production many *seringueiro* wives and children had to join in as rubber tappers or assistants. Once the rubber production activities ended up involving all the family members, there was nobody left to take care of manioc gardens, and hunt or fish, so that they were continuously haunted by hunger. In the middle of forests full of game and surrounded by rivers and lakes with abundant fish, many client families were so enslaved by the rubber production frenzy that they were eating only forest fruits and *farinha* and canned food bought from the *regatã*o – and, of course, paying a small fortune for these overpriced items. Therefore, the gains of the patron were ever increasing while his clients were getting deeper into a cycle of debt (Hecht and Cockburn 2010, Leonardi 1997, Ribeiro 1995).

Seeds of Doomsday

The rubber boom turned Manaus in one of the richest cities of the world. The *Theatro Amazonas*, the city's Opera House, was designed and built by European architects, contractors, painters and sculptors, and ornated with materials brought from overseas as well. Most of downtown was adorned with two- and three-story neoclassical buildings, and rich men and women walked the streets dressed in European costumes braving the Equatorial sun and air humidity typically above 90% (Hemming 1995). An unimaginable inversion of roles happened within the span of a single generation and Manaus was now importing luxury items from Europe. The once small forest village and commercial warehouse that use to ship

forest commodities to Europe had become a voracious market for whatever Europe had to offer of its best and most luxurious: wines and champagne, fine chocolate, perfumes, clothing, and chrome leather shoes (Leonardi 1997), even if they were to be used to crossing muddy streets.

Steamboats were introduced to every rubber-producing basin as well as to other major rivers. To sustain all this wealth, the *seringueiro* families were working beyond their physical and socio-economic limits. However, there was no sign of labor shortage on the horizon, since the rubber boom produced a steady influx of *arigós* traveling at their own expense, running from the drought and lack of jobs in the Northeast. Like the new boats burning hardwood in their steam boilers, the rubber industry was fueled by disposable human lives. Meanwhile, living in another dimension, rubber barons were exponentially increasing their wealth, , acting as if nothing could ever impair their business. The world's industries needed all the rubber that could be produced, and Amazonia was the only production region on the planet. Everything seemed to be aligned for the continued expansion of the rubber empire.

In 1876 however, Henry Wickham, British adventurer and spy, managed to collect several thousand rubber tree seeds in Brazil and smuggle them across the Atlantic to Kew Gardens in Southern England. Soon after, the seedlings were sent to colonies of the British Empire in South Eastern Asia and Africa (e.g., Congo) (Hecht and Cockburn 2010, Little 2001).

In the early 20th-century, after less than three decades of frenetic and socio-environmentally careless production, the Amazonian rubber monopoly was broken by Malaysia, which eventually became the world's biggest producer (Hemming 1995). Manufactured with a modern monoculture style, Malaysian rubber had a superior quality and more competitive price than forest-grown South American rubber. In the early 1910s, the entire Amazonian production became idle (Hecht and Cockburn 2010). The rubber boom was followed by an equally dramatic bust period. The collapse was rapid and decisive – overnight, the investors disappeared, the rubber barons had to renegotiate their own loans with English banks, the *arigó* influx dried up, and the *Theatro Amazonas* fell silent again (Bunker 1985, Hecht and Cockburn 2010)

Soldiers of Rubber

Following the logic of Amazonian boom and bust cycles, the *ribeirinho* families that survived the rubber production days resumed their subsistence livelihood,

going back to their cassava gardens, and hunting and fishing grounds (Ribeiro 1996). The main changes from the pre-boom period were the final incorporation of "*arigó* language" — Portuguese, and a feverous Catholicism as a result of the amalgamation of the two groups.

Apart from rubber, there was still a local market for other non-timber forest products (gums and resins, *piaçaba*, *farinha*, *piracuí, mixira*, turtles, fruits, etc.) in Manaus and other regional towns. And some patrons resumed their work with *ribeirinho* clients. Even though the rubber days were gone, the *aviamento* had become the Amazonian rural development and socio-economic system par excellence. And the *coronéis de barranco* were soon to be back in their business of extracting forest commodities using their clients' skills and sweat, for a promised credit that, in fact, would turn into an ever-increasing cycle of debt.

In spite of the *aviamento* system, with the collapse of the rubber empire, many *ribeirinho* families left their *colocações* in a desperate search for better places to dig new subsistence gardens. Many families migrated to the outskirts of Manaus looking for temporary jobs or any other opportunity to feed their families. Within a few years, the mobilization that had been induced by the rubber boom was entirely abated.

In 1942, during the South Pacific War, Japanese troops invaded Malaysia and seized the rubber plantations for their own military needs. The Allies desperately needed another source of rubber to maintain the war industries (CIT). Washington immediately contacted Brazil and an emergency plan was put into place to re-establish Amazonian rubber production.. The Brazilian Government named it the *Batalha da Borracha* (Rubber Battle), and up to 50,000 *arigó* "soldiers" were to be sent to the Amazon from the Northeast with the mission of producing 100,000 tons/year of rubber to be exported mainly to the United States (Hemming 1995). Although Brazil declared war on Germany and Italy in 1942, the first *soldados da borracha* arrived in the Amazon. It was only in 1943 that a contingent about half the size of the *arigó* battalion was finally sent to Europe to join the Allied forces (Castro 1987).

The second rubber boom was even shorter lived than the first. From 1943 to 1945, a battle for survival was fought deep in the Amazon, where *arigó* newcomers were soon to discover the *coronéis de barranco* were both their patrons and archenemies. In a predictable repetition of what happened during the first migratory waves of *arigós*, many thousands died due to total lack of State support and basic knowledge of the new forest environment, famine, diseases (e.g.

malaria, yellow fever, dengue, etc.), and disputes with other *seringueiros* and patrons' gunmen.

The official propaganda and enlistment bonus contract signed back in Northeastern Brazil listed the same false promises about infrastructure and support made to arigós during the first rubber boom, adding , however, the further false inducements of local training and, more importantly, military standard retirement pensions and recognition for heroic duty (Hemming 1995). Once again, in order to survive, the second wave of *arigós* had to undergo the process of caboclization in order to survive in the rubber *colocações*. The fact that Portuguese was already spoken in most rural areas may have lessened the culture shock this time; on the other hand, the life of a *seringueiro* was still a miserable one, and those who arrived poor, would be lucky to remain as poor, if they managed to stay alive.

Post-boom Socioeconomic Structure

The end of the World War II also marked the end of the rubber era in Amazonia. The *ouro branco* (white gold) was still out there in the jungle but its real production had been transferred to Southeast Asia and Africa. The lack of a rural development plan and a policy for long-term rubber production in Brazil doomed it as a very profitable enterprise. Rubber production continues today, although at a much smaller scale compared to that at the end of the 19th-century (Bunker 1985).

One of the main legacies of the rubber boom era was the adoption of the *aviamento* not only as the norm for regional rural development policy, for lack of a proper one, but first and foremost, as the socio-economic system that defined labor relations, thereby shaping, crystallizing, and transporting right into the 20th-century an archaic and highly dichotomized Amazonian society. In the early 1950's, the regional social resembled an inverted flat head pin, where the wide base represents all the oppressed clients (tribal indians, *ribeirinhos*, *quilombolas*, etc.) pierced by a pinnacle symbolizing the small and powerful oligarchy of patrons at the top, with its sub-patrons, managers, gunmen, etc. between the two extremes. Historically, there has been almost no social ladder to be climbed in Amazonia. There was only the individual way out, not a collective one. The way out of the oppressed base was to reproduce the oppressive system, for instance, a client managing to become a low rank bodyguard or gunman by showing no mercy towards his own kind, following blindly his patron’s orders.
The only way out of imprisonment in the oppressed class would depend on developing a relation with the patron, helping him to enhance and maintain control

by perpetuating the oppression of the client masses. In order to survive and feed his family, the *ribeirinho* head of the family would be sentenced to...

> *"...a perpetual search for vertical patron-client relations. In a society were upwards mobility is difficult and restricted and where the conditions of life enjoyed by the majority are wretched, these vertical ties provide the surest, sometimes even the only form of security and advancement"(Maybury-Lewis 1968:165).*

Figure 2.2. Rubber tapper working under the supervision of the patron (© unknown)

CHAPTER 3: 20th CENTURY INDIGENOUS PANORAMA

> *Turning [*General*] Custer upside down, men like the Villas Bôas, officially charged with the benevolent conquest of indians in Brazil, used seduction rather than weaponry to tame entire populations that had resisted contact with Euro-Brazilians. The system, officially inaugurated by the army officer Rondon...was first called* ***pacification****...and then renamed* ***attraction****, but, apart from the innovation of aircraft flying low over terrified indians...it has kept its main features: surreptitious approaches to campgrounds or villages in scouting sorties by groups of men suggestively called* ***penetration teams****.*
>
> Alcida Ramos (1994:150, emphasis in the original).

Figure 3.1. Salesian Boarding School of Taracuá, Upper Rio Negro (Photo © *Diocese de São Gabriel da Cachoeira*/ISA)

A Brief Overview

This chapter aims at providing a basic panorama of some indigenous perspectives, conflicts, policies and other important issues that happened in the 20th century. Even though some of the topics presented are primarily concerned with other regions of Brazil, they are still relevant for a better understanding of how indigenous peoples were viewed and what was the general treatment they were receiving from the national society, through its official institutions. The century was marked by recurrent waves of genocide directly related to the expansion of new development frontiers. The emergent paradigm of development started to consider the forest — and its aboriginal peoples — as the main obstacle for the economic growth. Therefore it promoted rapid and forced changes in land use, where the tall trees of the Atlantic Forest were chopped down to make room for immense agricultural fields for a growing agricultural commodities economy. This development phase was based on coffee monoculture and extensive rangelands in a socioeconomic strategy that was called the "reign of coffee and milk" (Bueno 1996:274).

Sertanistas *and* ***Índios***

By the end of the first half of the 19th century, decades before the rubber boom would change Amazonia entirely, another much less booming yet very transforming phenomenon started happening in South Brazil. European colonists and the last tribal indians of the Atlantic Coast were starting to meet and eventually clash in the agricultural development frontiers that were been opened mainly by European colonists leaving the Old World in search of new opportunities and access to land (Hemming 2003). The only problem was the fact that the remaining forests of Eastern Brazil were still the home of extraordinary warriors that managed to survive the previous four hundred years of intermittent yet aggressive contacts (Davis 1984, Ribeiro 1996).

In the following decades until the dawn of the 20th century, rural conflicts escalated into an interethnic war for access to and control of the land. While indians depended on the forests to maintain their livelihoods, the Brazilian government was attracting colonists from overseas to open new agricultural fiends (Hemming 2003). By the turn of the century, Italian settlers who just crossed the Atlantic in search for arable land at the border of Minas Gerais and Espírito Santo met instead a Bororo welcoming party who offered fierce resistance to the invasion of their land. Kaingang indians had stopped the construction of the North

West Railroad that was crossing their territory in the extensive forests of western São Paulo state. In South Brazil, German agricultural frontier colonists were facing so many conflicts with Xokleng warriors that colonization companies in charge of the new settlements started hiring *bugreiros* (professional indian hunters)(Davis 1984).

The state governments solution for these conflicts was based on the same drastic measure — objective extermination of the "problem" — and a series of genocides followed. A single *bugreiro* from São Paulo proudly reported having poisoned the water reservoir of the Kaingang with strychnine causing the death of at least 2,000 indians from both gender and all ages (Hemming 2003). A newspaper article published in 16 October 1908 described in full detail the horrors of another massacre perpetrated by a 31 men party "heavily armed with Winchester .44-caliber carbines, shotguns and machetes" who ambushed another Kaingang village by nightfall, waiting till the first light to start shooting indiscriminately to end the atrocious job by burning down the whole village with its terrified occupants (Hemming 2003:26).

During the 1908 Conference of Americanists held in Vienna, a Czech anthropologist, Vojtech Frič, publicly denounced the Brazilian governmental authorities for supporting the ongoing genocides of the Kaingang and Xokleng, and the hiring of professional indian hunters as the only official solution encountered (Hemming 2003:16). A global outcry followed and the Brazilian government was forced to come up with an outstanding solution to stop the massacres, and above all, the negative publicity generated by them. The first reaction from Brazilian diplomats and politicians was to suggest that Dr. Frič's description was very exaggerated. However, inside Brazil even public figures and a few scientists from European descent were asking for an "extermination war" as the only way to civilize the country's interior once and for all (Ribeiro 1996).

The official response came in 1910, right before the end of the first rubber boom, when a military engineer, Major Candido de Oliveira Rondon, was summoned to the capital, then located in Rio de Janeiro. Rondon, who was already considered a national hero with a growing international reputation as a humanist and intrepid explorer, was put in charge of the design and creation — apart from serving as its first director — of the *Serviço de Proteção aos Índios* (Indian Protection Service - SPI).

> *The legislation that established the SPI, and which was later included in several Brazilian constitutions, explicitly stated that it was the obligation of the Brazilian government to protect the Indians against the effects of frontier expansion and to defend their lives, liberty, and property against extermination and exploitation. In*

> *addition, this legislation recognized the rights of Indian peoples to exist on their own lands and to continue, under the guardianship of the government, their ancient and traditional ways of life.* (Ribeiro 1962 *apud* Davis 1984:3).

Rondon had been in charge of building the telegraph lines that connected the Brazilian wild west to the rest of the country and Rio de Janeiro. For than two decades of hardship experience in the Amazonian frontiers, Rondon and his team had to advance through several uncharted territories and also interact with their inhabitants — many uncontacted and potentially "hostile" indians like the Bororo, Nhambiquara, Pacaas Novos, and others (Hemming 2003). It is attributed to Rondon the method of 'pacifying' the indians by respecting their timing, behavior and culture. The first contact was seen as a crucial moment to state Rondon's pacific intentions, symbolized by the distribution of industrial gifts as steel tools, pans and other useful items that were utterly prized by all indians.

During an expedition in late 1913, Rondon was wounded by an arrow shot by a Nhambiquara still uncertain of the white men's intentions. His fellow expeditionists wanted to fight back for their lives but, in this crucial moment, Rondon coined what would later become the motto for all Brazilian *sertanistas*[11]. Ordering a retreat without returning fire, Rondon told his men that in order to accomplish their duty, one would have to "die if needs be, but never kill" or else their pacific relations with the indigenous peoples would be severely jeopardized (Hemming 2003).

During the first two decades of SPI's existence, not a single indian was killed or wounded by its *sertanistas* and other agents. On the other hand, several SPI casualties were reported although none was avenged, creating the first precedent of this kind in Brazilian history. Shelton Davis details the early 'successes' of the still glorious phase of SPI that was highlighted by

> *[*The pacification of*] "the Kaingang (1912) of São Paulo and Paraná (1912), whose land are now covered by productive coffee plantations; the Botocudos (1914) of the Itajaí Valley, which is now one of the richest regions of Santa Catarina State, the Aimoré (1911) of the Rio Doce Valley in Minas Gerais and Espírito Santo, an area now occupied by towns, industries, and farms; the Umutina (1918) of the Sepotuba and Paraguay Rivers, whose pacification made possible the exploitation of the large ipecac forests of Brazil; the Parintintin (1922), who prevented the exploitation of large rubber tracts along the Madeira River and its tributaries; and the Urubús (1928), who had caused turmoil*

[11] "*Sertanista* was a high rank in the SPI, an elite of backwoodsmen who led contact expeditions" (Hemming 2003:24).

> *throughout the entire Gurupi Valley, between Pará and Maranhão* (Davis 1984:4-5).

However, "the job of pacifying Indians was designed less for them than for Brazilian society as a whole" (Ribeiro 1954 *apud* Davis 1984:5), and in spite of the attempted mediation and best efforts of SPI's agents, rubber tappers, extractivist collectors, fur hunters, cattle ranchers, and all kinds of settlers inexorably invaded the pacified territories. Pacified indians were "seduced and abandoned" (Ramos 1998) by the very State that vowed to protect them. Destitute indians all over the Brazilian interior were further attacked by disease and "became marginalized ethnic populations on minuscule parcels of land"(Davis 1984:5).

The period between the early 1940's to late 1950's, saw the emergence of a group of Brazilian humanistic anthropologists — having Darcy Ribeiro as its maximum exponent — infused with a new practical perspective for a participatory anthropology focusing on studies and political mobilization that could support actions to enhance the chance of survival of threatened tribal indigenous peoples surrounded by the advance of the national society (Hemming 2003).

In 1943, Orlando, Cláudio and Leonardo Villas-Bôas, three adventurous sons of a recently deceased rich attorney from São Paulo, faked their identities pretending to be poor and uneducated as a means to enlist as labor force for the Fundação Brasil Central (FBC). The FBC was created by President Getúlio Vargas to open the Brazilian "wild west" to colonization and general development. In other words, the FBC was in charge of expanding the development frontier across the Brazilian Central Plateau which was one of the last unexplored areas of the country (Ribeiro 1996, Sick 1992). Due to their natural leadership, higher level of formal education, communication and planning skills the Villas-Bôas brothers were quickly upgraded to positions of command in the FBC, as soon as the first expedition started. In less then a decade, the Villas-Bôas became the senior planners of all the FBC field campaigns and gained fame among Brazilians who started to see them as national heroes and friends of the indians. The Villas-Bôas were inspired by Rondon's positivist agenda and pacification strategy to contact indians. The Villas-Bôas took part of a select group that included Rondon, Darcy Ribeiro, high rank militaries and politicians and José Maria da Gama Malcher, who was in charge of presenting the project for the *Parque Indígena do Xingu* (Xingu Indigenous Park) to the President Café Filho, in 1959 (Hemming 2003).

In 1957, Darcy Ribeiro published a detailed report on the current status of the indigenous peoples in Brazil. According to this study, in the first half of the 20th

century more than 80 tribal indigenous peoples would have made contact with the national society and subsequently disappeared due to epidemics, heavy deculturation and conflicts in general. During this period, in the agricultural frontier six groups were driven to extinction. In cattle ranching areas, 13 peoples were eradicated. Meanwhile, almost 60 tribal peoples have disappeared in extractive areas in Amazonia. The major token resting on rubber collection areas were genocidal wars were perpetrated with the full support of *seringalistas*[12] and the State, both of them bewitched by its rapid gains during the rubber boom. In only five decades, Ribeiro estimated that the Brazilian indigenous population had dropped from about one million to less then 200,000 people (Ribeiro 1957).

Presidente Jânio Quadros finally signed the creation of a reduced version of the original Xingu Indigenous Park in 1961. In spite of the immense dedication of Darcy Ribeiro, the Villas-Bôas brothers and other advocates for the indigenous protection, the Brazilian State was once again falling miserably to do so. Reports from more genocides perpetrated during the 1950s and early 60s were been organized by a work group of the Ministry of Interior and the atmosphere at the *Serviço de Proteção ao Índio* (SPI) very grim, once staff from the institution was directly involved in the recent massacres, that would have been executed following military orders. Finally, in 1967, SPI was extinct and replaced by the *Fundação Nacional do Índio* (FUNAI) as a strategy to prepare for the negative repercussion of the genocides report that was already in the making. The replacement of SPI by FUNAI was just staged to pretend that the military regime was taking actions to eliminate the root causes of the problems. Instead, it was just perpetuating the old degraded structure of what SPI has been turned into: a service to eliminate indigenous groups as protect national interests. FUNAI brought a new acronym but was created with the same staff that worked on SPI, and also maintained the same policies and praxis (Davis 1984, Hemming 2003, Ramos 1998).

The golden years of SPI and its proud *sertanistas* ended right before the coup d'état by the Brazilian military in 1964. In a retrospective, Darci Ribeiro considered Rondon as the greatest humanist he ever met. According to him, Rondon considered the indians intrinsically good and, following his Positivist beliefs, as if they were still in an earlier stage of the human natural phases of evolution. Therefore, Rondon considered the indians to be in a pre-civilized stage, yet he was one of the first to advocate their intrinsic right to be different. Being different should not be a reason to deny them the same rights that any other

[12] *Seringalista* was the owner of a *seringal* (rubber production field) and could rank in status from *patrãozinho* (patron's assistant) to a rubber baron (Hetch and Cockburn 2010).

Brazilian had warranted by law[13] (Ribeiro 1996). Anthropologist Alcida Ramos, conversely, sees Rondon as the civilizing strategist, the first to envision a way to integrate the indian, as a labor force, into the national society. Indeed, this is perfectly aligned with Comte's positivistic doctrine, which was Rondon's main philosophical influence. However, Ramos goes further:

> *The image of the benign state, protector of and provider for the Indians, is encapsulated in certain personalities elevated to the status of national heroes. The conquest of the hinterland, supposedly a fearful human void, was for a log time one of the greatest sources of heroism, supplying the required features of romance and daring. But behind feats of bravery and self-denial has always been a clear vision of the need to take possession of the land and resources, not to mention people* (Ramos 1998:149)

Another Brazilian anthropologist, Carmen Junqueira, who worked in the Xingu National Park notes that:

> *The implementation of a protectionist policy has entailed a "delicate interference" in the way of life of the Kamayurá [Xingu indians] has brought about a series of unforeseen structural changes in the relationships of the tribe. Among the most important of these changes is the great degree of economic dependency that has been created between the Kamayurá and the Indian agents in the park* (Junqueira 1973 *apud* Davis 19884:53)

The *sertanistas* work was not immaculate, and some indian agents were taking advantage of the situation to establish patron-client relationships with the indians as mentioned above. But one should also recognize that most *sertanistas* worked on dire conditions with very little political and financial support. If the indigenous peoples suffered sequential genocides in the first half of the 20th centuries even though they had some protection — no matter how limited —from the SPI, one could imagine how would it have been without it.

However, the once virtuous and idealistic SPI turned into a monstrous institution in its later phase. The institution that was created by Rondon himself, to protect the indians at all costs — although following a perspective of assimilating them to the national society — entered the 1950s and 60s perpetrating the very crimes it was supposed to suppress (Davis 1984, Ramos 1998, Ribeiro 1996).

[13] The first law that extended the same rights of Luso-Brazilians to the indians was passed by Pope

Exchanging Six for Half a Dozen[14]

Following the release of the expected Brazilian Ministry of Interior report on the 1950-60s indian massacres that happened under the responsibility of SPI, a bombastic article published by the Sunday Times Magazine in 1969 (Lewis 1969), entitled "From Fire and Sword to Arsenic and Bullets: Civilisation has Sent Six Million Indians to Extinction", generated another international outcry. This time, the negative repercussion was even louder and more structured than the previous 1908 genocidal scandal that forced the creation of SPI in the first place (Davis 1984).

During the 1970's, under the Military Regime, Amazonia was hit by several development projects aimed at construction of infrastructure to allow its colonization by land. Therefore, a network of immensely long but narrow highways was designed without any previous knowledge of the terrain, thus based on straight lines that were impossible to maintain during the construction due to unsurpassable obstacles like rivers, hills, swamps, lakes and dozens of indigenous territories. Huge hydro dams projects — like Balbina, in Amazonas, and Tucuruí, in Pará — were also planed and executed generating devastating environmental problems (Ramos 1998). Balbina alone flooded 10,000 hectares of the Waimiri Atroari traditional hunting grounds, while the construction of BR-174 highway crossed the heart of their sacred territory, which started another ethnic war (Baines 1990).

In 1972, Brazilian Amazonia was portrayed in the *Engineering and Mining Journal* as the "new mineral province for the 1970s" bringing a new wave of development impacts to Cinta Larga and Suruí who were living inside the Aripuanã Indian Park (Davis 1984:87), and a number of still isolated tribes (Emilia and Bavaresco 2011). The main response from FUNAI to the new challenges and threats to Amazonian indigenous peoples was to repeat the main policy "by the Bureau of Indigenous Affairs in the United States, of leasing the rich minerals contained on Indian lands" (Davis 1984:88).

As part of the military colonization plan for Amazonia, transmigration projects were implemented transferring landless ex-farmers from South, Southeastern and Central Brazil to the state of Pará and the territory of Rondônia and Roraima. When confronted with the fact that Amazonia was not an empty land, but home to thousands of indigenous peoples whose land would be destroyed by the transmigration projects, some Brazilian military evoked the genocidal quote "*Índio*

[14] Translation for the Brazilian proverb — "Trocando seis por meia dúzia" — meaning not changing the essence of things at all.

bom é índio morto" (The only good indian is a dead indian) from US General Philip Sheridan (Davis 1984, Ramos 1998).

The transmigration projects were considered strategic for the military once they were supposed to be solving two complex socio-economic and environmental problems. Land grabs by powerful landowners, food giants and other corporations had evicted thousands of small-scale farmers from their own land in Southern Brazilian states (Wright 2003). Meanwhile, from the military planers perspective, Amazonia was an empty space filled with thick jungle. It was just a matter of sending the ex-farmers turned landless to Amazonia and let them do the whole job of cutting down the forest and start cultivating the soil that should be rich, given the size of the trees (Ramos 1998, Wright 2003). The results were devastating. There was not even a minimum infrastructure waiting for the arrival of the colonists who were exposed to diseases, weather, and malnutrition. When the opening of service roads and the deforestation started, innumerable interethnic conflicts followed, with hundreds of casualties from both sides (Hemming 2003, Ramos 1998). Due to lack of any previous information, technical support or rural extension services, the first agricultural experiences were the complete failure of southern crops planted erroneously in Equatorial areas (Wright 2003). The colonist were saved from dying of starvation and malaria because their learned with local *caboclos* and *ribeirinhos* how to adapt to the regions environment and ecology in a process Eugene Parker called caboclization (Parker 1985).

Let Them Be

The highly controversial attraction fronts used by SPI and later by FUNAI were finally abandoned as the institution's main policy towards the uncontacted indians. Under the guidance of *sertanista* Sidney Possuelo, in 1987 an important paradigm shift was implemented with the adoption of a different strategy. Instead of any attempts to establish forced contact with, the new policy was designed to protect the indians by identifying their existence and demarcating their territory, as a means of creating a buffer zone. This would allow the isolated indians the necessary time and space to self-determinate if they would want to make to contact or not (Hemming 2003, Liebgott 2011, Neves 2011).

The 1988 Brazilian Constitution created a key precedent by recognizing the indigenous primordial rights, meaning the rights they should have had since the arrival of the Europeans once they their ancestors were already there. Among the most important changes is the complete abolition of State tutelage that had been turned official in 1973, but was now extinct for good. Also the right to live and

have demarcated their traditional territories, the right to have and follow their own socio-political organization and rules, the right to be different and the universal right that grants access to public services for every Brazilian citizen. Important campaigns and projects followed the 1988 Constitution indigenous rights advancements. Almost as a prize for their tremendous lobbying effort, many indigenous and socio-environmental Non Governmental Organizations (NGO) had more access to official funding and became involved in the demarcation and management of *Terras Indígenas*, health programs, etc. (ISA 2002). Some NGOs opted for "resurrecting" the concept of the noble savage by portraying indians as having intrinsically harmonious relations with nature and natural resources failing to take into account the centuries of ethnogenesis and adaptations to survive, for instance. Most of it was done for marketing and funding purposes. However, the main focus remained on the tribal peoples, meanwhile the *ribeirinho* remained in hidden in their invisibility (Nugent 1993).

Another good news for the indigenous cause was released in 1989, with the approval of the International Labor Organization Convention #169 (ILO 169). The ILO 169 is the only international law that recognizes indigenous rights to their land, livelihoods and socio-political organization. Although is echoes most of the indigenous rights as presented in the 1988 Brazilian Constitution, the ILO 169 goes further and states that indigenous peoples have the right to make decisions about projects that may affect them and should always agree through real informed consent. Brazil and other 22 countries have signed it, however most continue to disrespect the official agreement (Hemming 2003, Ramos 1998).

A third genocidal wave struck Northern Amazonia when a gold rush made 30,000 desperate gold miners, many of them *ribeirinhos*, invade Yanomami territories located in the state of Roraima. A third international campaign was released to let the world know that gold was more important than indigenous lives as the Yanomami were dying by the thousands due to diseases, armed conflicts, and hunger (MacMillan 1995). As a result for the international pressure, the Brazilian government was forced to homologate the demarcation of the Terra Indígena Yanomami in 1995 (Kopenawa and Albert 2013).

20th Century Rio Negro

In 1914, Salesian Missionaries went up the Rio Negro and established missions and boarding schools in São Gabriel da Cachoeira and in the rivers Tiquié, Uaupés and Papuri. During the early 1940s a mission and boarding school was opened in Barcelos as well. The missionaries were extremely rigorous with the students'

discipline. The Upper Rio Negro students were all tribal indigenous kids and used to speak their own parents' languages at home. However, they were absolutely forbidden to speak a word in any other language than Portuguese. Any mistake was punished severely with the *palmatória* (ferule) in front of all the other students. Punishments by food deprivation and solitary confinement were also used to acculturate the interns.

The quality of education was quite high though. Many indigenous families did all they could to send their children to one of the Salesian boarding schools. Apart from the obvious fact that education was of the highest level, the students' families might also have tried to alleviate them from the burden their parents have suffered throughout their lives. By giving their children a chance to receive good education and become proficient in Portuguese, the parents were also trying to provide their children with a cover identity, the one of a generic indian or even a non-indian (Key informant, pers. comm.). Many parents also ceased speaking their native languages with their children during their vacations back home. Some respondents of the survey conducted in this study, described how they felt sad by not been able to speak with the parents any more, and even forgetting languages that they once knew (Lasmar 2006). The Salesian missionaries reincarnated the worst aspects of the 17th century Jesuit and other missionaries, and were responsible for a severe acculturation of all the students that spent a certain amount of years in the boarding schools. Indeed, the *curumins* (indigenous kids) that once entered the mission school would never be the same (Cabalzar Filho 1999, Wright 2005).

The Salesian range of cultural influence in the Upper Rio Negro, however, was much broader than just the sphere of the missions. The decision to build the iconic boarding schools was meant to transform the students into good Christians, meaning being baptized and adopting a civilized behavior that would clear the sins of their earlier life as savages. After the complete acculturation was achieved the children were then used as vectors to spread the cultural change back to their original families and villages. By using the students to spread the Catholic faith and civilized behavior from inside out in their villages, the Salesian were opening another front in their comprehensive frontal attack to the basic principles of indigenous communal life, considering it to be based on sinful behaviors and practices (Peres 2003). Along the initial decades of their presence in the region, the Salesian missionary managed to destroy almost all the large communal houses of many tribes, fiercely opposed shamanistic practices, and did their best to stop all cultural manifestations of traditional festivities, the use of personal adornments, ingestion of hallucinogenic plants, and marriages between cross cousins (Cabalzar Filho 1999).

As soon as the rubber boom was over in the early 1910s, many Upper Rio Negro families migrated down river in search for jobs and other opportunities. Even tribal indigenous families experienced some decades of high mobility either going up the Negro tributaries into Colombian and Venezuelan territory or, conversely, going down all the way to Manaus, at the mouth of the Rio Negro. Finding jobs was not an easy task during the first half of the century. Most families were following patrons trying to find work on the extractivism labor camps of *piaçaba* palm fibers, and the latex of rubber, *sorva*, and *balata*. Back then the fur trade was avidly looking for any quantity of spotted cat (i.e. jaguar, ocelot, or margay), black cayman, and giant otter skins. Another traditional activity was the production of *mixira* - the equivalent of an indigenous sausage — made with manatee or river turtles meat. Many nature wood oils were also marketable commodities like those extracted from copaíba (*Copaifera sp.*)and pau-rosa (*Aniba rosaeodora*) (Benchimol 1999).

During the 1950s, the Salesian order changed diametrically its orientation towards the indigenous peoples of the region. A few decades earlier, the Salesian were completely dedicated to the complete suppression of aboriginal sociocultural behaviors and expressions. However, in this new role, and now also present in the Middle Rio Negro, the Salesian abandoned the boarding schools as their prime acculturation tool and decided to work on the indian villages towards the rescue and empowerment of indigenous identities and freedom. Indeed, the missionaries were then trying to salvage what the order had spent the last decades attacking and destroying (Cabalzar Filho 1999) Their new mission was to bring the indians closer to the church and its concept of purification through material renunciation as a means of spiritual gain (Peres 2003). Interestingly enough, the priests that first moved to the region were the ones who promoted most of the indigenous material and cultural forced renunciation. That early phase of work could be interpreted from many perspectives, none of them leading to any spiritual gain though. In spite of the violent repression of the initial decades and its overall inconsistent orientation, the Salesian and their boarding schools played important roles in the formation of regional indigenous leaders (Peres 2003), giving them not only access to quality education but also preparing them to the pressures and cultural barriers they would face while dealing with the national society, politicians and the Brazilian government institutions and officials.

Later, from the 1970s on, gold and diamond mines were located in the mountainous border between Brazil and Venezuela. The access was very difficult, but thousands of indigenous peoples, *ribeirinho* and tribal, headed there to take chances or more often work as porters. Tantalite was found on the plateau of the

Serra do Aracá in 1980s, attracting another wave of miners and porters (Nivalson Andrade, Pers. com.).

In 1988, the territory of Roraima became the a state and another transmigration project channeled many thousand colonists from Southern Brazil looking for a place to restarting their farmer's life. A smaller scale version of the interethnic conflicts that turned Rondônia upside down also repeated in Roraima when colonists invaded indigenous territories to open new agricultural land and pastures. Due to complete lack of State planning and governance deforestation, epidemics and armed conflict became widespread mainly in the Southeastern part of the new state (Mourão 2008).

By late 1980s the first indigenous and socio-environmental NGOs either arrived or were founded in the Middle and Upper Rio Negro. What may have seemed earlier as a very tentative approach found very fertile grounds in the strong political leadership of Baniwa and Tukano indians of the Upper Rio Negro. The organization of indigenous peoples of the whole basin started there with the foundation of the *Federação das Organizações Indígenas do Rio Negro* (FOIRN) in 1987 (Andrade 2007). Repeating the trajectory of the indigenous families who went down river in the early 20th century looking for work opportunities, some 80 years later what came down river to influence the entire basin was the indigenous leadership stimulating other *parentes*[15] (relatives) to organize themselves into associations and organizations to fight for indigenous rights like the demarcation of traditional territories, access to healthcare and special indigenous education, etc (Cabalzar and Ricardo 1998).

The 1991 Brazilian general census showed an indigenous population of about 294 thousand indians. This was barely the expected residual increase from the projection made by Ribeiro four decades earlier (Ribeiro 1957). Then, in 2000, another census recorded an astonishing 249.6% increase totaling about 734 thousand indians in the country. Finally, in 2010, the first Brazilian census to ever record ethnicity and spoken languages for indigenous respondents produced an even more impacting result. After two decades of consistent increase, the indigenous population reached 896.9 thousand people who belonging to 305 ethnic groups and speaking 274 indigenous languages.

> *"This expressive increase could not be understood only as a demographic effect (i.e. due to [changes in rates of] mortality, births, and migration), but*

[15] *Parente* is the traditional way that Brazilian indian refer to one another independently of having any ethnical or kin affinity. It is based on the concept that all indians share a common origin.

> *[due] to a possible increase in the number of people that self-identified as indigenous, mainly in the urban areas of the country"*[16] (IBGE 2012c: 3)

The 2010 census also identified 505 *Terras Indígenas* (Indigenous Reservations) where 57.7% of the total population was living. In spite of the auspicious news in regards to an impressive population recovery, 66.9% of the indians interviewed in Amazonia, declared having no sources of income (IBGE 2012b).

By the turn of the century, an auspicious combination was already happening in Rio Negro Basin, when the native indigenous leaders found support in the local and arriving indigenous and socio-environmental NGOs to form dozens of working groups on several different fronts related to the demarcation of traditional territories, recue and empowerment of indigenous identities and cultures, and sustainable development projects. The key to the success was a simple yet not always feasible group effort incorporating the indigenous ecological and geographical knowledge to the NGOs experience on presentation of proposals, fund raising and political lobbying the Brazilian government institution and National Congress (Andreza 2007, Ramos 1998). FOIRN is the most important indigenous NGO in the Rio Negro, which is divided in five coordinated offices that work with 89 indigenous grassroots organizations distributed along the Rio Negro main channel and many tributaries, representing more than 35,000 indians living in more than 750 villages (FOIRN 2014).

[16] Original in Portuguese: *Esse aumento expressivo não poderia ser compreendido apenas como um efeito demográfico (ou seja, devido à mortalidade, natalidade e migração), mas a um possível crescimento no número de pessoas que se reconheceram como indígenas, principalmente nas áreas urbanas do País.*

CHAPTER 4: RESEARCH DESIGN AND METHODS

> *You want to know what needs to change to better off our community?* ***Rapaz*** *(Oh boy), everything! We dream of having, one day, [24h/day] electricity, health care, and education. The salary of the [few rural] professionals should increase a lot because we have enough will to work even harder. We need [emergency] transportation [to rescue the sick and wounded], fuel for the [electricity] generator and the* ***voadeira*** *(speed boat). Also, [we need] another building to serve as school. [The old one]... collapsed almost over the heads of the kids, and a* ***merenda*** *(school meal) more adequate to the* ***curumins*** *(indigenous kids). The Municipal Administration really needed to become more conscious of [the reality and difficulties faced by] the people from here [the rural communities], but this is the most difficult of all* (Recorded from a Baré community leader, September 2012).

Figure 4.1. *Ribeirinho* weaving a *paneiro* to store *farinha*. (Photo © F.B. Pontual)

Filling the Gap

In order to understand why entire *ribeirinho* households seem to be abandoning their communities and migrating to the nearest cities, it was necessary to learn who these very families were, where they lived, and how they were making their living. The *ribeirinho* amount for the largest indigenous contingent in the Pan-Amazonia, yet have remained virtually invisible and unrecognized (Nugent 1993) in spite of being a living and diversified cultural entity undergoing their ethnic transfigurations since the 17th century (Ribeiro 1995). It is also necessary to understand the socio-political and economic dimensions of *ribeirinho* dynamics encompassing both urban and rural areas in the Rio Negro.

As mentioned in Chapter 1, even after having played vital roles as a disposable army of forest laborers that supported all the Amazonian economic cycles throughout the centuries, to this date, the *ribeirinho* were the main subjects of very few academic studies (Adams *et al.* 2006, Wagley 1985). For the Rio Negro *per se*, there is only a handful of relevant works that shed some light on *ribeirinho* identity, social settings, livelihoods and survival strategies in such a vast region (Cardoso *et al.* 2008, FAS 2011, Guzmán 2008, Kurihara *et al.* 2010, Menezes 2014, Oliete Josa 2008, Oliete Josa *et al.* 2013, Pereira 2007, Peres 2003, Sobreiro 2007). However, most of them seem to be either too generic or quite conscripted to very specific places or areas, therefore failed to provide a more regional sense of *ribeirinho* socio-cultural and economic diversity. Contrary to the hundreds of ethnographic monographs published on many tribal peoples of the past and present day, an exhaustive literature survey using *caboclo* and *ribeirinho* as key words will offer no clue on the drivers of the rural exodus observed in the Rio Negro. Therefore, this dissertation fieldwork research was also designed to provide a regional panorama of *ribeirinho* identities, livelihoods, household socioeconomics and dynamics, and rural communities' infrastructure and constrains that may be more representative of the other hundreds of rural communities along the Rio Negro basin that could not be included in this study. The core of my fieldwork was to design and implement a regional scale *ribeirinho* multi-community household survey across the Middle and Lower sections of the Rio Negro. The survey was carried out entirely by myself, to ensure consistency and enhance accuracy of the collected data. The interviews were conducted at the respondents' houses or any other place of their choice.

Once the rural-to-urban migration is an ongoing phenomenon, a major conceptual decision had to be made in regards to the research perspective of analysis. In other words, the choose between doing either a household survey in a city like Barcelos, for instance, interviewing families who had already migrated, hoping to

understand what their drivers for moving had been; or doing the work on rural communities and interviewing families without previous knowledge of their willingness to move out or not. The rural-based survey seemed to best serve my objectives, once it would allow me to capture not only a sample of pre-exodus perspectives but also to better understand the apparent anomalous phenomenon of abandonment of subsistence grounds to take chances in Barcelos, Novo Airão, Caracaraí, Santa Maria and other regional urban centers (see Chapter One). After all, cities have been acting as magnets everywhere, but studying the *ribeirinho* households while they were still living in their communities could give me a better idea of what was the baseline condition for the rural exodus.

The research for this study was done from 2008 to 2013, whereas fieldwork was divided into four seasons from 2008 to 2012, totaling 15 months of research in the Rio Negro basin. The fieldwork for this study included 388 respondents from 210 *ribeirinho* households interviewed in 40 rural communities[17], distributed in the municipalities of Santa Isabel do Rio Negro, Barcelos, Novo Airão and Iranduba, in the state of Amazonas; and in the municipalities of Caracaraí and Rorainópolis, in the state of Roraima. It also included dozens of key informants in the cities and peri-urban areas of Barcelos and Manaus. The sampled field site was a sinuous transect of about 2,200 km (1,375 miles) of navigable waters, spreading all the way from the vicinity of Santa Isabel do Rio Negro to the vicinity of Manaus, along the Rio Negro main channel and the lower sections of ten of its tributaries (i.e. rivers Preto, Padauiri, Quiuini, Aracá, Demeni, Amajaú, Xeriuini, Jauaperi, Cueiras, and Acajatuba) from both margins (see Figure 4.2). Barcelos was chosen as the field base. A research boat was built and used during the household survey phase (2012)(See Figure 4.4).

Previous Field Experience

From 2003 to 2005, I served as a field manager on a vertebrate diversity inventory in some of Rio Negro's left margin tributaries, and inside Yanomami Territory. That assignment gave me the opportunity to visit a few of the *ribeirinho* communities I have included in this study. Spending some time in these communities provided the opportunity to talk to many community members about the local fauna, their lives and main problems, as well as asking questions concerning the logistics to reach the places we were heading to. Therefore, about three years later, when the decision to work again in the Rio Negro was made, I

[17] Only 38 communities were visited during the 2012 survey, but respondents from another two communities (Nova Jerusalém and Bacuquara) that I visited in 2005 and 2008, respectively, were interviewed in other locations for this study.

already knew more than the basics about *ribeirinho* etiquette and how to approach local people in an objective and transparent way. I was also aware that *ribeirinhos* tend to be suspicious about outsiders in general, especially if the visitors' walk around collecting information, taking pictures, and notes.

Figure 4.2. Location of the field site and the main regional rivers (Map by Laura Daly).

Navigating Through Time and Space

Initially, this study would be only sampling households from communities located in the Middle Rio Negro. However, based on extensive research and interviews with NGO staff and other key informants, a decision to expand the universe of analysis including communities located in the Lower Rio Negro region was made based on three main conceptual reasons.

Firstly, as mentioned in Chapter 1, moving upstream in the Rio Negro basin reproduces a similar effect to a time travel back in time, through some of the main phases of rural development in Amazonia. This happens because different sections of the basin still maintain and represent particular stages of past development or economic cycles (e.g., labor for wage in the outskirts of Manaus, boat carpentry in Iranduba, *piaçaba* extractivism around Barcelos, commercial production of

farinha in São Luís and Canafé, tribal socio-political organization in the Upper Rio Negro, etc.).

Secondly, the Rio Negro basin is so vast and diversified in terms of recent colonization and socio-economic orientation that visiting specific places and communities located in different states and municipalities may also give and idea of the diversity found the other parts of Amazonia. As described in Chapter Three, during the 1970's and 80's, the state of Roraima was a major recipient of thousands of families of small-scale farmers of European descent who were displaced from their properties by corporatization of land in South Brazil and joined the military government's transmigration projects (Right and Wolford 2003). Therefore, Roraima shows many socio-economic and cultural traits that may relate more closely to the frontier development regions of Eastern and Southern Amazonia than those found on the rest of the Rio Negro basin, as will be further discussed in Chapter 5.

The third and last conceptual reason for having expanded the universe of analysis is the fact that, in spite of having its own peculiarities, studying the Rio Negro may also help to shed light on factors influencing rural development and exodus elsewhere in Amazonia.

Dimensions of Research

The research methods for this dissertation were organized and applied in three distinct yet complementary dimensions of analyses that required different approaches and procedures. These dimensions are: 1) Historical perspective, 2) Urban socio-political economy, and 3) Rural communities and household survey.

The first, which main findings were already presented in Chapters One, Two and Three, consisted of an extensive and systematized literature review on the geography of the Rio Negro basin, the history of colonization and rural development of the Brazilian Amazonia and how it affected its aboriginal peoples, from the dawn of the conquest to the first decade of the 21st century. The literature review provided a solid historical background on which I could overlay my own observations, data set, and analysis to provide a perspective on the development of causes and processes that influenced and were instrumental in shaping the contexts observed today in the Middle and Lower Rio Negro basin.

The second dimension of investigation was the study of urban socio-political and socio-economic settings, specially those related with the informal economic

interactions, found in Barcelos, used here as a reference of urban center in the Rio Negro. In order to assess a critical mass of understanding on this topic I carried out many urban and peri-urban participant observations and semi-structured and open-ended interviews with key informants in Barcelos, and Manaus. This work also functioned as a prerequisite to design and implement the rural household survey, once it provided enough information and understanding on the diversity and complexity of the research universe and its major stakeholders.

The third dimension of analysis was focused at uncovering the rural communities and household cultural, socioeconomic and mobility dynamics. The fieldwork activities followed the usual social sciences/anthropological research methods yet were grounded in a very structured and systematized empirical methodology which core was the *ribeirinho* household survey. The survey consisted of a comprehensive set of structured interviews based on a custom-built questionnaire containing both quantitative and qualitative questions addressing topics on respondents identities, household composition, drivers of mobility, socio-economic activities, social assets, garden productivity and management, livelihood indicators, and cultural perceptions on the communities and cities (Converse and Presser 1986).

The dimensions of analysis listed above are clearly multifaceted and intermingled with each other. Triangulation, or the use of different methods of observation and sources of information to crosscheck data while analyzing a given phenomenon (Fetterman 1989), was used throughout my research mostly to perceive the interconnectivity and interactions between these dimensions, in order "to put the whole situation into perspective" (Fetterman 1989:89)

Triangulation was also used to calibrate quantitative results by means of establishing the right context of analysis indicated by qualitative data (Ragin and Becker 1992). For instance, today, a household that produces 50 *paneiros*[18] per year can be considered as among the top *farinha* producers. However, both the literature and some respondents mentioned a regular production of 200 plus *paneiros* in the 1950-1970's, when the Rio Negro rural population was much larger and patrons were buying a lot of *farinha* to resell it to their clients working in the *colocações* (labor camps) deep in the most isolated hinterlands.

Another important and subtle type of triangulation was done to interpret quantitative and qualitative data provided by household respondents during the interviews. For instance, most households live embedded in informal economies

[18] *Paneiro* is a 30liter/8 gallon weaved basket, commonly used a unit of measurement in Amazonia.

framed by a day by day production vs. consumption mindset, keeping no written or clear mental records of their garden yields, yearly/monthly total income, etc.

Historical Perspective

The historical background produced by the bibliographical research was divided in four sections: 1) History of Indigenous Peoples, with an emphasis on the Rio Negro, 2) Amazonian Rural Development Phases and Emergence of Patron-client Relationships, 3) 20th Century Brazilian Indigenous Rights and Indigenism, and 4) *Ribeirinho* Ethnogenesis and Survival Strategies. Dividing the reviewed literature among these topics allowed me to make use of a diversified selection of authors from different fields and perspectives to provide a solid reference of the historical processes that shaped and frame the present day contexts.

The section on History of Indigenous Peoples provided a reference point to understand the magnitude of the socio-environmental impact and changes perpetrated in Amazonian autochthonous peoples by the conquest wars, missionization, colonization and subsequent rural development policies and activities. The section was organized to address three major topics: 1) The post-conquest ethno-cultural and socio-economic collapse, 2) Emergence of the generic indians, and later, the *ribeirinho*, 3) Main *ribeirinho* survival strategies: Assimilation or isolation? I have tried to provide an emphasis on the Rio Negro basin, using the extensive qualitative information gathered from other secondary data sources and key informants to provide a coherent historical narrative.

In the Amazonian Rural Development Phases and Patron-client Relationships, the main events of recent Brazilian Amazonia history were organized in a sequence of causal flow. The literature covered the main regional socio-economic cycles from the late 16th century to the end of WWII, shedding light to the emergence and adaptations of patron-client relationships associated with the main rural development phases. I believe that it helps understanding the almost symbiotic character of such a long term relationship. I provided my own interpretation of historical facts and how their succession shaped the present day context found while doing my fieldwork.

My investigation on the 20th Century Brazilian Indigenous Rights and Indigenism highlights the emergence of indigenous rights, Brazilian *sertanistas* (hinterland experts), humanist anthropologists, and governmental institutions that were supposed to be dedicated to the study and protection of surviving indigenous peoples. Some conflicting perspectives were provided for the roles played by the

main stakeholders, to provide a realistic sense of the troubled decades of the last century when at least 87 indigenous groups were extinct (Ribeiro 1996) by armed conflicts, diseases and loss of suitable land.

The last part of the bibliographical research, Emergence and Identity of the *Ribeirinho*, described the formative process of the *ribeirinho*, how they have been adapting their survival strategies to cope with all the socio-economic, political and environmental changes through the centuries. A fluid and dynamic perspective on the concepts of ethnicity and ethnogenesis permeates my interpretation of historical facts that culminates with the phenomenon of rural-to-urban migration that is directly related to the main research question of this study.

Urban Social-political and Economic Settings

The study of urban socio-political and socio-economic settings in Barcelos, specially those related with informal economic transactions in Barcelos, followed three methods: 1) Urban and peri-urban participant observations, 2) Semi-structured and open-ended interviews with key informants, and 3) Collection of recent Governmental and NGO documents.
Participant observation has been called "the foundation of cultural anthropology" and also described as "a method that is both humanistic and a scientific one" (Bernard 2006:342). It was used extensively during my fieldwork, mostly as informal observation and open questions, but occasionally in it's slightly more structured versions as well. Quite frequently, participant observation allowed me to identify people who later became key informants. It was also facilitated my acceptance in meetings, events and social gatherings in general.

In Barcelos, my key informants covered a range of *ribeirinho* that moved to the city a decade or so earlier, Municipal government officials and Non-Governmental Organization staff, former and active patrons, and representatives of the local middle class (e.g., teachers and health care professionals, etc.). The semi-structured and open-ended interviews with key informants, quite often lead to a new lines of inquiry and additional perspectives.

Developing a grounded sense of the urban socio-political and economic settings was mandatory to identify potential drivers for the rural-to-urban migration and to uncover other relevant social settings that will be described in detail on Chapters 6 and 7. The study of urban settings was also a necessary step to design and implement the rural household survey.

Collecting and interpreting written recent Governmental and Non-Governmental Organizations documents was done both in Barcelos and Manaus. Written materials addressing subjects as rural development and extension in the Rio Negro, anything on rural communities, NGO reports on community-based projects, etc., were regularly searched for. Most of the information on Governmental programs showed a clear bias towards representing the State as a provider of rural projects that were successfully implemented (IDAM 2010). NGO materials varied from non-peer reviewed published reports to material to be used for practical institution-building and funding purposes. In general, such to written secondary data proved to be much less informative and realistic than one might expect after all the official statements regarding sustainable development projects and Governmental grants and finances (FAS 2011, SDS-AM 2012).

Rural Communities and Household Survey[19]

The rural dimension of my research was designed to study the rural communities and households cultural, socioeconomic and mobility dynamics. It was divided in three main activities: 1) Selecting rural communities and households, 2) *Ribeirinho* household survey, and 3) Survey data analysis.

Selecting Rural Communities and Households

Considering the great socioeconomic, geographical, and environmental variation within the hundreds of rural communities located in the Middle and Lower Rio Negro, these may be grouped in, at least, these five major categories, according to their main socio-economic orientation: 1) Extractivism of non-timber forest products, 2) Gardening for *farinha* (roasted cassava flour) production, 3) Timber products and carpentry services, 4) Providing labor for external patrons, and 5) New types of natural resource management and land tenure in communities located in recently created Federal and State reserves. Identifying the sample of communities to be included in the household survey was done based on information gathered from key informants from Governmental institutions, NGOs and others. Selecting the communities was then done objectively trying to capture as much as of the existing diversity on: A) Socio-economic and cultural identities, B) Socio-environmental settings, and C) Different categories of land tenure. The initial list was refined by taking in consideration the logistics of location, access, and process of obtaining permits (when applicable)(see Figure 4.3).

[19] See Appendix A for maps detailing the location of all surveyed rural communities.

The selection of households to be surveyed was done in each community at a time, following a procedure that became standardized for the entire survey. Knowing upfront it would be mandatory to follow the *ribeirinho* rural community etiquette, upon arrival in any community, the first step was to address its president, administrator or leader. This community representative would then suggest some families to be interviewed or would organize a public meeting at the *sede* (community center). In any case, I followed the community leader's suggestions but also added as many extra families as possible to my sampling. This way I managed to respect the local culture while maintaining some level of control of the selection of households to be included in the survey. Randomly selecting households in a *ribeirinho* community is simply not an option.

Figure 4.3. Location of all towns and cities and the 40 communities surveyed (Map by L. Daly)

Each interview was started with the informed consent when I would also inform that the only concrete outcome from my research would be a copy of my final regional report[20] when the whole research would be done, so that the participating communities would be able to have a sense of what is also happening in other

[20] A document written in Portuguese and accessible language containing relevant results and information from this research, to be distributed to each of the 38 participant communities.

communities along the Rio Negro basin. I never offered any type of compensation or bargain for interviewing households.

Before the household survey was initiated and while it has been conducted, key informants, urban dwellers and rural community members were systematically interviewed using semi-structured and open-ended questions. These accessory interviews carried on while the household survey has been conducted provided an invaluable tool to double check information and get a better understanding of topics, subjects, and issues mentioned in other occasions or during the survey interviews.

Ribeirinho *Household Survey*[21]

My household survey was primarily based on a 137-item questionnaire designed by myself to guide the structured interviews of the household survey (see Appendix). This original questionnaire was later integrated with the baseline questionnaire used in Poverty and Sustainable Development Impacts of REDD (POV-REDD, see Appendix) projects in many tropical countries around the world (ENGOV 2013). The necessary language and cultural adaptations were made to the POV-REDD questionnaire while it was merged with my original questionnaire to align it with Amazonian reality, in addition to having my special interest questions also addressed. The use of this combined questionnaire will allow comparisons between my data set and other tropical regions in the world.

This final household questionnaire was divided in four main sections: A) Household Structure and Livelihood Assessment, B) Resource Use, Income and Constraints, C) Property Rights, Use Rights and Management, and D) Perception, Attitudes and Norms Concerning Resource Conservation. The questionnaire many topics and specific questions designed specifically to address in depth quantitative and qualitative information regarding *ribeirinho* identity, life histories, household characteristics, family mobility history and its drivers for past and future mobility communities' infrastructure assets and problems, garden agriculture management and crop diversity, household sources of income, and open ended questions with general discussion at the end of the questionnaires, that allowed me to record the perceptions of each interviewee on the quality of life they have experienced both in their own communities and the nearby cities.

[21] See Appendix C for a copy of the household questionnaire used in the survey.

Survey Data Analysis

The data analysis the household survey was non-probabilistic due to the recruiting methods used during the household sampling. The original data set amassed on paper questionnaires during the 210 interviews to *ribeirinho* households was transferred to Excel spreadsheets. A Data Spreadsheet (DS) and a Codes Spreadsheet CS) were necessary, since the previous coding proved insignificant to correctly represent the diversity encountered in the field. Questions with multiple answers required the use of multiple columns in the DS to correctly represent the answers. Coding was done in the CS while the data have been entered in the DS.

The data set was coded and categorized to produce Summary Statistics (SS) divided in the following topics: 1) Household characteristics, 2) Past and future drivers of mobility, 3) Household assets, 4) Social assets, 5) Community infrastructure, 6) Garden management and crop diversity, 7) Livestock production, 8) Household sources of income, 9) Qualitative perceptions on the communities, cities and how to improve community quality of live. Some questions required the use of Excel logical equations to be answered. Multivariate logistic regression analysis was run using Stata 13.1 (STATA 2014). Results will be presented on Chapter 5.

Figure 4.4. The research boat, O-Sonhador, at port in the Aracá River (Photo © F.B.Pontual)

CHAPTER 5: WHO ARE THE *RIBEIRINHO*?

> *No, these people move on again and again in a constant effort to better their lot, to escape from the constraints of a miserable existence...Their only chance is to move on in the hope that, by some lucky fluke, they might escape from poverty. At the very least, even if they do not profit from some boom harvest or make a lucky strike at a mining camp, they might find a good and generous patron*
>
> David Maybury-Lewis (1968:163-166).

Figure 5.1. A *ribeirinho* extended family having a meal (Photo © F.B.Pontual).

Decoding the Survey

As mentioned in Chapter 4, although the *ribeirinho* have participated in all the main phases of Amazonian history, they remained comparatively invisible and underrepresented in the sociological and anthropological literature vis-à-vis the many tribal groups who were studied, described and portrayed in thick ethnographic descriptions (Adams et al. 2006, Nugent 1993, Wagley 1985).

The results presented in the following pages reflect an objective interpretation of the subjective views of the respondents informing about the *ribeirinho* world, realities, problems and opportunities as described by 388 respondents from 210 different families, representing a total household population of 989 people. In this chapter, I am contextualizing this primary information, gathered during the conduction of the household survey and semi-structured and open ended interviews with key informants, to provide a grounded, objective, and analytical perspective addressing two overarching questions that guided the data selection and survey interpretation.

First, I wanted to know **what are the identities and cultural traits of the present day Middle and Lower Rio Negro *ribeirinho***. For that, I looked at the interviewees' responses on household composition, age groups, ethnicities, languages spoken, level of formal education, religion, main occupations, social roles played in their communities, interviewees' perceptions on their own communities and the nearest town or city.

The second guiding question for the survey interpretation was to uncover **what are the socio-political organization and household economy of the *ribeirinho***. To address it, I looked at the local administrative social structure and dynamics, the socio-political perspectives of community roles and main occupations, observations on the inter-household interactions, household microeconomy and assets, garden and crop diversity, management and productivity, and an overall analysis of the *ribeirinho* sources of income.

Ribeirinho Identities and Cultural Traits

Household Inhabitants

The *ribeirinho* household was the unit of analysis in this study. Most respondents were husband and wife, interviewed in their own houses and at the same time, to respect local etiquette and culture. Therefore, some potential gender issues and

biases could not be checked or addressed in further detail. Rarely, single respondents or one of the heads of a family was interviewed alone or accompanied by one or more siblings. Interviewees' age varied from 18 to 91 years, and the average was 43.7 years old. The number of respondents and their dependents was recorded by gender and age group and displayed in the population pyramid bellow that depicts the total household population sampled in this study (see Figure 5.2).

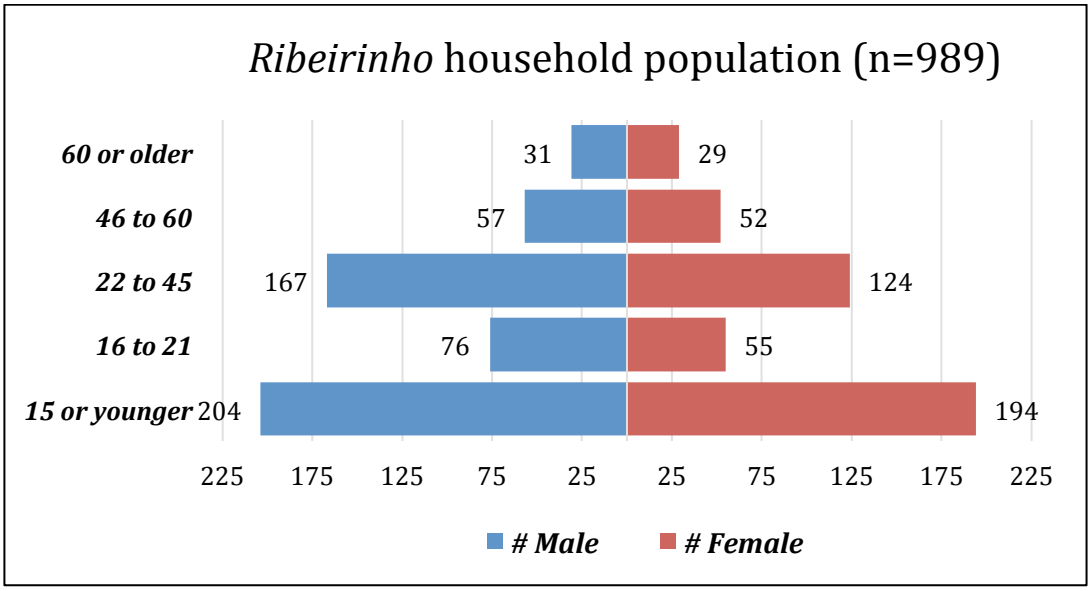

Figure 5.2. Population pyramid showing the surveyed *ribeirinho* population (n = 989) distributed by gender and age group. See text for interpretation.

The pyramid portrays the two main generations represented in this study: the parents — mainly associated with the 22 to 45 and 46 to 60 age groups; and their dependents, mostly the children, teenagers and young adults — represented by the two lower age groups. A third generation, composed by the parents of the respondents, is slightly represented in the two upper age groups. Although most of the subjects of the elder generation were declared either living in other places or already deceased. The pyramid also shows a constricted distribution at the 16 to 21 age group that seems to relate to the fact that, as reported by respondents and other key informants, it is from 17 to early 20s when most dependents turn adult and form their own families. Following this logic, these young men and women were no longer declared as dependents by their parents in this survey. The overall predominance of men in every age group may be explained by two reasons. First, the apparent slightly different birth rate biased towards males, as suggested by the numbers in the basal age group. Second, and consistent with *ribeirinho* culture, the higher mobility associated with males who are always on the move looking for gigs, opportunities, and potential brides.

The three top self-identification responses given by interviewees for their ethnicity were non-indigenous (31.96%), Baré (35.57%) and "generic indian"[22] (14.18%) (see Figure 5.3). Some of the non-indigenous respondents informed having indigenous mothers. However, according to traditional Upper Rio Negro tribal standards, the definition of children's ethnicity is patrilineal (Lasmar 2005), therefore some of these respondents made no claim to any indigenous ancestry. Others who declared non-indigeneity were offspring of *arigós*[23] and modern settlers, or recent immigrants themselves coming from other regions of Amazonia or Brazil. The second biggest group, the Baré, refers to one of the most enslaved and missionized Rio Negro aboriginal peoples (Wright 2005). In the past century, only remnant tribal Baré still living in villages at the Upper Rio Negro have managed to maintain their original Arawak language, whereas most of the Baré living along the Rio Negro have long adopted *Nheengatu* (the Jesuit Tupi based pidgin) as their "native" language (Figueiredo 2009, Meira 2002).

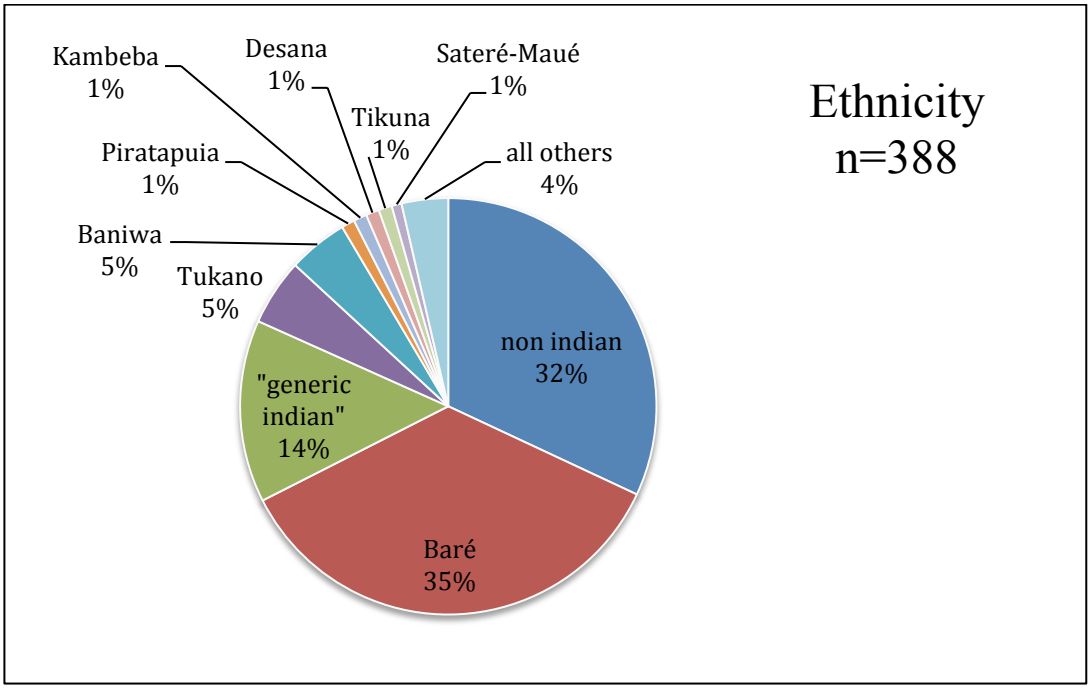

Figure 5.3. Ethnicity of survey respondents (n = 388, in rounded percentages). All others include: Tariano, Kaxinawá, Arapasso, Makuxi, Mundurucu, Tuiuka, Puianauwá, Apurinã, Wapixana, and Miranha.

[22] These respondents claimed to be indigenous but could not inform any specific ethnicity; therefore I am referring to them as "generic indian", using the term coined by Darci Ribeiro (1995).

[23] *Arigós* were the Northeastern Brazil generic indians that migrated to Amazonia during the rubber boom.

In the present day Rio Negro Basin, many people self-declare to be Baré as a means to reinforce their indigeneity or to make a statement of having undisputable indigenous ancestry. Furthermore, since *Nheengatu* was so widespread and frequently spoken until the rubber boom and the first decades of the 20th century, many respondents seemed to associate the fact that their parents were *Nheengatu* speakers with an automatically implied, but not necessarily confirmed, Baré ethnicity.

It should be noticed that 81.71% of the respondents interviewed in this study are represented by the categories of non-indigenous, Baré and "generic indians". These categories are, for some of the reasons aforementioned, quite generic in the sense that they inform a notion of belonging to groups that, at least for the past couple centuries are no longer very cohesive. This evidence produced by the survey corroborates the concept that the *ribeirinho* would be a quasi-ethnic group (Chibnik 1991), better characterized by its generic livelihoods than by any specific ethnic heritage (Parker 1985, Ribeiro 1995).

As for the other ethnicities declared during the survey, most refer to descendants from Upper Rio Negro tribal peoples who migrated to the Middle and Lower basins for several different reasons. Finally, some of the declared ethnicities — like Tikuna, Kambeba, Sateré-Maué, Kaxinawá and Miranha — indicate recent migrations of family groups from other Amazonian regions.

As mentioned in Chapter 3, after the promulgation of the 1988 Brazilian Constitution, there has been an increasing phenomenon of indigenous self-identification that has reverberated strongly in Amazonia. Since late 1990s and early 2000s, an intensive effort from some Rio Negro based indigenous NGOs, like ASIBA from Barcelos, has been made to "help people identify their own ethnicity" mainly based on the place they were born, as I heard from different informants. However, this externally driven identification seems more associated with NGOs' agendas than really trying to make a real effort to help locals. The recent history of the Rio Negro, with all the enslavement and forced displacement of an enormous indigenous contingent, the severe missionization that went well into the last century, the many different and intermingled ethnogenetic processes that took place within the last couple hundred years, added to the more recent migrations caused by the rubber boom and other economic cycles, plus the countless extended household traveling up and down the main river looking for better life standards, makes it almost impossible, with few notable exceptions, to establish an informed deterministic association between particular ethnicities and any given area or tributary of the Middle and Lower Rio Negro basin.

In spite of the apparently strong external influence from indigenous NGOs, it seems clear that most people feel safer today to self-declare their indigenous ancestry. Moreover, I was told that some respondents felt as if they were "taking back what was already theirs". This mind set follows closely the interpretation of demographics experts about the observed steep increase of the Brazilian indigenous population after the 1988 Constitution: that it would be more related to a dramatic change in peoples ethnic self-identification than an actual increase in the indigenous population due to an increased birth rate (IBGE 2012).

The 'Burden' of Being Indian

Every *ribeirinho* respondent surveyed in this research speaks Portuguese, which is the official and by far most used language in the Middle and Lower Rio Negro basin. 70.07% of the respondents only speak Portuguese (see Figure 5.4). *Nheengatu* is spoken by 21.20% of the interviewees and, in certain communities, is still used as a ceremonial language to open and close official meetings and special events. The other languages are used mostly within their speakers' households. Due to the proximity with the borders of Venezuela and Colombia, some respondents have relatives born in these countries and speak some Spanish.

Referring to the widespread fear of being identified as an indian during most of the 20th century (see Chapter 3), this study collected evidence that supports that some parents may have actively tried to hide their children's indigeneity as to protect them from ethic segregation. Many indigenous parents decided not to teach their native languages to their children: 44.33% of the survey respondents do not speak their parents' languages. "My parents did not want to teach me their original languages" — told me an indigenous leader who only learned *Nheengatu* from other people, while working on extractivism.

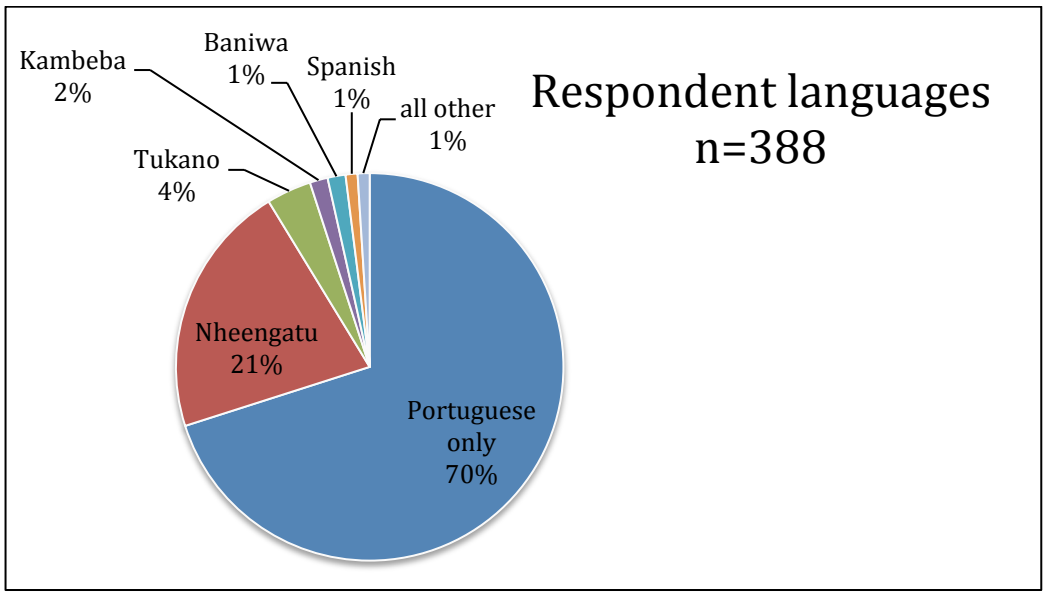

Figure 5.4. Languages spoken (n = 388, in rounded percentages). All other include: Desana, Sateré-Maué, and Makuxi.

He was intentionally not exposed to his parents' impressive multi-lingual capacity that included Baniwa, Kubeu, Karapanã, Desana and *Nheengatu* languages. Other respondents cited similar attitudes from their parents. By comparing data on language spoken by respondents and their parents, added by some respondents explanations, and associating them with the context of hard times experienced by indigenous peoples during the 20th century, I concluded that interrupting the use of their own ethnic lineage languages might have been one of the brutal survival strategies adopted by Rio Negro indigenous families aiming at protecting their children from the same segregation the parents have endured (Ramos 1998).

This provides more evidence to support the claim that, not long ago, being identified as "indian" in the Rio Negro would just add hardship to livelihoods that were already intrinsically hard, therefore triggering parents' strategies to provide some kind of ethnic camouflage to their children. This interpretation also helps to understand why so many indigenous parents sent their children for the notoriously heavy acculturating Salesian Missions' boarding schools of the Upper and Middle Rio Negro, where the children were forbidden to speak any language apart from Portuguese and any expression of aboriginal culture would be severely repressed by exemplary psychological and physical punishment (Andrello 2006, Wright 2005). By becoming very proficient in Portuguese and earning some of the top white man's education available in the Rio Negro, the *curumins* (indian children) may have had been fetched with more tools to scape their parents' burden to be eternal clients at the service of rigid patrons.

The *ribeirinho* are quite religious, and all rural communities have churches or chapels. The Sunday morning mass is an important social event, that helps maintaining the social settings and group identity of each rural community. The majority of respondents declared to be Catholic (70.36%), then Assembly of God Evangelic (18.56%), Seventh-day Adventist Evangelic (2.06%), followed by other Evangelic churches. 3.87% of respondents declared having no religion (see Figure 5.5).

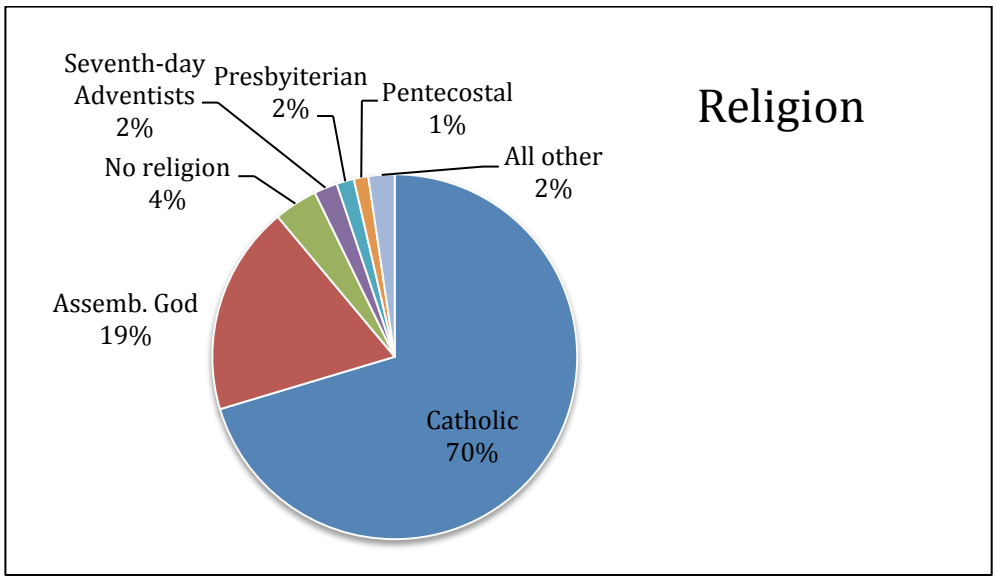

Figure 5.5. Religion of survey respondents (n = 388, in rounded percentages). All other include: Baptist, Jesus the Nazarene, and Jesus is the Arc.

Another important aspect to be noted is how Evangelism has been spreading rapidly in the Rio Negro. Catholicism arrived in the basin with the Jesuit missionaries by late 17th century and was the core of the mission acculturation package. Steeply contrasting to that, it was only in the first decades of 20th century when Protestant missionaries, mainly coming from the US, arrived in the upper courses of some Rio Negro tributaries in the Colombian side, and later in Brazil (Lasmar 2005, Wright 2005). In just one century or so, Evangelic religions spread so quick and consistently in the basin that they formed a large number of followers, including 25.77% of the respondents in this study.

However, compared to the 96.13% of respondents who are either Catholic or Evangelic, the percentage of religious marriages (35.05%) is almost three fold smaller, even though most communities have churches or chapels where a matrimonial ceremony is available free of charge. On the other hand, 39.69% of the respondents declared to be *amigado* (cohabiting) (Table 5.1), the informal

wedding bond *per se* among most indigenous peoples in Amazonia (Ribeiro 1995). This helps to exemplify how some of the Rio Negro aboriginal cultural identity was neither forgotten nor abandoned in spite of several centuries of *ribeirinho* ethnogenetic process (Wright 2005).

Marital status	# respondents	% respondents
Cohabiting	*154*	*39.69%*
Catholic marriage	*88*	*22.68%*
Civil marriage	*38*	*9.79%*
Catholic & civil marriage	*32*	*8.25%*
Single	*32*	*8.25%*
Widow	*13*	*3.35%*
Civil & evangelic marriage	*12*	*3.09%*
Separated	*11*	*2.84%*
Evangelic marriage	*4*	*1.03%*
Divorced	*2*	*0.52%*
Deceased	*2*	*0.52%*

Table 5.1. Marital status among the ribeirinho respondents (n = 388).

Livelihood Dynamics

Most of the *ribeirinho* socioeconomic activities, apart from those ruled by debt bondage, are embedded in very informal systems and tend to be highly seasonal, dependent on quite unpredictable natural cycles, or even random. Consequently, recording the main occupations of responds proved to be one of the most challenging tasks of the household survey. I decided to record the complete spectrum of occupations each respondent engaged throughout his/her life. Thus allowing me to perceive a much greater diversity than if I just tried to portray the present day occupations. In fact, due to the high seasonality of occupations, when I asked what one interviewee what do to earn a living, very frequently, the answer would address only what he/she was working at that very week or month. My previous experience with *ribeirinho* multifaceted livelihoods allowed me to avoid this pitfall and to record a much broader and realistic range of activities and occupations. For instance, people working with extractivism of forest products may work as rubber tappers in some Rio Negro islands during the low water level, and will turn to collecting Brazil nuts in the *terra firme* (upland forest) when the islands' ground is submerged. Others will alternate working as professional fisherman during the low water season and head to their gardens when fishing becomes more difficult with the high water levels. Extractivism

depends on nature's seasonality but also on the forest commodity price, and the presence and willingness of a patron to make the *aviamento* (open a line of credit to buy all the supplies needed for the work) so that the client can give it a try to make ends meet. Gardening is quite dependent on the happening of a good "summer" (hot drier season from May to September) to enhance the growth of cassava tubers and also to allow the proper conditions for the opening and burning of new gardens. If the summer is not "good" (hot and dry enough), a household may postpone the opening of a new garden.

Since it is so difficult for any given household to plan upfront what their specific occupations will be for the next year, all the occupations each respondent reported for their working life was recorded. Later, when analyzing the survey data set, I could tell what activities were long gone, others that were more recently prohibited, and the remaining occupations that are still ongoing in the present day.

Confirming the *ribeirinho* traditional role as the Amazonian historical peasantry (Nugent 1993), 88.14% of respondents have worked with agriculture at some point in their lives (Fig. 5.6), but only 61.60% of the households had at least one functional garden at the time the survey was conducted. This discrepancy informs two important things. First, it suggests that present day agriculture has become less of the subsistence backbone it had been for the past several centuries. Second, the high percentage of agriculture can be explained considering the average age of respondents (43.7 years old) and the fact that, about three or more decades ago, almost all the households would have at least a small subsistence garden to produce *farinha*, their main staple food. In *ribeirinho* households, as in any other indigenous household, children learn the skills needed for each different occupation helping their parents at work. Analyzing carefully the data set, most of respondents that reported never having worked in agriculture were born and raised in a town or city therefore probably did not have access to a garden during their childhood.

Five of the top ten occupations portrayed in Figure 5.6 are traditional extractivism activities: collecting Brazil nuts (35.82%), rubber tapping (32.22%), cutting *piaçaba* palm fiber (24.23%), collecting *sorva* latex (22.94%), and cutting *cipó-titica* (a vine used or weaving) (16.24%). The extraction of *sorva* became a decadent activity and lost its marketability about four decades ago. This happened right before aquarium fish (15.46%) started to become a new extractivism commodity. Back then, a boom in the international sales of a tiny colorful fish, the cardinal tetra (*Paracheirodon axelrodi*), also captained another four-dozen

different species of Rio Negro ornamental fish that have been shipped mainly to Asian and North American markets (Prang 1996).

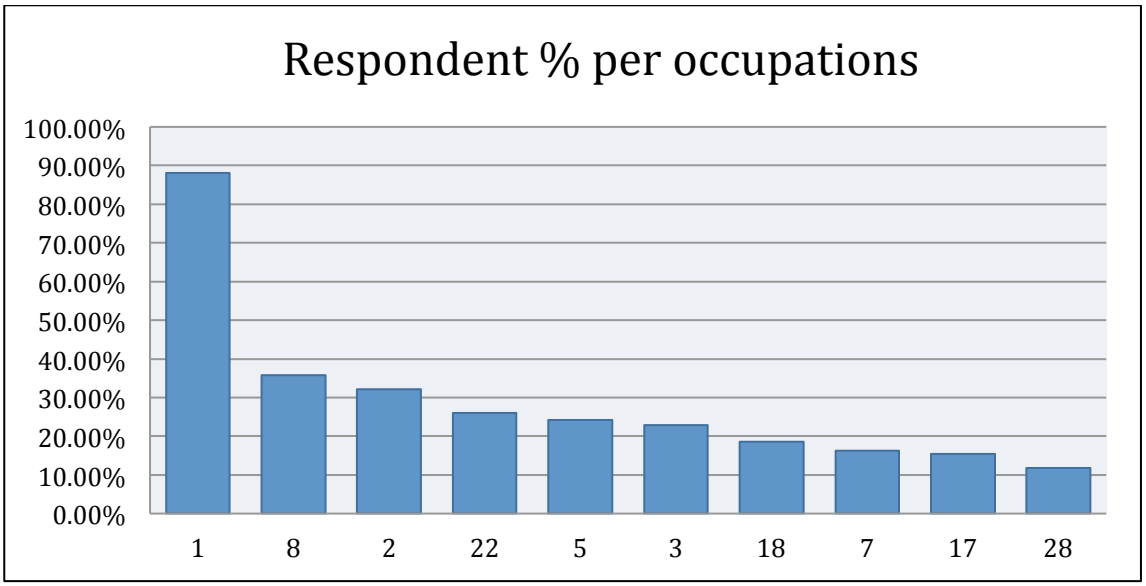

Figure 5.6. Percentage of respondents per most common historical non-mutually exclusive occupations (n = 1607). Codes: Agriculture (1), rubber tapper (2), *sorva* latex (3), *piaçaba* fiber (5), *cipó* weaving vine (7), Brazil nut (8), aquarium fish (17), iced fish (18), housewife work (22), and urban job (28).

Today, *piaçaba* and aquarium fish are the last forest commodities still helping some *piaçabeiros* and *piabeiros* (who collect *piaba*, or aquarium fish) making a living in the Middle Rio Negro, provided that they manage to keep their debt under control. Rubber tapping, collecting Brazil nuts and cutting *cipó* are now reduced to auxiliary activities that help the household income but are far from being as important as they once were (Leonardi 1999).

The other three most common occupations are equality traditional. Housewife multi-tasking work (26.03%) has always been the backbone of *ribeirinho* families and this "low" percentage does not pay tribute to its real importance. On the other hand, it seems to reflect that some respondents are starting to recognize it as a productive activity as important as any other, which can be interpreted as a sign of change in the once highly chauvinistic *ribeirinho* society (Murrieta and WinklerPrins 2008, Siqueira 2008).

Both the *geleiro* (18.56%), professional fisherman who now uses diesel powered boats and *gelo* (ice) to conserve the catch, and the *serrador*, woodsman who cuts timber with a chainsaw (7.22%), would, in the old days, paddle single log canoes and use crosscut saws, have adapted their business by incorporating new

technologies along the past decades. The modern ways to preserve fish by keeping it frozen and substituting the two-man crosscut saws by much more efficient chainsaws surely have made traditional labor intensive professions like the *geleiro* and *serrador* much easier to handle. Conversely, in spite of the obviously welcomed technological help, these modernizations also brought extra costs that increased the dependence on a patron or a similar system of *a priori* debt based work (e.g., a *serrador* typically charges 50% of the pay before delivering the timber). For this reason, most *geleiros* work for middleman who buy their catch and discount it from the previous *aviamento*. Some *serradores* may group and work for patrons who sell timber in the cities. Although most are typically solitary woodsmen who very rarely manage to deliver their product according to the consumer's specification, allotted time and quantity. Therefore, in spite of the differences concerning the updated working tools, and the scale of their debts and gains, both professions still remain pretty much constrained by the same old logic of the *aviamento,* the Amazonian debt slavery system (Bunker 1988).

Conversely, a concrete sign of change is the 10th most common occupation found in the survey (see Figure 5.6): "urban jobs" (11.86%) — a term I coined to describe any paid occupation *ribeirinhos* may have while living in urban environment. This refers to everything from temporary jobs to a formal proletarian work at one of the "maquiladoras" at the free trade industrial zone of Manaus, that was recently ranked the second lowest index of urban-wellness in Brazil (Nery 2014). The present day *ribeirinhos* roam easily between the rural and urban spheres, always on the move looking for opportunities anywhere (Harris 2006). Although they seem to prefer living in their communities, the cities are another important source of resources to be harvested (Eloy and Lasmar 2001).

Social Reproduction

The *ribeirinho* have been considered to be quite traditional in regards to their socioeconomic and cultural reproduction (Barretto Filho 2008, Harris 2000, Ribeiro 1995, Weinstein 1985). In this study, I wanted to have a sense of the social reproduction of livelihoods, or the degree of maintenance of the same occupations, within a one-generation timeframe. In order to do it, the life occupations of the survey respondents were compared to those of their parents, in a gender specific way (i.e. fathers' occupations compared to their sons', and mothers' ones compared to their daughters'), since there are obvious divisions of labor between males and females. The initial results (see Table 5.2) showed that

92.27% of respondents shared at least one equal occupation with their parents. Since agriculture was reported by 88.14% of respondents who, as mentioned earlier, tend to be initiated in this activity by their parents, I run another analysis excluding agriculture as an option for shared occupation. Yet, 61.08% of respondents still share one or more life occupations with their parents. The last analysis was made excluding both agriculture and housewife work — the two most traditional occupations that almost every boy and girl learns in their childhood — and resulted in only 51.29% of the respondents having at least one occupation in common with their parents. In other words, about half of the respondents did not have even one similar present or past occupation with their parents throughout their lives.

Occupations Intergenerational Similarity *(n = 388)*	*# of Respondents*	*% of Respondents*
At least one exact same occupation	**358**	**92.27**
Same occupation minus agriculture (AG)	**237**	**61.08**
Same occupation minus AG and Housewife	**199**	**51.29**

Table 5.2. Number and percentage of respondents who share occupations with father (if son) and mother (if daughter).

This result strongly suggests that new occupations are being created or adopted by the present day *ribeirinho* in a very perceptive way within the period of just one generation. Amazonia is under a rapid urbanization process but many changes are also happening in the rural areas, where the household survey was conducted.

Some of the more obvious intergenerational occupational changes are related to new activities that were started in the Rio Negro within the past two decades or so. These new occupations include: 1) A number of seasonal, high pay services associated with the sports fishing tourism industry; 2) paid and voluntary work for socio-environmental and rural development NGOs; 3) the slow but steady tendency to professionalize some community roles like administrator, and school janitors; and 4) the emergence of an increasing number of rural teachers and health care agents that typically lack time and will to participate in traditional occupations like gardening, extractivism and fishing. These new posts, gigs and jobs are far from being abundant, yet they already seem to enunciate the inescapable emergence of a still incipient but slowly emerging *ribeirinho* middle class that works for a fixed monthly wage in the very rural communities that were still ruled by patrons needs and coerced by *aviamento* bonds, only one generation ago.

All the occupations reported during the household survey represent 100% of the pie showed on Figure 5.7. Thus, allowing a comparison between the proportions of the most common occupations *vis-à-vis* all the other occupations, which include those already discarded decades ago, the less common ones, and even those that are still emerging and are yet to be seen.

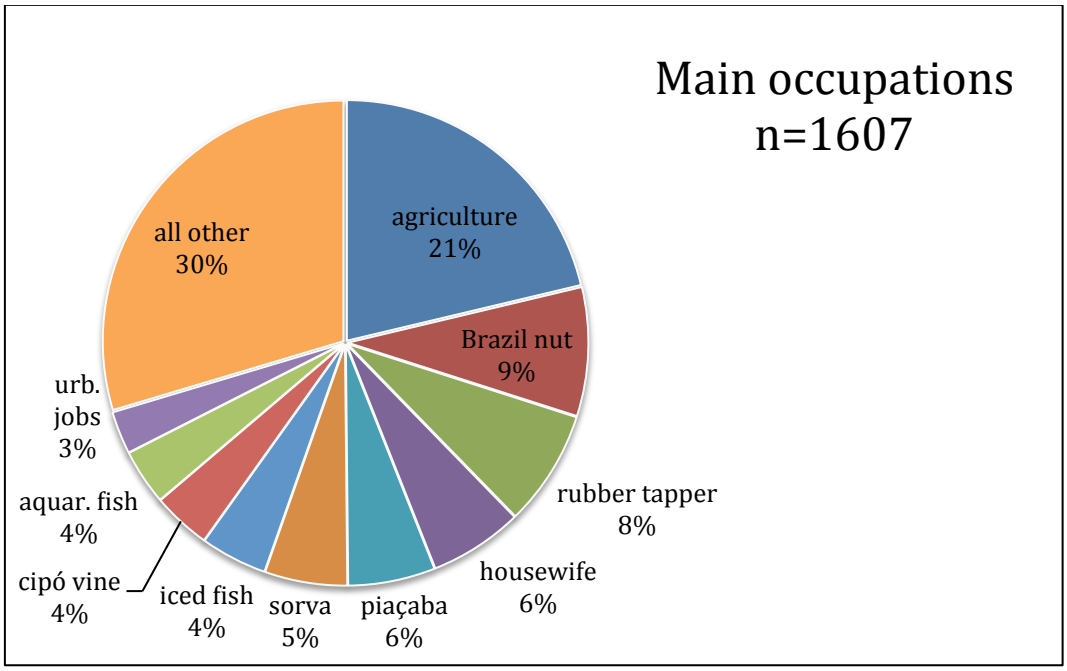

Figure 5.7. Proportion of all occupations reported (n = 1607, in rounded percentages). Codes: Agriculture (1), rubber tapper (2), *sorva* latex (3), *piaçaba* fiber (5), *cipó* weaving vine (7) Brazil nut (8), ornamental fish (17), iced fish (18), housewife (22), and urban jobs (28).

In this comparative analysis, agriculture represents 21.28% of the chart, followed by Brazil nut, rubber tapping, housewife labor, *piaçaba* to complete the right half of the pie. Interestingly enough, this half represents some of the very occupations that shaped the Rio Negro *ribeirinho* livelihoods and identities in the past 150 years or so. The left half of the pie portrays *sorva* latex, *geleiro* iced fish, *cipó* vine that are also quite traditional. However, it also depicts ornamental fish (3.73%) a new forest commodity from the 1970s, the emerging urban jobs (2.86%), and it also conceals all the other occupations, mixing past and present activities and, more importantly, is where the future livelihoods of the *ribeirinho* are still on the making. As expected for any traditional people, among the *ribeirinho,* abrupt changes are not the norm. Thus, the observed rural exodus may not be an anomalous and isolated phenomenon after all, but another chapter of the long and still unfolding *ribeirinho* ethnic transfiguration (Ribeiro 1995) — deeply rooted in their historical survival strategies (see Chapter 6 and 7).

The Education Enigma

According to survey respondents, rural schools used to be much fewer and more distant from their ranches or communities in the past decades than they are today — "yet, it is very difficult to keep the children motivated to go to school". There are plenty of reasons why someone would not feel very excited about school in most of rural communities I have visited during this study. Infrastructure is bellow minimal, electricity is rare, bathrooms are frequently incomplete or broken, chairs and black boards are truly battle battered, pencils and notebooks are scarce, and the *merenda* (school meal) includes items that are not regionally appreciated, like the *farinha branca*[24]. To make things worse, many rural teachers lack any academic or pedagogical training, and are forced to leave the community several times during the semester to look for school material, trying to receive their ever late salaries, begging for fuel for the school generator, and *merenda* items that are always missing. If all this is solved, most of the rural schools follow the multi-grade teaching system where people aging from 5 to 35, or more, have to share the same classroom and are supposed to be able to follow the syllabus of as much as five different grades, simultaneously! All this happens under the guidance of a heroic rural teacher who needs to keep the students motivated, on track, and focused only on their specific grade lesson in a multi-grade environment.

Still, 85.57% of respondents had access to some formal education, averaging 5.54 years of schooling. This average is 31% lower than the Brazilian national average for people above 15 years of age (IBGE 2012). The small group of respondents studied for 9 years (8.51%) to complete the equivalent of middle school (or junior high). Only 7.47% have 12 years of schooling or the equivalent of high school. Six respondents (1.55%) reported having finished post-graduations *lato sensu.*

The data analyzes trying to correlate levels of education to income rendered no significant results. Meaning that a higher level of formal education is not directly nor inversely related to a higher pay of the respondent. As mentioned earlier, education in the Salesian boarding schools of the 20th century may have played an important role as a sort of ethnic camouflage. However, today this is no longer necessary. Respondents were clearly proud to report they had completed junior high or high school, suggesting that having a higher level of formal education may help increasing the social status of community members. Still, if education is not a prerequisite to get a job[25] or a better salary, why are the *ribeirinho* investing their

[24] *Farinha branca* is a whitish flour made from sweet varieties of manioc that is popular in Northeastern and Southern Brazil, whereas the Amazonian *farinha d'água* or just *farinha* is yellowish and produced with fermented bitter manioc.

[25] The only rural community based jobs that require higher levels of education are the ones

time to attend to such precarious rural schools? Why is access to education the main reported driver for families who are planning to move from their communities (see Chapter 6)?

Ribeirinho Social-political Organization and Microeconomy

Community Roles and Social Settings

In the present day, most *ribeirinho* villages are called communities[26] throughout most of the Brazilian Amazonia (PIATAM 2008). However, since the rubber boom days, the households have been competed among themselves for the favor of the patrons. Thus, reality shows very different and even opposite inter-household relations than what would be expected if the *ribeirinho* were engaged in sharing the resources and the management of theirs commons. Therefore, cooperative work is very rare, normally related to a few emergency repairs done on public structures like an old chapel or a collapsed riverbank stairway. The *ajuri,* a traditional way of offering or exchanging agricultural labor on someone else's garden, seems to be one of the last remnants from a communal tribal culture.

The formative process of most Middle and Lower Rio Negro communities was quite similar. It usually started with a family moving from a previous location in search of a more pleasant or promising place, and then opening the *terra firme* (upland) forest to settle down in a *sítio* (ranch). As soon as the founder family started experiencing some success in their main activity — be it extractivism, fishing or production of *farinha* — other members from the extended family and friends would be invited and encouraged to move to the *sítio*. After the first several years, if the place proved to be free of diseases and had abundance of fish and game, or was strategically located close to an extractive *colocação* (camp), other families would move in and the population would start growing. The founder family usually maintains its status for many generations, and tends to participate in the community's administration and informal decision-making processes. Although the *ribeirinho* are considered as one of the traditional peoples of Amazonia, most communities are only several decades old. From the 40 communities surveyed in this study, only two are more than a hundred years old (i.e. Carvoeiro and Moura). Instead of having a strong relation to a particular

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directly related to teaching, whereas most teachers come from cities or bigger communities. Healthcare agents only need to be able to perform very basic read and write.

[26] Before the arrival of the 20th century missionaries, villages were called *sítio* (ranch) if they comprised a single extended family, or *povoado* (pueblo) if there were more families. Today, in the state of Roraima the term *vila* (village) is preferred over *comunidade*.

ancestral territory as most tribal peoples do, the *ribeirinho* main relation to territory is opportunistic and, comparatively speaking, short lived. Whereas tribal peoples tend to have an acute sense of territoriality associated with their group identity, the *ribeirinho* seem to praise their high mobility and adaptability.

All the rural communities included in the survey have a formal administrative structure elected by universal suffrage every four years. A president, administrator or indigenous leader always heads the administration. Typically, the local administration staff is also composed by a vice-leader, a secretary, a treasurer, and, more recently, community councilors who are supposed to be in charge of overseeing the work of the aforementioned staff, the teacher, and healthcare agent. In most of the communities studied, volunteers fill these administrative roles. Some communities located in the state of Roraima have been professionalizing some administrative roles namely the community administrator and the school director, at least for communities inhabited by 50 families or more.

The community councils and councilors are still been created and implemented following the external agendas of the powerful FOIRN and other indigenous NGOs. However, most respondents could not tell me what this new political structure of representation was all about. As of 2012, the community councils where still seen as an external top down imposition that was serving someone else's needs but locals lacked the most basic understanding of how they could benefit the recipient communities.

Quite often, the leader of a community is one of the wealthiest or more influential persons in the neighborhood. This does not imply that being the leader helps to better off business, on the contrary, many claimed to have spent their own money to fix community problems and needs. However, being the president, administrator or *tuchaua* (indigenous leader) is a clear sign of social status and prestige. Thus, elections for community leader can be quite disputed.

The *patrãozinho* is another important type of traditional rural businessman that works as a local branch or manager for a more economically powerful and frequently urban-based patron. A typical *patrãozinho* owns at least one workboat powered by a central diesel engine and has several auxiliary canoes used for commercial fishing, to transport *farinha* and forest commodities like *piaçaba*, Brazil nuts, ornamental fish, *cipó,* etc. Some of the community leaders interviewed in the survey were also *patrãozinho* and would be always surrounded by many clients willing to do any gig or unpaid small task only to maintain the bond with the local patron.

Every community has a few old-timers who spend most of their days working their gardens or immersed in subsistence weaving, fishing and hunting activities. These people are the relicts of another era, when there were no satellite TVs breaking up the evening social interactions, and the rural population of the Rio Negro was much larger. Back then, the production of *farinha*, measured both by its quantity and quality, was not only a vital necessity but also an important symbol of status and labor skills for many households. The cassava gardens were a mix of survival school and labor camps until the late 1970s. When interviewed, old-timers always mentioned how those days of much harder work were also better for maintaining the community moral and traditional social structure alive. They also seem to agree that today's teens and young adults were too lazy to have inherited the garden skills and tenacity of their parents and grandparents. Finally, comparing the hours of paddling a canoe needed to reach school in the old days to the present reality of having a rural school in almost every community, the elders used to complain how the new generations are so spoiled that they don't even want to walk across the street to go to school. Today, influenced by the every evening soap operas and Manaus, Rio de Janeiro and São Paulo urban fashion tendencies seen on TV, *ribeirinho* kids and teens like to dress up in surf ware style and show off their custom made modern "big city" haircuts, including extensive use of hair dyes for boys and girls.

Teachers and healthcare agents tend to be seen as either angels or parasites, depending on how present and dedicated they are to their work and the community in general. Often times, teachers and healthcare agents need to use their own motorized canoes to go the municipality capital looking for educational material, school meals, medicines and fuel for the electric generators. Some of them expend part of their salaries paying for materials and other things necessary to maintain their work without much expectation of receiving reimbursements. I met some healthcare agents that have used their own canoes and personal fuel to take patients to the nearest hospital. These devoted, sometimes even heroic, professionals are very esteemed in the communities. On the other hand, some of the teachers and healthcare agents were also described as being lazy, unprofessional, untrained, arrogant, and irresponsible. This dichotomist view may just replicate the normal human diversity of characters found anywhere. However, it may also reflect both the special attention devoted by the entire communities' members due to the great importance of such roles as well as the fact that they represent two of the very few opportunities of work for a monthly wage in most communities. Following along these lines, a fostering a network of maleficent gossip may be a way of creating enough pressure as to encourage an unwanted teacher or healthcare agent to quit and start looking for work in another community, leaving behind a vacant niche that would be fiercely disputed.

In the chauvinistic *ribeirinho* society, the wives have been responsible for maintaining the household functioning and the family well taken care off while the husbands are be absent, either working for a patron or involved in some subsistence activity. Most women would also be in charge of managing the household garden, from planting the cassava shoots, to cleaning it from invasive plants, all the way to processing the harvested tubers to make the final product, the *farinha*. The husbands and older sons participation is much less frequent yet provides the heavy work needed to cut the forest to open the gardens, burning it to fertilize the soil with the ashes, and also to help carrying the heavy *aturás*[27] (weaved cargo baskets) filled with the harvest. Although some wives participate in all activities, including the very labor intensive ones, the main difference between gender roles is that the wives' household and garden work happens in daily and is never ending. While the husbands' roles are associated with travelling away from the house, to engage in labor intensive work, but also involves periods of idleness when back home. This is when the "head of the family" is resting and recovering his energies for the next round of work outside. Arguably, the wives are the real functional heads of most *ribeirinho* households since they are always present and in charge of making the daily decisions and management of food production and general wellbeing of the whole family.

Recent changes in the communities' and regional socio-economic tendencies have been opening new job and income opportunities to women that are associated with handicraft, tourism, services, and several types of family grants that are paid preferably to wives. Meanwhile, many traditional male activities dependent on forest commodities which cycles have entered bust periods and changes in land use and natural resource regulations have forced many husbands out of their traditional roles, as, for instance, happened about five years ago with boat carpenters in communities that are now placed inside protected areas in the Lower Rio Negro. Consequently, some women are now earning more money than their husbands in an unprecedented inversion of roles that has put in check who, between husband and wife, is main household provider after all.

This general panorama of some *ribeirinho* socio-political life and interactions was made possible once the household survey have captured a very diversified sample of respondents' social roles (see Figure 5.8).

[27] The *aturá* or *waturá* is a cargo basket made from liana fibers that is carried in the back supported by a belt made of *envira* (a flexible tree bark) attached to the porter forehead. It is widely used by many indigenous peoples in the Rio Negro (Emperaire 2010).

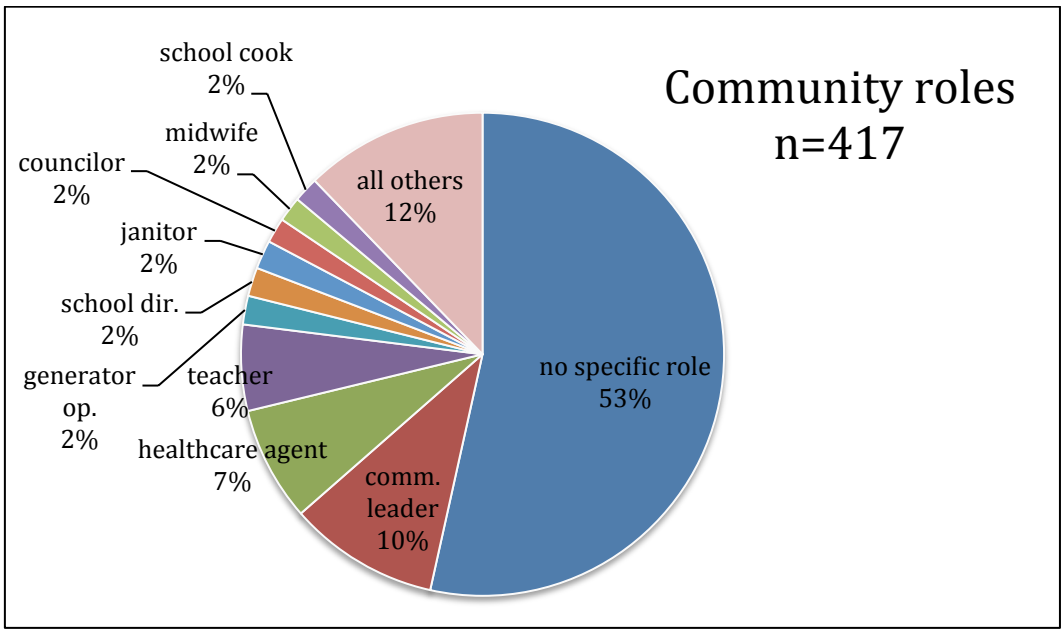

Figure 5.8. Community social roles played by respondents (n = 417, in rounded percentages).

This allowed the possibility to learn from the perspectives of 388 respondents representing the local administrations, the waged laborers — as the teachers, healthcare agents, electric generator operators, janitors, and others, as well as a variety of volunteer roles such as midwife, councilor, shaman, herbalist, and others. Last but not least, the largest contingent, containing 53.48% of respondents, represents those that claimed no specific community roles — the common people, the common *ribeirinho*. It suggests that the survey interviews may have managed to record perspectives from all segments of the rural Middle and Lower Rio Negro *ribeirinho* societies, from the local elites and emerging middle class, all the way across the socioeconomic spectrum to incorporate the communities' masses, including the dispossessed.

Household Assets and Microeconomy

The *ribeirinho* have long adopted the European missionary/colonizer general settlement and housing patterns in which a church or chapel is the most important socio-geographic reference for each community. The houses used to be placed around the church square. Most *ribeirinho* communities have no square, but houses are typically placed along, as well as around the soccer field. Until the late 1960s and early 1970s, the houses walls and roofs were made mainly with weaved palm leaves tied with lianas to a wooden structure. In the past decades, with the popularization of chainsaws, the skilled community *serradores* started

producing plank wood in the middle of the jungle. Today, most of the houses have walls made of this type of artisanal plank wood (93.56%) and are covered by asbestos cement roofing sheets (55.93%). Only a few walls also use mud bricks and palm leaves in their construction, and zinc sheets and palm leaves cover the other half of surveyed *ribeirinho* houses (see Table 5.3).

Household Assets I (n = 388)	1st option	%	2nd option	%	3rd option	%
House tenure	owner	85.05	prof. room	5.41	free stay	4.38
Wall main material	plank wood	93.56	p. wood + bricks	3.35	palm leaves	1.55
Roof main material	asbestos sheets	55.93	zinc sheets	22.16	palm leaves	20.10
Number of bedrooms	two	37.89	one	36.86	three	15.21
Source of drinking water	river	53.35	modern well	35.05	traditional well	2.58
Cooking energy (non-exclusive)	butane gas	70.10	charcoal	43.81	fire wood	51.55

Table 5.3. House physical characteristics, sources of water and non-exclusive cooking fuels (n=388).

The survey showed that 85.05% of the families own their house, which has, in average, two bedrooms and is inhabited by 4.7 people, including the respondents. I was informed that the size of the houses did not change over the years as much as the main building materials did. The main source of drinking water also did not change much, and 53.35% of the families still get it straight from the river. Many respondents mentioned the difficulties to have access to clean water during the "dry" season and the water level is very low and the riverbank gets dangerously steep, as well as during the rainy season climax when the water carries all shorts of human and domestic animals waste to the river.

An important change regards the main source of cooking fuel. One generation ago, it used to be homemade charcoal. Today, butane gas is used by 70.10% of households as their first option[28], followed by charcoal (43.81%) as a second option. However, only 29.64% of this charcoal is still produced by the household. The third main option of fuel is firewood collected in the nearby forest. Homemade charcoal and collected firewood do not have a monetary cost, but butane gas and purchased charcoal (14.18%) do. Thus, modernization literally comes with a price, and the *ribeirinho* seem to be steadily augmenting their levels

[28] Each household was asked to rank their 1st, 2nd and 3rd options for most used cooking fuel. So the percentages refer to each option and that should not be compared between the options.

of dependence on products from the market as opposed as providing for their own needs in a more self-sufficient way, like the previous generations used to do.

The most common household appliances (see Table 5.4) are gas stoves, used by 89.18% of the families, and TV sets (79.90%). It should be noticed that the average number of TVs per respondent (1.04) is larger than the average number of gas stoves (0.90). Even though only 20% of the surveyed communities may allow some cellphone reception[29] 62.89% of respondents have mobile phones. Most claimed to use them only when visiting the regional cities. However, cellphones are frequently used in communities with no signal as digital cameras, to play music or simply as a symbol of status. Almost all communities rely on electric generators for electricity. Since the provision of fuel tends to be very limited, the hours of electricity per day vary from several in the evening to 24hours/day. Consequently, households' first choice is to have a freezer (37.89%) instead of a much cheaper fridge (29.12%). The main reason for this choice is that the freezer has a much better insulation and can keep lower temperatures for longer periods of time. Even if there is electricity for a few hours per day, it is possible to keep food refrigerated for a long time. DVD players (69.85%) and notebooks (18.30%) are another sign of modernization of the *ribeirinho* households. The first are quite widespread while only rural teachers and youngsters of richer families own the later. Since electricity provision is so uncertain, electric generators are needed to allow the use of all the other appliances in a regular basis.

Household Assets II (n = 388)	**%**	**Average**
House appliances		
TV set	79.90	1.04
Radio	61.86	0.75
Mobile phone	62.89	1.16
Notebook computer	18.30	0.18
DVD player	69.85	0.42
Gas stove	89.18	0.90
Fridge	29.12	0.29
Freezer	37.89	0.38
Electric generator	29.64	0.30

Table 5.4. Household main appliances per respondent (n = 388).

[29] Eventual cellphone signal reception is achieved in eight communities only when an external antenna with 20Db booster is used on top of a 12 to 18' high hardwood pole.

Almost all the transportation used by *ribeirinho* households is river based. Very few communities have ports and streets that can be used by cars, and most families are too poor to afford having an automobile (1.03%). However, wood canoes (89.18%) of different shapes and sizes are the most common workhorse and leisure transportation devices every *ribeirinho* boy and girl learns how to paddle and drive when powered by long tail outboards (81.96%) (see Table 5.5). Bicycles are owned by 25% of respondents, but are used mostly by children and old timers. Wood boats (18.30%) use high torque diesel engines and are the river equivalents of small to midsize trucks. Professional fishermen, patrõezinhos, and other local businessmen own them.

Household Assets III (n = 388)	**%**	**Average**
Transportation		
Bicycle	25.00	0.39
Motorcycle	2.58	0.03
Automobile	1.03	0.01
Wood canoe	89.18	2.04
Aluminum canoe	6.44	0.06
Wood boat	18.30	0.18
Rabeta (long tail) outboard	81.96	1.06
Outboard	6.96	0.07
Central diesel engine	18.30	0.18

Table 5.5. Main means of transportation per respondent (n = 388).

Following the same metaphor, aluminum canoes using outboard engines would be the riverine equivalent of sports cars and are owned by very few "upper class" respondents (6.44%).

Household Assets IV (n = 388)	**%**	**Average**
Production tools		
Casa de farinha	29.38	0.29
Shotgun	59.28	0.59
Machete	95.62	2.77
Axe	70.88	1.12
Hoe	83.25	1.81
Long-armed sickle	14.18	0.14
Chainsaw	30.67	0.31
Cassava grinder	30.15	0.30

Table 5.6. Production tools used per respondent (n = 388).

The main production tools used by *ribeirinho* households reinforce their condition of being the historical Amazonian peasantry. Machetes, hoes and axes are widespread and used in several daily activities. Shotguns are used by 59.28% of the respondents as the main tool in the subsistence hunting (see Table 5.6). Many artisanal traps are still produced to catch fish, turtles, birds and small mammals. Today, hand held harpoons are rarely used to hunt manatees (*Tichechus inunguis*), but still necessary to catch some occasional *pirarucu* or arapaima fish (*Arapaima gigas*). An example of hunting culture that is disappearing is the one kept barely alive by the few *tartarugueiros* archers who master the use of long bows and iron headed arrows that have been used for centuries at the mouth of the Rio Branco, where it meets the Rio Negro. Conversely, chainsaws and powered cassava grinders have become more popular within the last decades, allowing changes and adaptations in many traditional occupations and professions like boat carpenter, *serrador* and others. Another sign of change perceived in this study is the incorporation of the long-armed sickle (14.18%) — a slashing tool that is very commonly used in Central and Southern Brazilian states. The use of this particular tool was only recorded in households interviewed in the state of Roraima, that amount for 23.71% of the total number of respondents. In the past decades, Roraima received dozens of thousands of immigrants, mainly peasants, coming from the very areas where the long-armed sickle is normally used (see Chapter 4). This is just a small example of ongoing cultural influence and petty change that has been happening in the Rio Negro. In most Amazonian rural communities, long blade machetes are used to perform almost every task, including the job that the long-armed sickle was designed to do more efficiently. On the one hand, the *ribeirinho* have managed to survive throughout the centuries without having access to specialized tools, or even basic healthcare and education, by relying on their immense resilience, adaptability and creativity that form the backbone of their survival strategies. On the other hand, the outside world has changed a lot and some aspects of modernization may offer ways to better off *ribeirinho* households, if the adoption of improvements does not create new cycle of debt and dependence.

Ribeirinho **Agriculture**

During the late 2000s, an anthropological study organized by the Brazilian National Institute of Historical and Artistic Heritage (IPHAN) was conducted in the municipality of Santa Isabel do Rio Negro, in two rural communities not included in my household survey. The main result of that study was to officially recognize the so named *Sistema Agrícola Tradicional do Rio Negro* (Rio Negro's Traditional Agricultural System) due to its unique agricultural knowledge,

diversity of crops and garden management practices, and the overall socio-cultural relevance of the system to the local indigenous peoples (Emperaire 2010).

Comparatively speaking, the agricultural panorama depicted by my doctoral research within the 40 communities studied presented a smaller diversity of manioc varieties. The percentage of respondents that had at least one functional bitter manioc garden at the time of the survey was 61.60%. However, only 29.38% of them had a *casa de farinha*[30] (see Table 5.6). This fact corroborates what key informants have told me — that the present day production of *farinha* has became a fraction of what it used to be a few decades ago. Back then each household used to have at least one *casa de farinha* that would be quite busy most of the time. Today, due to the much-reduced production, different households have been sharing the remaining *casas de farinha*. The wide spread use of chainsaws turned the labor required for opening gardens much less intensive and time consuming than when it used to be all done by axe. Along the same lines, powered cassava grinders are much more efficient than the artisanal ones used in the recent past. Still, apart from the continuing access to land and these technological improvements, the heyday of *farinha* production in the Middle and Lower Rio Negro seem to be gone. Many of the households that are still gardening are no longer able to produce all the *farinha* needed. In 2012, 62.37% of the households surveyed had to buy at least some *farinha* for their own consumption (see Figure 5.9).

However, the survey's consolidated results show that, even today, there is enough *farinha* been produced in the communities to feed all the local households. The average yearly production per household was 13.45 *paneiros* (30 liter/8 gallon weaved baskets), whereas the average consumption was only 7.66 *paneiros* per household/year. So, apart from the reduced production, another important change in the present day is that *farinha* became a commodity even inside the rural communities where it is produced.

Many respondents claimed to have stopped producing *farinha* once its market price got so low in the previous years that "it was not worth the effort of producing it".

[30] *Casa de farinha* or *casa de forno* is an open hut that has at least one circular fireplace toped by a large metal pit where, after the fermented bitter manioc is processed it will be roasted to become the *farinha (see Figure 5.14)*.

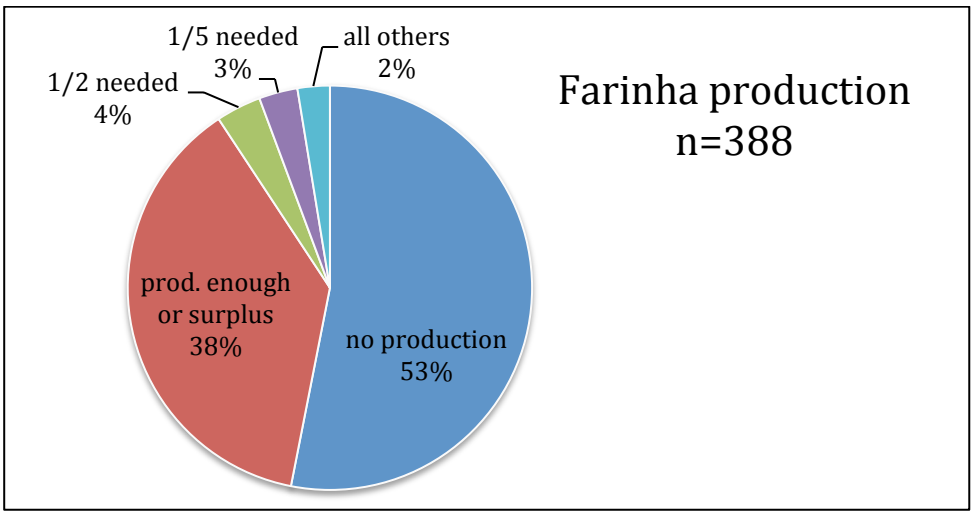

Fig 5.9. *Farinha* (roasted bitter manioc flour) production per respondent (n = 388, rounded percentages).

In August 2011, the price of a *saca* (grain bag with a volume of two *paneiros*) was as low as R$ 90,00 (US$ 53.00) when many families stopped producing it. Following the market logic of supply and demand, one year later, reflecting a steep reduction in *farinha* production, one *saca* reached R$ 250,00 (~US$ 124.00) in Barcelos. Since this survey was conducted in 2012, it may have recorded a production level of *farinha* that is probably closer to its bottom end, reflecting the abandonment of gardens that happened during 2010-2011. On the other hand, the survey results may also have captured a greater willingness for opening new gardens on the second half of 2012 (see Figure 5.10) than that of the previous years. After all, *farinha* had just reached unimaginably high prices, changing from a condition of 'not worth producing' to the opposite extreme of becoming 'totally worth' in a matter of 10-12 months. In 2013 however, due to the increased production fueled by 2012's attractive prices, the value of the *saca* went steep down again once the market became over supplied. This three-year snapshot of regional market uncontrolled fluctuation helps highlighting the urgency and utmost importance for the implementation of a State policy to manage the production and commerce of *farinha,* the fundamental Amazonian staple.

This study collected data on 410 household gardens located in 40 rural communities. The present day *ribeirinho* gardens are meant to yield as much quantities of bitter manioc — for the production of *farinha*, and bananas and plantains, another very important food staple, as possible without the intensive investment of labor and management of the recent past. At first glance, it seems that the availability of labor, both in qualitative and quantitative terms, has

become the most important limiting factor for *farinha* production. However, without a clear policy to foster the production, transport and commercialization of *farinha*, most families seem to have reduced its production in accordance to each family's labor availability. It seems clear that producing *farinha* is no longer the *raison d'être* of most of the *ribeirinho* households surveyed.

The average size of gardens was 0.64 hectares (1.58 acres), and their average age was 10.15 months old. On average, only 2.50 different cassava varieties and 2.11 banana varieties are used per garden (see Table 5.7). Gardens are opened in areas covered by different types of vegetation — from the *várzea* (partially flooding plains), including many secondary forests in distinct stages of ecological succession, all the way to the primary or climax upland forests.

Garden management I	***Average***
Area (ha)	0.64
Age (months)	10.15
Time drying (days)	34.78
Time burning (hours)	22.80
Bitter manioc varieties (#)	2.50
Banana and plantain varieties (#)	2.11
Farinha production (*paneiros/year)*	7.66
Banana production (bunches/year)	10.85

Table 5.7. Garden management averages (n=410).

Gardens opened in the *várzea* tend to be smaller than 0.5 ha and are used to plant mainly rapid growth manioc varieties, corn and watermelon. Since *várzea* gardens will be flooded for two to five months per year, the main concept is to take advantage of the thin cover vegetation that is easy to open and, more importantly, the rich soils that are annually fertilized by the sediments brought in by the high waters. The down side is that the garden needs to be opened, prepared, planted, and harvested in six or seven months, before it's flooded again. Therefore, no permanent crops can be planted in the *várzea*.

Most gardens were opened in upland secondary forests with less than 15 years of growth (56.37%) (see Table 5.8). The older the forest the harder it gets to cut it down and open a garden. However, in Amazonia most of the nutrients are stocked in the living biomass, not in the soil (Clements 1999, Moran 1993). Therefore gardens opened in old growth forests may benefit from a greater amount of nutrients that can be transferred from the forest biomass into the soil through the slow burn of the fallen trees, so that the ashes may retain as much nutrients as possible (Balée 2013, Clements 1999, Denevan 1992, Nair 1993).

Garden management	*1st option*	*%*	*2nd option*	*%*	*3rd option*	*%*
Soil treatment	sparse litter	54.07	no cover	41.48	*coivara*	1.48
Use of agroforestry	< 6 trees spp.	47.06	> 6 trees spp.	45.45	backyard	7.49
Initial Vegetation	sec.< 15 yrs.	56.37	primary	24.02	sec. > 15yrs.	15.93
Opening tools	axe	74.88	chainsaw	9.36	axe + chainsaw	9.36
Labor opening	household	37.37	*ajuri*	10.57	paid	3.87
Labor planting	household	42.01	*ajuri*	10.05	household + *ajuri*	4.12
Labor cleaning	household	45.88	*ajuri*	6.44	paid	3.35
Labor harvesting	household	49.23	*ajuri*	4.38	extended fam.	2.58

Table 5.8. Garden management indicated by the top three options per topic (n=410). Ajuri is cooperative work still done in gardens. <6 and >6 tree spp. mean agroforests with less than and more than 6 tree species, respectively. Sec.< and sec.> stand for secondary forest with less or more than 15 years of growth.

On the other hand, Table 5.8 shows that most labor for opening the gardens was performed by household members (37.37%) using axes (74.88%) what may help explaining why most gardens were not opened in primary forest (24.02%). It should be also noted that secondary forests with less than 15 years of growth is the most common category of vegetation found around any community up to 20-30 minutes of walk distance.

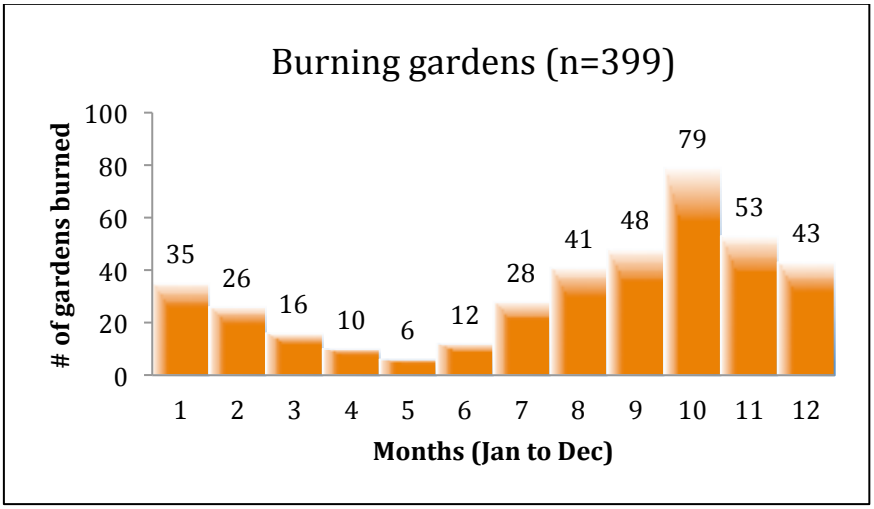

Fig. 5.10. Number of gardens burned by month in 2012 (n = 399).

The time required to dry the slashed trees before they can be burned depends on three main factors: the age of the forest, the month of the year, and the weather being sunny and dry enough. Most respondents said it might take only two weeks to dry a young secondary growth forest up to 60 days to allow a fallen primary forest to be correctly burned. The preferred time of the year for burning gardens is from August to December, during the Rio Negro's 'drier' season, regionally called *verão* (summer) (see Figure 5.10). The average time to let the forest dry was 34.78 days, and the average time to burn it was 22.80 hours (see Table 5.7). The responses obtained during the interviews made it clear that most *ribeirinhos* prefer to burn the fallen trees using the highest fire intensity available (81.03%) — "índio gosta é de fogo alto!" (an indian only likes the high flames), was repeated several times from respondents showing a proud smile. If the drying time and conditions was not ideal and the burning not even enough, other secondary fires may be used to burn the specific parts of the garden that may require extra ashes — a technique called *coivara*, very appreciated to prepare the soil for bananas and plantains.

Apart from different kinds of bitter manioc and bananas, most *ribeirinho* gardens also have other annual (93.25%) and permanent (41.79%) crops. Once manioc and banana varieties have many popular names that may vary from one community to another, it was difficult to keep track of the total number of different types of manioc and banana used in the surveyed communities. Therefore, the maximum diversity was recorded considering the number of different varieties found inside the same garden (see Table 5.8). The diversity of the other annual and all permanent crops was measured by the total number of different plant species. The research on crops diversity and varieties was based on the interviews and some observations on the ground, but was not based on collecting samples for further analysis. Consequently, the diversity reported here is certainly underestimating the reality found in the Middle and Lower Rio Negro.

Having a great diversity of bitter manioc varieties in each garden is a key strategy to cope with unpredictable weather conditions, attacks from herbivores and diseases, allow storage of food on the ground for different periods of time, and maintaining a live and ready to use germplasm bank. Within a highly diversified manioc garden, some varieties will perform better than others under different biotic and abiotic conditions, thus increasing the chance that at least some varieties will produce a harvest (Altieri 1995, Emperaire 2010). Although the maximum manioc diversity reported was 17 varieties in one garden (see Table 5.8), the average found for all 414 gardens was only 2.50 (see Table 5.6). This diversity is much smaller than the minimum of 6 varieties of bitter manioc per

garden reported for two communities in Santa Isabel do Rio Negro, where the maximum was 20 varieties (Emperaire and Eloy 2008).

Garden management III	*# of varieties*
Banana max. diversity	12
Bitter manioc max. diversity	17
Annual crops	26
Permanent crops	32

Table 5.9. Garden maximum diversity of bananas and bitter manioc recorded by garden. Annual and permanent crops recorded by plant species.

All *ribeirinho* gardens follow a series of stages of management (see Figure 5.11). The first is the clearing of the forest understory to cut, using machetes, all the lianas and other plants that may interfere with a clean cut and falling of the trees. Next is slashing down the trees using axes and chainsaws. Some households try to keep standing some trees that produce highly appreciated fruits (e.g., Brazil nuts, *tucumã*, *bacaba*). Although it is during the third stage — the burning — that most of the unplanned damage uses to happen. Theoretically, a slow burn would allow more nutrients to be transferred to the soil through the axes (Nair 1993), but most men in charge of the burning are proud to produce the highest possible flames. Occasionally, the fire turns loose and burns the surrounding forest.

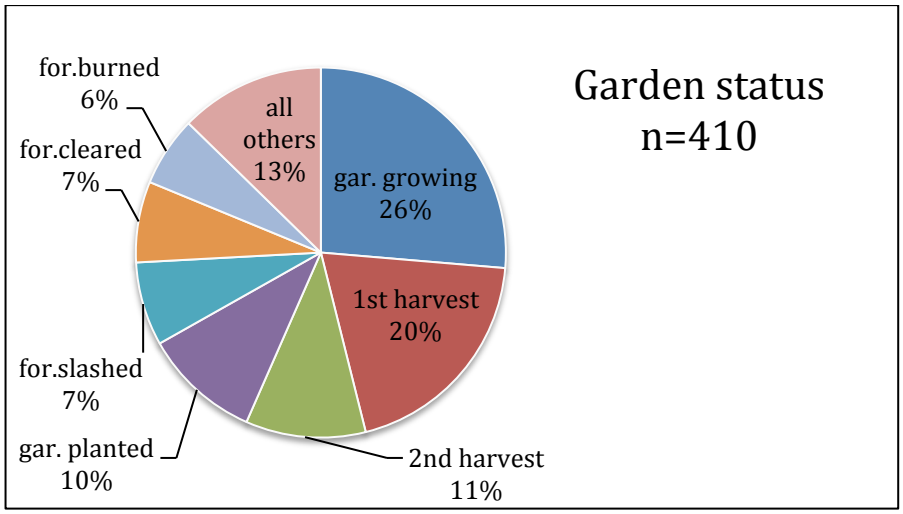

Fig. 5.11. Garden management status (n=410). Note that 56% of the gardens were in the initial stages of production (i.e. forest cleared, for. slashed, for. burned, garden planted and gar. growing).

More frequently, while burning the fallen trees, the fire damages or even kills some of the fruit trees that were left standing. Poor management during the burning stage is very common. After the burning, that takes an average of 22.80

hours to be completed (Table 5.6), the next step — after a week or so to cool off the burned soil — will be planting the stems of different varieties of manioc, as well as bananas, pineapple, sugar cane, peppers (see Figure 5.12) and some trees like *ingá*, *cupuaçu* and others (see Figure 5.13).

Each manioc variety takes a different period to fully grow and produce tubers with the right size to be harvested, ranging from six months to more than a year to be fully matured. Throughout this growing period, the garden needs constant attention to keep it free of invasive weeds and other plants that compete for the limited soil fertility. In doing so, some families go to the extreme of cleaning the soil with brooms as to leave it bare, with not even sparse litter covering it. Others prefer to use this mulch produced by cutting the weeds to help protect the soil from evaporation and the ultraviolet radiation that kills the microbial activity that maintains the soil alive and fertile (Altieri 1995). The next stage is the harvest that will happen according to the specific time of each variety. The larger manioc diversity a garden has the longer the harvest stage will be. Harvesting involves a lot of labor-intensive work to unearth the tubers, cut them to fill up the *waturás* (cargo baskets), and carry the heavy loads to the place where the manioc will be left submerged in water for up to four days[31], then transported to the *casa de farinha*, where it will be processed to produce the *farinha*. During the harvest, the *maniva* (the aerial part of the manioc plant) is cut in stems that will be used to replant it either in the same garden, or a new one, or even to trade them for other varieties from another family.

According to the survey respondents, depending on the type of soil and the garden management skills of the household, one garden may produce different manioc harvests from only one to up to five consecutive years. When the garden fertility is finally exhausted it is put to fallow for a minimum of five to eight years, depending on how quick and thick the secondary forest grows.

The most common annual crops found in the 414 gardens surveyed were pineapple (*Ananas comosus*), sugar cane (*Saccharum spp*.), *cará* or yam (*Dioscorea sp.*), watermelon (*Citrullus lanatus*), Cayenne pepper (*Capsicum spp.*), *cubiú* or cocona (*Solanum sessiliflorum*), pumpkin (*Cucurbita spp.*), *maxixe* or bur cucumber (*Cucumis anguria*), *macaxeira* or sweet manioc (*Manihot esculenta*)(see Figure 5.11), and 17 other species (see Appendices).

[31] Bitter manioc has high content of cyanidric acids that require it to be submerged for many days to release most of its toxic content (Emperaire et al. 2010).

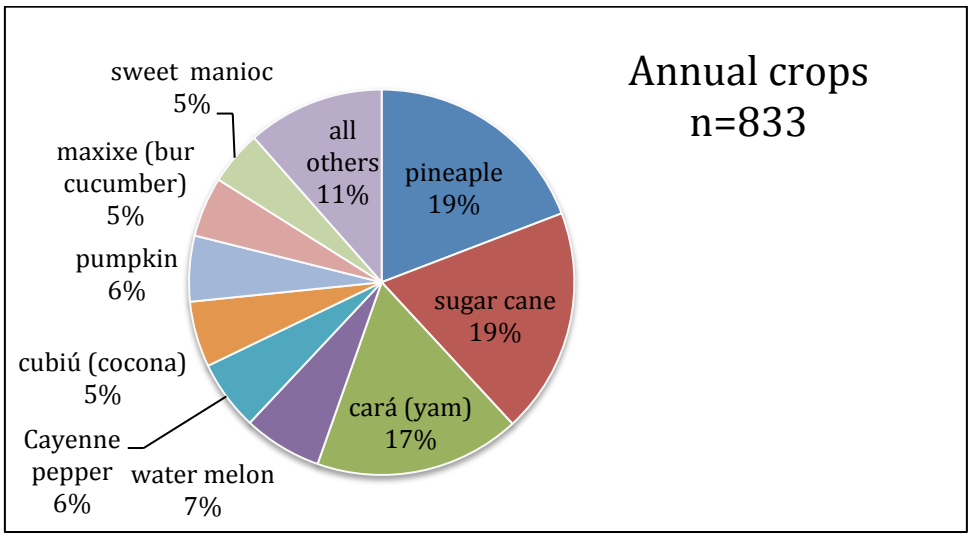

Figure 5.12. Diversity of annual crops commonly used in *ribeirinho* gardens (n=833, rounded percentages).

The annual crops include many fruits, tubers and spices used regularly to prepare daily meals in *ribeirinho* households. At least some of the most used are native to Amazonia, like the *cará* (South American yam), *cubiú* (cocona), Cayenne and other peppers, and *macaxeira* (sweet manioc). Annuals crops are usually lost when the gardens are put to fallow and the ecological succession overshadows the abandoned cultures that are not taller than bushes. Conversely, the permanent crops tend to continue alive and can be still harvested even after the gardens are well into the fallow period. This is possible because most permanent crops are native Amazonian trees that have been domesticated or semi-domesticated for millennia by aboriginal Amazonians (Clement 2006). The most common tree species used by the *ribeirinho* in their gardens and backyard orchards are *ingá* (*Inga edulis*), *cupuaçu* (*Theobroma grandiflorum*), *caju* (cashew tree) (*Anacardium occidentalis*), *açaí* (*Euterpe oleracea*), *pupunha* or peach palm (*Bactris gasipaes*), *umari* (*Poraqueiba paraensis*), abiú (*Pouteria caimito*), plus two long introduced species, mango (*Mangifera indica*) and avocado (*Persea americana*) (see Figure 5.12). Among the other 14 local species reported by respondents are other palm trees like *babaca* (*Oenocarpus bacaba*), *buriti* (*Mauritia flexuosa*), *tucumã* (*Astrocaryum aculeatum*), and famous species like the *castanheira* or Brazil nut tree (*Bertholletia excelsa*) and *cacau* or cocoa tree (*Theobroma cacao*).

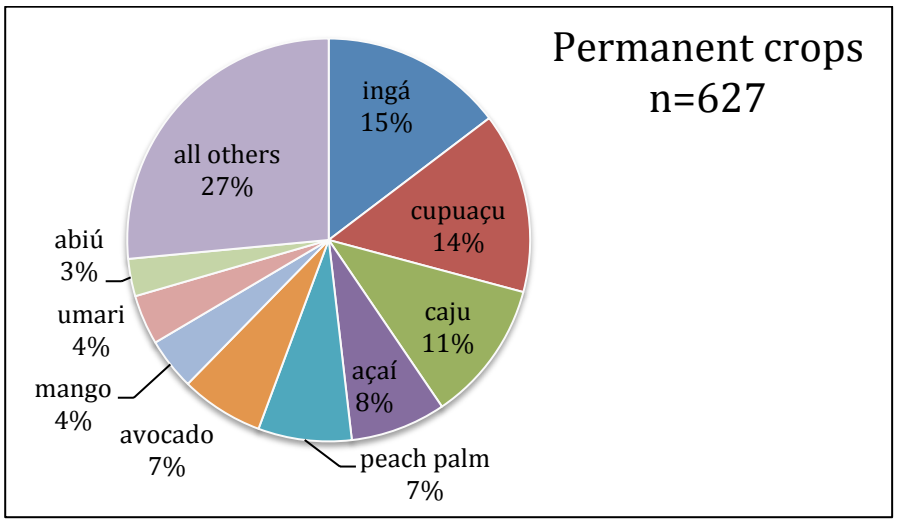

Figure 5.13. Permanent crops planted in *ribeirinho* gardens and backyards (n=627, rounded percentages).

Finally, it seems that the *ribeirinho* agriculture as observed in the surveyed communities is still important for the subsistence of local households, also playing roles on the maintenance of an agro-cultural system of production, and, last but not least, in the social reproduction and economic dynamics that underline the Amazonian peasantry in its traditional, yet adapting, journey throughout the past several centuries.

Household Income

My research amassed evidences that suggest that the Middle and Lower Rio Negro *ribeirinhos* are moving towards becoming less self-sufficient and more dependent of extra-community supplies, support and, above all, sources of income in the form of monthly wages and benefits paid by the State. More than ever, the *ribeirinho* seem to be trying to have access to the market economy even though they may still lack the specific social and merchant capitals, as well as the necessary State guidance and support for accomplishing such a complex goal.

In order to be able to visualize the present day *ribeirinho* income reality, all the data on the respondents' sources of income were organized in the main categories (see Table 5.10).

Average Income per Respondent (n=388)	*Annual R$*	*Annual US$*	*Category %*	*Monthly US$*
Salary	9008.51	*4333.09*	52.27%	361.09
Pension (SFI)*	2203.66	*1059.96*	12.79%	88.33
Patron	1702.02	*818.67*	9.88%	68.22
Bolsa família (SFI)*	1293.43	*622.14*	7.51%	51.84
Other	1055.71	*507.80*	6.13%	42.32
Iced fish	462.14	*222.29*	2.68%	18.52
Seguro defeso (SFI)*	414.67	*199.46*	2.41%	16.62
Extractivism	352.15	*169.38*	2.04%	14.12
Farinha	318.88	*153.38*	1.85%	12.78
Handicraft	187.17	*90.03*	1.09%	7.50
Family remittances	79.19	*38.09*	0.46%	3.17
Dried fish	69.52	*33.44*	0.40%	2.79
Bolsa Floresta	68.57	*32.98*	0.40%	2.75
Turtles	7.62	*3.67*	0.04%	0.31
Bolsa verde	6.86	*3.30*	0.04%	0.27
Bushmeat	3.1	*1.49*	0.02%	0.12
TOTALS	***17233.2***	***8289.17***	***100.00%***	***690.76***

Table 5.10. Average income per main category per respondent (n=388). Items marked with * were grouped in a super-category called State-funded Income (SFI). See text bellow for details.

Salaries and Labor Rights

Only 105, or exactly half, of the surveyed households receive any salary. Yet, this is by far the most important source of income for the *ribeirinho*, accounting for 52.27% of their total income (see Table 5.10). The salaries reported in this study were the monthly wages paid exclusively by Municipal, State and Federal Governments and by two private companies, that produce construction gravel in and around the semi-urban community of Moura, AM. The typical workers who receive monthly wages are the rural teachers, healthcare agents, school cooks and the *auxiliar de serviços gerais* (janitor). Larger communities, as well as those located in the state of Roraima, tend to have school directors, community administrators and electric generator operators who also receive salaries. The school boat pilots from half a dozen communities who are also paid monthly wages complete the very select list of the surveyed *ribeirinho* who receive salaries and can be seen as an emerging rural middle class.

In order to calculate all the income generated from salaries, I have multiplied the reported monthly values by 12 months. However, this result is a mere referencing

estimate once most waged workers do not get paid every month of the year. According to the Brazilian labor laws, those who are formally hired should have a signed *carteira de trabalho* (a work passport that issues a Social Security Number) are entitled to receive a 13th salary at the end of each year, and have a legal right for 30 days of paid vacations among other benefits. On the other hand, the employees have to pay 8% of their salary towards their future pension (and the hiring party should contribute another 12% towards the pension). However, every rural teacher, health care agent, school cook and janitor interviewed in this study had no other choice but to be forced to sign a temporary contract with the Secretary of Education or Health from the Municipality where the community was located, in order to be informally hired for one semester at a time. This procedure was used by the Governments of all of the six different municipalities included in the household survey (i.e. Santa Isabel do Rio Negro, Barcelos, Caracaraí, Rorainópolis, Novo Airão and Iranduba). Furthermore, respondents that lived and worked in other Amazonian municipalities and states reported having had the same kind of hiring experience. The practical result of this illegal yet widespread procedure is that all these employees tend to receive at the most 10 months of salary per year, since the contracts expire during the vacation months and need to be renewed when school starts again. The City Hall of Barcelos, for instance, was reported to pay salaries up to three months late, forcing some workers to apply for very expensive bank loans to make ends meet paying up to 10% of monthly interest rates. To top it off, all the six municipalities aforementioned deduct 8% from the salaries as if they were making the required payment for Social Security (relative to the employers future pension) although they never sign any of the employees' *carteiras de trabalho.*

In other words, these professionals are been striped of their most basic labor rights, receive no benefits whatsoever, are out-lawfully deducted 8% of their already low salaries, will have no right to receive pensions based on their real earnings since they were never formally hired and their employer never contributed their share towards the employees future pensions. Those that dare disagree or complain about these outrageous conditions are threatened to be fired right away, with no right for any compensation. There is no concrete possibility to sue the employer because the temporary contracts are never signed be the employer and no copies are given to the employees. More importantly, if a professional tries to sue the City Hall of one municipality he/she will be automatically black listed everywhere. So its take it or leave it. This gives a basic idea of the waged work reality for *ribeirinho* middle class. All the other *ribeirinho* are dreaming to climb up the almost inexistent socio-economic ladder to get to this condition.

Another way to understand how this illegal and wide spread system can survive over the years without facing any popular revolt or official scandal is to see this modern relationship through historical lenses. The City Halls in Amazonia did not invent the wheel. In fact, they are applying the basic equation of the debt peonage put together by the *aviamento* system during the rubber boom. The City Halls are acting as the present day patrons and the wageworkers are the new version of the old clients. Todays clients may receive salaries and look very different but are still willing to receiving the minimum pay and do not dare face the patron asking for their rights.

Among the 388 respondents I was able to identify only six who had formal jobs, had a signed *carteira de trabalho* and received all the official benefits. Two were employees of the companies producing gravel and the others were hired as *operador de usina* (electric generator operator) in communities located in Roraima.

Pensions and Banks

Retirement pensions paid by the Federal Government are the second most important source of income and are received by only 12.79% of respondents. This type of pension is officially called *Benefício de Prestação Continuada* (BPC) and was created by the Brazilian Constitution promulgated in 1988. The BPC pension is paid to any Brazilian citizen who is 65 years or more, independent of having contributed with the Social Security. This pension pays the official Brazilian minimum wage that was R$ 622,00 (~US$ 300.00) at the time the survey was conducted. Since the Federal Government is responsible for paying this pension, beneficiaries receive all the 12 months payments they are entitled to. However, it is at the very banks that lay hidden a series of traps just waiting for the naive retired *ribeirinhos*, some of whom having their first bank account ever and willing to trust both the financial institution and the cashiers that handle the payments. The survey uncovered a series of illegal scams aimed at preying on retired *ribeirinho*. First, all retired Brazilians are entitled to get bank loans with special interest rates (1.75%/month). Still, many respondents reported the amount of the payments they were charged for bank loans and this let me calculate the real interest rates which were ranging from 2.5 to 3.6%/month. Second, rapine driven bank cashiers create false deductions at the time they are delivering the payment for the retired *ribeirinho*. I was able to witness it happening when I was accompanying a *ribeirinho* to bank agency. While the cashier was acting in a very attentions and friendly way, he charged for a deduction of R$ 10,00 (~US$ 4.81) for a false campaign to buy and distribute the equivalent of Food Stamps to

the elders. This was not an invitation for a donation; it was pure and simple petty robbery inside a bank branch and in front of my eyes. The third blood sucking strategy consisted in packing the new bank accounts with many unnecessary and unauthorized services that included credit cards, bank loans, capitalization plans and others. I had the opportunity to check more than a dozen different bank statements trying to answer questions many of the survey interviewees had. In total, 9.52% of the households have bank loans and most claimed they never asked for one. These bank accounts are automatically generated for retired people under the BPC to be able to receive their pensions, and most old-school *ribeirinhos* had no idea how a bank would work before they stepped into one. The *ribeirinhos* know they are not receiving all the money they were expecting. Once again, the patron-client mindset of the past seems to be very alive in the present day. The bank buildings have many resemblances with the patron house or boat. It is where all the money is, there are gunmen guarding it and nobody dares suggesting the pay was not correct. Just like in the old days, the retired *ribeirinho* walk out the bank with whatever they receive and that is it.

21st Century Patrons

The real present day patrons have all moved to the cities, maintaining very few ongoing business in the rural areas, if compared to what they were still doing a couple of decades ago. These patrons are now investing in the urban sphere, opening cellphone shops, building small hotels and restaurants, turning their attention to the increasing Rio Negro sports fishing industry that already fuels the economy of the region for half of the year.

The patrons are dependent on the work of their managers, the *patrõezinhos*, still located in rural communities to keep making money through a much softer or relaxed version of *aviamento*. Each *patrãozinho* is still in charge of running the commercial fishing activities, or the collection of *piaçaba* fiber, or even buying some *farinha* when the price gets really low.

The key to keep all the patron/*patrãozinho* run activities profitable is to pay for the clients' services only through barter of industrialized goods. Payments in cash are very rare and considered as exceptions to the rule. The client services are calculated by tonnage of iced fish, or *piaçaba* and *cipó* fibers, or hundreds of containers of aquarium fish, or *sacas* of *farinha* and Brazil nuts. The prices per ton or other measure that was previously accorded price is typically maintained (see Table 5.10). The first catch happens during the weighting of the production when the patron or a *patrãozinho* claims many reasons for discounting several

hundred kilograms from the totals. The final catch is that the goods used as payment are severely overpriced. The client knows it, and accepts it because it has been always like this (Bales 2004, Menezes 2014, Oliete Josa 2008). There seems to be some sort of macho pride fueling the historical acceptance of such unfair relationships. "Quem gosta de reclamar é *panema*, freguês macho trabalha mais duro ainda pra pagar as contas"[32] — I was told. Still, the more the 'macho' client produces, the more he will be underpaid in the next round of barter.

Bolsa Família

The *Bolsa Família* (BF) or family grant program is a Conditional Cash Transfer Program (Fried 2012) that was started in Brazil in 2003 and today reaches 48 million people and costs about US$ 10 Billion, or 0.5% of the Brazilian GDP (Kiggundu 2012, João Saboia, per. com.). The BF is designed to transfer income to families that live with less then R$70,00 (US$28.00) per capita/month. Families who want to apply for this benefit need to show proof of need (e.g. lack of job) and satisfy the two conditions required for approval: 1) All kids under 15 years of age need to be enrolled in school, and 2) All kids need to keep record to show proof of participation in all official vaccination campaigns.

Bolsa Família was received by 59.52% of the surveyed households. On average, the program was paying US$ 51.84 per respondent, which was about U$100.00 per household. On the other hand, the average monthly income of the *ribeirinho* households receiving the benefit was already R$ 283,93 per capita/month before receiving the grant, or four times the maximum income per capita/month that a family would be allowed to join the program. This is relatively easy to explain. During the survey I was told that the application for the BF was done either by father or mother depending on each one did not have a job that could be track down. This way the family could claim a condition of poverty worse than the reality of most. The *ribeirinho* are not naive and their communities receive bellow minimum State assistance and support. It seems the *Bolsa Família* has been used as some sort of compensation for this almost complete absence of the State.

[32] "Those who complain are *panema* (*Nheengatu* for inexperienced fishermen who never catch any fish), a macho client will work even harder to pay his debts."

Seguro Defeso

The *Seguro Defeso* (SD) is a Federal Government fishing subsidy that is paid through accredited Fishers' Unions to registered professional fishers during four months of the spawning season. The SD is paid once a year and equals to the value of four minimum wages or R$ 2488,00 (~US$ 1197.00). The Fisher's Unions have teams that travel visiting the communities and offering memberships highlighting the possibility of starting to receive the SD. Many respondents that have SD are registered in Unions located in other municipalities. Once the little bureaucracy for the application is satisfied, nobody checks if the registered member is really a professional fisher or even if he or she is still living in the same community. It seems to be a good business for the Unions that deduct their annual fees from the payment made to the members, who otherwise would have no way to cope of the monthly payments. It certainly is a very welcomed help for the *ribeirinho* families that receive the subsidy as well. Just like what happens with the *Bolsa Família*, technically speaking, many households would not qualify for the SD. Some families may not be aware of it while for others who are more conscientious, it may act as one of 'the weapons of the weak' to compensate for the unforgivable State neglect of their communities and own families most basic needs.

Other Sources of Income

Under the rubric ***Other*** (see Table 5.10) were listed most of the informal and intermittent sources of income including independent labor, temporary jobs, etc. These encompassed working on commerce, tourism, and carpentry, also making and selling charcoal, dealing with diesel mechanics, collecting wild fruits, boat building, and others.

Iced fish is the present day commercial fishing using boats with ice containers. The recorded values referred to the gross income and estimating the costs was impossible. Thus the values are much higher than the actual net income for this category. ***Extractivism*** refers to all activities that involve searching, collecting, cutting, transporting, and trading non-timber forest commodities like Brazil nuts, *piaçaba,* aquarium fish, *cipó*, etc. Both commercial fishing and extractivism used to be under the strict rule of patrons. However, some *ribeirinho* managed to become their own bosses and may still sell their catch or production to *patrõezinhos* but rarely accept to be paid with overpriced goods. Those working in these activities as clients accepting barter as payment were listed in the previous category ***Patrons***.

Farinha is one of the most traditional sources of income based on the most sellable product of the never ending hard work on the bitter manioc gardens, it refers to the artisanal production and trade of *farinha*, the roasted bitter manioc flour. Along similar lines, ***Dried fish*** refers to the production of salted sun-dried big catfish and arapaima fillets that was the old school method of preserving the catch and is rapidly fading away. True relicts from a time of widespread commercial hunting, ***Turtles*** refers to the hunting and commerce of several river turtles species for their meat and eggs, which is still a common and praised traditional activity. So is ***Bushmeat***, the hunting and trading of game that is a widespread activity yet difficult to access its real scale due to its illegality. As a quick reference, in Barcelos, the price of bushmeat from *anta* or tapir (*Tapirus terrestris*), *paca* (*Cuniculus paca*), *queixada* or white-lipped peccary (*Tayassu pecari*) is usually half of the price charged for beef.

On the other side of the spectrum, the production of ***Handicraft*** is one of the new and increasing sources of income for the *ribeirinho*. Although tourism in the Rio Negro is still basically related to sports fishing, the production and trade of handicrafts based on Rio Negro aboriginal objects as baskets, hand fans, earrings, collars, has been gaining more visibility and marketability. Aligned with the new tendencies, ***Family remittances*** are sent by sons and daughters that live and work in Manaus and other cities, to help their parents who are still living in the rural communities.

The somewhat younger versions of the family grant, the ***Bolsa floresta*** is a conditional cash transfer program funded by the State of Amazonas aimed at granting traditional families living inside official reserves for their willingness to protect the forest and avoid its deforestation; and ***Bolsa verde*** is similar program funded by Federal Government aiming at the same population living in official reserves in any of the Amazonian states.

State-funded Income

As shown in Table 5.10, the income categories ***Bolsa família***, ***Pensions***, and ***Seguro Defeso*** were grouped to create a super-category named State-funded Income (SFI). The great differential about SFI is that, in practical terms, there is no impediment to maintaining SFI while the recipient families may move from their rural community to the cities and vice versa, throughout the year. All the other categories of income are location dependent. For instance, the salaries are only paid if the teacher is teaching at the rural school, or farinha can only be

produced if the family is attending the gardens for many months in a row. Conversely, SFI functions almost as a prize, once a household gets it, can keep it and withdraw the cash payments whenever they go to the city.

SFI responds for 28.99% of all the surveyed households. When only households that have any SFI (72.86%), then SFI is responsible for 39.80% of their total income. Considering the high mobility of *ribeirinho* household members, being able to move or even migrate maintaining almost 40% of their income following the family seems a very interesting condition. Furthermore, 47.62% of the households have more income from SFI than from salaries.

These partial results lead me to consider that households that receive SFI could be more willing to move or migrate to the cities since they already have some sort of 'safety net' resource that could possibly provide enough income to allow for the establishment of the household in the city. It seemed like a promising working hypothesis. At least until it was crosschecked against other quantitative and qualitative data. Solving this puzzle is precisely the main goal of the next and concluding chapters of this dissertation. How do the historical survival strategies of the *ribeirinho* may relate to the drivers for the rural-urban migration?

Figure 5.14. Roasting *farinha* (bitter manioc flour), the Amazonian staple (Photo © F.B.Pontual).

CHAPTER 6: PATRON-CLIENT RELATIONS AND CULTURAL INFLUENCES

> *Dishonesty feeds on honesty. The very rules of trust and honesty that guide most of these poor Brazilians in their dealings with each other are key to how the patrons enslave them. All the workers I met had a very strong sense that debts* ***must*** *be repaid, that a person who did not pay his or her debts was the lowest of the low. The sly manipulation of this belief achieves the patrons' ends more effectively than violence: the drawbacks are fewer and the worker's productivity is greater.*
>
> Kevin Bales (2004:137, emphasis in the original).

Figure 6.1. A *patrãozinho* boat with a *chata* (cargo canoe) full of *piaçaba* fiber ready to be weighted and shipped to Manaus (Photo © F.B.Pontual).

Ribeirinho Sovereignty and Servitude Dynamics

This chapter addresses a third overarching question that aims at identifying and understanding **how the dynamics of patron-client relationships and the *ribeirinho* historical survival strategies may be influencing their present day livelihoods and decision-making processes related to the rural-urban migration.** To address this question, I will draw on the qualitative data from my survey on the *ribeirinho* social assets and household perceptions of their rural communities and nearest cities. I will analyze this data according to the historical context together with fresh insights on dynamics of the patron-client relationship extracted from my notes, transcripts, and open interviews with key informants.

Patron-client Relationship Phases

Reviewing the emergence and development of patron-client relations as described in Chapters 2 and 3, it is necessary to provide a timeline for the phases of this development, including the latter two that were not mentioned until this moment. By looking at the different characteristics of each phase, it is possible to list a typology of different roles played by patrons and clients throughout the centuries. Understanding the patron-client relationships dynamics through time and having a better sense of their plasticity and range of adaptation may help in putting the present-day *ribeirinho* livelihoods into historical perspective, as well as provide further framing to interpret the apparent rural to urban migration.

Survival Paid with Servitude

As mentioned in Chapter 2, the Jesuits and other missionaries were the first European patrons of the *ribeirinho* forefathers. Considering that back in17th and 18th-century Amazonia the only alternatives to missionization were either to run away and hide in deeper hinterlands, or to face the extreme violence perpetrated by the Portuguese wars of conquest, little effort was required to convince natives to move off their land and stay at the missions (Anderson 1999). The indigenous peoples of Preconquest Amazonia commonly enslaved one another, but slave roles tended to be ritualized and based on representing and honoring the unbreakable character of their own tribe (Porro 1994, Santos-Granero 2011). In the missions, Indians were forced completely to assimilate a foreign culture and to work hard every day, unto death.

The first kind of patron-client relationship may have started as some sort of salvationist, protective, and paternalist interaction aligned with an egalitarian principle where the hierarchy was mainly based on knowledge and experience, possibly mimicking the type of hierarchy the removed indians may have known in their original villages (Block 1994, Ribeiro 1995). Apart from the general acculturation imposed and ministered by the missionaries, the other main change to the indigenous livelihoods and *raison d'être* was the forced labor to produce a surplus of food and forest commodities for export to other missions, cities and European markets (Anderson 1999, Parker 1985). After the initial decades of intense mission-driven production, securing a steady supply of indigenous labor became gradually more difficult, with ever-increasing efforts to remove more Indians. Finally, the Jesuits and other missionaries turned to organizing and conducting the necessary slave raids that would reach the upper courses of all rivers from the Rio Negro basin and other basins of the Brazilian Amazonia (Hemming 1987, Wright 2005).

This first phase of patron-client relationship was born under the sign of a double-edged sword, which offered indians some level of protection from almost certain genocide, but had also cut the territorial, economic and socio-cultural ties to the universe to which they once belonged. Thus, starting the acculturation and amalgamation processes that induced the ethnic transfigurations that originated the generic indians, and, later, the ethnogenesis of the *ribeirinhos* (Ribeiro 1995).

Portuguese Citizens or Property?

By the late 1760s, after the Jesuits and other missionaries were expelled from Amazonia, and then from Brazil and the other Portuguese colonies, the missionized indians had lost their protectors. During the Directorate period that lasted until 1798, the Portuguese settlers who had been asking the Crown officials for permission to access missionized indian labor now were free to take as many slaves as they could handle (Anderson 1999, Hemming 1987). Most of the Portuguese settlers in the Eastern Amazon were too poor to afford the few African slaves that were traded to the region. However, the settlers had always considered themselves superior to the natives, acting as if they had been entitled by God to be served by indian slaves, based on the divine right of the Iberian Catholic colonizers to explore the infidel aborigines (Ribeiro 1995). Contrary to the Protestant colonists in North America, the Portuguese settlers had never done much physical labor themselves. Their laziness with regard to performing hard work on their land was revealed in their ruthless dealings with the Indians (Almeida 1997). Half of the indigenous captive male contingent was reserved to

work for the *negócio do sertão* (extraction of forest commodities), and were to be paid in rolls of cloth[33], according to their productivity, since the Directorate policies considered the indians incapable of dealing with cash (Anderson 1999).

This period was marked by the greed of the Portuguese settlers, who finally got access to the ex-missionary monopoly on indian labor. However, they were soon to run out of this source of labor, too, due to the extremely harsh treatment they dispensed to the missionized indians. Therefore, more and more slave raids and removals were necessary to provide new working arms for the colonial enterprise (Malheiro [1867] 2008). Darcy Ribeiro referred to this ever-increasing need to capture more indians and to use them unto death or complete physical collapse as one of the *moinhos de gastar gente* (people wasting grinders) (Ribeiro 1995:106). Together with the wide epidemics of European diseases, this resulted in the severe depopulation of tribal indigenous peoples anywhere along the primary channels of the main rivers, specially in Eastern Amazonia (Anderson 1985, Hemming 1987, Hemming 1995, Roosevelt 1995). Each of the removed captives was declared the property of their patrons, who received official ownership papers allowing them to be buy, sell, and inherit these people as mere properties (Wright 2005).

This reality did not change after 1755, when the Portuguese Crown reinforced previous laws that extended to all *índios mansos* (tamed indians) the same 'citizen rights' as any other Portuguese settler (Malheiros [1867] 2008). However, this clever diplomatic strategy was very instrumental once the number of Portuguese colonists was still very modest in Amazonia. Therefore, the co-opted indians were of vital importance in satisfying the conditions for populating the villages of the new territories claimed by Portugal, following the procedures mutually agreed upon with Spain in the Treaty of Madrid (Almeida 1997, Hemming 1987).

During this second phase of patron-client relationships, the patrons became the Portuguese settlers and Crown officials, who, compared to the missionaries, proved to be much more ruthless and deceitful, luring more tribal peoples to frontier villages with assurances that they would by given the same treatment as Portuguese settlers. Thousands of indians accepted these terms, only to find themselves turned into mere slaves, facing worse conditions than those experienced by indians during the mission era (Almeida 1997, Hemming 1995).

[33] The procedure of paying for IndianIndian labor through barter using mainly measures of cloth was instituted in 1655, by the Jesuits and other missionaries. Typically, each month of work would be worth only "2 1/2 yards of rough cotton cloth" and was not increased for more than a century (Hemming 1987:414).

Enslaved by Debt

After the Directorate regulations and policies were decommissioned, the first decades of the 19th century saw the emergence of the first *latifundios,* land granted to Portuguese settlers who could afford large herds of cattle, plantations of cocoa, sugar cane, and cotton, and African slaves to work these fields. These new export commodities helped deepen the gap between the growing local elite and the generic indian families who were still struggling to survive selling traditional, depreciated forest commodities to a fading market (Anderson 1985, Benchimol 1999). The social turmoil fueled by these rampant inequalities increased until the Cabanagem Revolt, which claimed some 30,000 lives in Pará and other regions of the Brazilian Amazon. The Cabanagem social-economic outcomes set the stage for the yet-to-come rubber boom, and also presented the *caboclo* or *ribeirinho* to a recently independent Brazil (Anderson 1985).

When the rubber boom started in the 1870s, a large number of businessmen and investors from overseas and from other regions of Brazil rushed to Amazonia to join the *nouveau riche* Portuguese elites from Pará (Hemming 1995). The rubber boom formalized the *aviamento* system of advancement of goods and implements needed by the rubber tappers to perform their work. The *aviamento* retained the concept of payment by barter introduced during the Directorate, aided by a line of credit that would allow the rubber patron to exert complete control of the client through the string of debt bondage (Ribeiro 1995). The rubber tappers formed the bottom of the production pyramid, followed by managers above, then the local rubber patrons at the third level, topped by the regional rubber patrons. The immensely powerful rubber barons would control the whole rubber operation — extraction, transport, commerce and financing — from the very top of the pyramid (Leonardi 1999). The entire chain of command and production was linked by different versions of the *aviamento* (Anderson 1999). The harshest conditions of debt were offered to the rubber tappers. In order to meet their assigned production quotas, all members of *ribeirinho* families, including children, were co-opted into the rubber production frenzy. Without sufficient time, subsistence activities were reduced to a minimum. The drastic reduction of food items produced by the household caused even more household debt, forcing *ribeirinhos* to acquire canned food from the rubber patron and his *regatão* managers (Ribeiro 1995). By the end of the 19th century, most *ribeirinho* families were imprisoned by their rubber boom obligations, working harder then ever just to eke out enough to barely feed themselves. Meanwhile, rubber barons based in Manaus and Belém were entering the select hall reserved for the richest people in the world (Hecht and Cockburn 2010).

An Institutional Patron

During the first half of the 20th century, a completely new version of patron was introduced to tribal indigenous peoples who were experiencing severe adversities. This new patron emerged in the capacity of Governmental institutions, starting with the *Serviço de Proteção ao Índio* (SPI) that was later replaced by the *Fundação Nacional do Índio* (FUNAI) by the end of the 1960s. The SPI was created as an official response to a global outcry urging the immediate halt to genocides perpetrated in frontier development regions in the Brazilian Atlantic Forest (Hemming 2003, Ribeiro 1995). However, the SPI patron was only represented by small groups of *sertanistas* (hinterland experts) of different ranks and walks of life. These new actors entered the stage already playing strategic roles; they were charged with making peaceful contacts with "problematic" indigenous peoples in order to "pacify" them (Ribeiro 1995). This was accomplished by means of offering steel tools, cloth, aluminum pans and other utensils that marveled pre-contact indians (Hemming 2003). However, the gifts were used to subjugate the indians to do as they were told. By offering the goods, then withdrawing them until SPI orders were accepted, even the most well-intentioned *sertanistas* were using "a virtually infallible strategy for disempowering someone" (Ramos 1998:150). On the other hand, on many occasions, the *sertanistas* were the only thing standing between the indians and people who were willing to exterminate them (Hemming 2003, MacMillan 1995). In spite of all the apparent novelty and some positive outcomes, the *sertanistas* were pretty much re-enacting the missionaries' role of protecting the endangered indians from the encroaching non-indigenous society. Also, just like the missionaries, the *sertanistas* used the method of convincing the indians of the necessity to move to places where they could be "better protected": The new version of the missions became the indigenous reservations. Repeating history from two centuries earlier, the indians were expected to accept this new system and to play their part, too, which consisted of doing the hard work to build the infrastructure of the reservations (Ribeiro 1995). The demarcation of territories, basic healthcare and other forms of support were clearly welcome and necessary, but the other side of the coin was the increasing reliance on bartered goods and promises made by this "absent" institutional patron. Throughout the 20th century, this tendency of coercing indians to change their livelihoods in order to get more attention and support from the institutional patron turned "into an irreversible condition of dependence on the national society and one from which... [they would] never again escape" (Ramos 1998:151).

Rise of Ribeirinho *Patrons*

The 1970s marked the end of the *coronel de barranco*[34] age and the emergence of the first *ribeirinho* patrons (and *patrõezinhos*) in the Rio Negro. My informants suggested that this was a turning point in patron-client relations that, from then on, became less based on physical coercion and more focused on social control exerted by extended family ties (*compadrio*) and the economic bondage of *aviamento* (Oliete Josa 2008, Prang 1996). The fact that some of the emergent patrons were *ribeirinhos* themselves may help explain this tendency towards softening the patron-client social relations while keeping economic bondage as tight as before.

Some authors have suggested that, in the Rio Negro, the patron-client relationships may already have changed in their essence (Medeiros 2014, Peres 2003). However, these alleged changes may be better understood as necessary adaptations to cope with socio-economic, cultural and even legal changes that have taken place in the past several decades in Amazonia (Campos 1993, Andrello 2006, Harris 2000, Hecht and Cockburn 2010, Jackson 1994, Wright and Wolford 2003).

Recently, a few *ribeirinho* clients supported by prosecutors of the Brazilian Public Ministry have taken different *piaçaba* patrons to court and won their cases in unprecedented legal victories that seemed impossible a few years ago. Many more clients have also defied patrons' calculations and decided that their debt had been paid, moving out of the *colocações* (extractive labor camps) in what would have been equally unimaginable in the *coronel de barranco* days (Medeiros 2014). The Public Ministry of the State of Amazonas went further and published a list of recommendations for adoption by Governmental Secretaries and Institutions, that included the "cancelation of any kind of business with *piaçaba* patrons that were still using the *aviamento* system, once it subjects workers to conditions analogue to slavery" (MPF/AM 2014).

However, some of the Rio Negro's rural areas have also changed a lot within the past several decades. Many respondents mentioned how the rural population was larger until the 1970-80s, when extractivism still kept patrons busy hiring clients in rural areas, managing the production, and oiling the gears responsible for the reproduction of the debt bondage relations. The *aviamento* was still very much alive and seen as the only socio-economic model for rural development in the Rio Negro. Today, even the collection of aquarium fish, a recent forest commodity

[34] *Coronel de barranco* (riverbank colonel) was a nickname given to old school patrons who were very authoritarian and violent (Leonardi 1999).

that boomed right when the rural population started declining, is already coming to its bust phase. In 2012, a powerful *piaçaba* patron told me this commodity "would last no more than a decade, until the industry replaces it with oil based materials".

Still, the present day version of *aviamento* continues to be used as the standard socio-economic system for *ribeirinhos* working on many extractivist activities (e.g., *piaçaba,* ornamental fish, Brazil nuts, *cipó*, etc.), some *serradores* (chainsaw experts) and *geleiros* (professional fishers), and even a few remaining *farinha* producers. Direct access to urban markets is still very limited, and cooperative work seems restricted to communities under the direct influence of social-environmental NGOs acting in the Lower Rio Negro. In spite of the ongoing adaptations, it seems obvious that it will take more than just official recommendations issued by the Public Ministry to change the traditional culture of production and rural development in the Rio Negro basin and the rest of Amazonia.

Urbanized Patrons

Since the main forest commodities of the Middle Rio Negro seem to entering a bust period, many patrons have diverted their attention from the traditional rural activities to new urban-based businesses and enterprises. Small cities like Santa Isabel do Rio Negro, Barcelos, Santa Maria do Boiaçu, and Novo Airão have experienced a rapid and disorganized growth in the last two or three decades (IBGE 2012a), accompanied by problems related to a severe lack of planning and adequate urbanization (Vicentini 2004). This rapid increase in the urban population also created new markets for different types of services (e.g., commerce, transportation, internet, banks, hotels, restaurants, tourism, etc.) that opened opportunities for the local oligarchies — the patrons — to invest their merchant capital in the urban sphere.

In past boom and bust cycles, clients used to either follow their patrons to other river basins and to the urban periphery during bust periods; or, conversely, pay their debts and resume lives mainly dedicated to subsistence activities in the hinterlands (Anderson 1985, Hecht and Cockburn 2000, Hemming 1987, Hemming 1995, Leonardi 1999, Parker 1985, Ribeiro 1995). However, in terms of their socio-economy, until the 1970s, many Amazonian cities were quite similar to those of post-WWII, when the rubber boom revival was definitely over (Hecht and Cockburn 2000, Hemming 2003). Back then, clients would find ways of working for their patrons in the city, since there was a steady need for hard

labor at the docks — loading and unloading cargo boats, for instance. This type of work was not very different in essence to what clients had been doing in rural areas.

However, the 21st-century's small-to-mid-size interior towns turned into very different places, with social settings differentiated from those of a couple decades ago. Survey respondents and other informants told me that the intensive urbanization of ex-rural patrons in Barcelos, for instance, has not been accompanied by a large number of their former clients also moving to town. The main reason for that seems to be related to the limited offering of traditional job opportunities in this modernized version of Amazonian towns. Most present-day urban jobs seem to be related to commerce and services, requiring a certain level of formal education and a reasonably good knowledge of urban culture and how to use modern technologies (e.g. computers and cellphones).

In other words, the patrons have turned their backs on their ex-clients at the rural *colocações* and communities where they used to work, leaving them with neither jobs nor other sources of income. This probably is reproducing what patrons of the past may have done to their own clients when bust periods began. This does not mean that all the present day *ribeirinhos* stayed quietly in rural areas: Their dynamic livelihoods and high mobility kept them traveling in and out of urban and rural areas looking for temporary jobs, selling products, buying and bartering for goods, or just visiting family members.

A New Patron in Town

The Brazilian State has been historically absent from *ribeirinhos*' lives (Ribeiro 1995). Nevertheless, events unfolding during the last 15 years present a completely new perspective to patron-client relationships. During this period, the State has assumed a quite different role: that is, one of a benevolent, omnipotent and distant 'patron', willing to pay monthly grants to poor families able to satisfy a simple set of pre-conditions: 1) living with no more than US$ 33.70 per capita/month, 2) all children are attending school, and 3) keeping records of all the children's participation in vaccination campaigns (Soares *et al.* 2010).

This could be seen as a second phase of the institutionalization of the patron, yet the first to include *ribeirinho* households among all other eligible poor Brazilian families. So, the Rio Negro *ribeirinhos* have been getting increasing access to what I called 'State Funded Sources of Income' (see Chapter 5), in the form of family grants, special pensions, and fishers' subsidies. To put this into

perspective, throughout *ribeirinho* history, there have never been easier conditions under which to get monthly payments in cash. Thus, access to a steady source of education and healthcare became an immediate economic priority for those who met the pre-conditions to gain access to *Bolsa Família*, the most important family grant program (see Chapter 5).

All different types of family grants, pensions and fisher's subsidies are now paid to the recipient families through the few bank branches scattered through the Rio Negro interior. In order to access payments, each beneficiary receives a magnetic card specific to each of the family grants, and a second generic magnetic bank card to receive pensions and subsidies. In the old days, at the end of a long period of hard work, clients were subjected to the draconian calculations of the patron's *caderno*, the infamous notebook where he kept track of all transactions, reserving the right to alter the rules, always to his financial benefit. Often times, a client who was expecting to pay his debt and to have built some credit, would instead be informed that he had just become more indebted. Today, some *ribeirinho* households have abandoned the relationship symbolized by the *caderno* and substituted these magnetic cards for it. The benevolent State, their new 'patron,' is symbolized by these plastic magnetic cards. The banks, Government institutions, and urban-based public services are the tangible part of this new patron. They are also part of the whole process of getting evidence to proofing eligibility, applying for the benefits and subsidies, and receiving the payments.

In spite of the arrival of this new patron, the absent State is still very real and is responsible for the lack of waged jobs and the poor maintenance of all rural communities. As generalists and masters in the art of survival, the *ribeirinhos* are making good use of this opportunity to augment their household income by doing their part in the deal: satisfying the conditions for getting access to each of the State-funded Sources of Income (SFI) (see Chapter 5).

Still, many *ribeirinhos*, specially the elders and the poorest, had never entered a bank branch before they were granted automatic accounts to receive their monthly pensions or yearly subsidies. In general, *ribeirinhos* tend to keep an excessively humble attitude while entering banks and Government Secretaries to file applications or to try to solve problems that are blocking them from receive their benefits. The old habit of not arguing with the patron — who was always right even when doing something wrong — seem to be framing the ongoing relationship with the State in the process of getting access to the SFSI. Actually, the main interactions take place with the intermediaries who are supposed to help *ribeirinhos* to set up their magnetic cards and use them at the banks. Learning to deal with these "managers" of the new patron seems to be another adaptation

process following the pattern of historical *ribeirinho* survival strategies. Some of these managers are reportedly taking financial advantage of naïve or unadvised *ribeirinhos* (see Chapter 5), which is either the first stage of a learning curve that will gradually change, or may reproduce the socio-economic dynamic of the *aviamento* that "allowed" the rural patron to pay the clients less than they actually earned. Interestingly enough, a few decades ago most *ribeirinhos* agreed that the patrons' *taras* (discounts) and added interest were correctly due and that a responsible client should pay them without complaint (Medeiros 2014). The macho response to the *aviamento* system got so imbedded in *ribeirinho* culture that the burden was always placed on the client's shoulders, not the patron's pocket. Each *patrão forte* (powerful patron) was so demanding that becoming one of his clients was a symbol of status among other *ribeirinhos* — even though it meant that the workload would be immense, with no room for complaint or according compensation. The only solution for any potential dispute was the client's responsibility to work even harder next time.

However, dealing with this new "electronic" patron requires a completely different approach. It may be the first real change in patron-client relationships since the 17th century. This new relationship is institutional, does not require work in exchange for payment, and the value is pre-established, allowing no patron discounts. Still, it is necessary to satisfy the bureaucracy and deal with some questionable managers, either to get "hired", meaning to receive the magnetic cards, or to get paid. Once the *ribeirinho* household members get the cards, they are free to go back to their communities. Many avoid coming back to town each month as travelling is too expensive. Sometimes, one single extended family member will go to town, taking multiple magnetic cards to withdraw money for many different people every three or so months, as a means of diminishing the travel costs per month.

Rural Social Assets and Perspectives

Social-cultural Assets

During the household survey, the perspectives provided by respondents on their own communities' social assets and settings were recorded and coded as depicted below (Table 6.1). The first thing to be noted is that only six out of 388 respondents said that they did not like the communities where they were interviewed. However, the same six interviewees also stated that they were in a critical economic situation, and four of them were *novatos* (newcomers), still on

probation period. On the other hand, 79.95% stated that they liked their community. Some of the remaining 18.49%, whose answer was "more or less", also reported that they had been facing socio-economic difficulties. In other words, apart from households facing economic and adaptation difficulties, most of the surveyed *ribeirinhos* like the place where they live. Conversely, only 20.05% of the respondents had a high or very high level of confidence in the people of their community. Maybe even more striking is the fact that 22.40% declared having low and very low levels of confidence in the people with whom they share their rural communities' space. Then, when asked if they liked their neighbors, the answers replicated percentages very much aligned with the first question, when I asked whether they "like their community".

Social assets and perceptions	***Answer***	***%***	***Answer***	***%***	***Answer***	***%***
Like your community	Yes	79.95	More/less	18.49	No	1.56
Level of confidence on locals	High/V.high	20.05	Fair	57.55	Low/V.low	22.40
Like neighbors	Good/V.good	78.38	Fair	20.31	Low/V.low	1.31
Like people from other comm.	Good/V.good	80.74	Fair	17.15	Low/V.low	2.11
Like NGO staff	Good/V.good	40.86	Fair	25.11	Low/V.low	34.03
Like local council	Good/V.good	55.17	Fair	27.59	Low/V.low	17.24
Like Gov. Institutions	Good/V.good	6.13	Fair	12.53	Low/V.low	81.34
Like invading com. fishermen	Good/V.good	0.81	Fair	4.43	Low/V.low	94.76
Like invading com. hunters	Good/V.good	0	Fair	2.00	Low/V.low	98.00
Like sports fishing tourism	Good/V.good	28.11	Fair	28.11	Low/V.low	43.78
Like 'expresso boat'	Good/V.good	0	Fair	0	Low/V.low	100.00

Table 6.1. *Ribeirinhos*' social assets and perceptions per respondent (n=388). Cells marked in green indicate the highest score answers.

In short, the top answers suggest that most of the surveyed *ribeirinhos* like their communities, do not trust the locals, yet like their neighbors. How could they not trust the locals and still like the neighbors? Actually, it seems quite possible for the *ribeirinhos* to "like" someone without trusting the person or their household. I was told repeatedly that "one should like everybody else, until they do something wrong or harmful." Trusting someone, on the other hand, requires more than having had no previous bad experience. Trust is something reserved to very few. Since the *ribeirinho* households have been historically competing for the patrons' favor, trust is reserved mostly for the household members, extended family and, maybe, a few friends. As mentioned in Chapter 4, the very term 'community' was coined by missionaries and has very little connection to the plain reality of a group of independent households that share the same geographical spaces.

Furthermore, not trusting locals in general but still liking 'neighbors' makes sense, since the immediate neighbors tend to be part of the extended family, often have *compadrio* (godfather and the like) interfamily ties, or may be just close friends. Off course, most neighbors are none of the above. Many respondents mentioned there was more intra-community than intercommunity household competition, which seems to be corroborated by a slightly more elevated percentage (2.36%) of respondents who "like people from other communities" more than they "like neighbors" from their own communities.

The recorded perceptions about NGO projects and staff varied a lot. In general, NGOs associated with delivering free healthcare services were very much appreciated by all respondents (e.g. *Asas do Socorro*, *Raio de Sol*, and *Caiuá*). In contrast, indigenous NGOs, like *Federação das Organizações Indígenas do Rio Negro* (FOIRN) and *Associação Indígena de Barcelos* (ASIBA), tended to be described as opportunistic and not reliable: "They came here once, full of promises, and disappeared." In the Jauaperi River, the *Associação Amazônia* (AA), a 'conservation' NGO organized by two Scottish brothers was described as obstinately trying to stop the subsistence activities of the local *ribeirinho* communities. According to respondents, AA considered the *ribeirinhos* to be destroying the very natural resources from which they have been making a living for many decades before the two foreigners arrived with their own external conservation agenda.

During the survey, I had the chance to interact with staff and record *ribeirinhos'* perceptions on the activities of three main socio-environmental NGOs involved in rural development projects in the Lower Rio Negro basin. The *Fundação Vitória Amazônica* (FVA) has been working for about a decade with *ribeirinho* communities in the Unini River, a left margin tributary of the Rio Negro. The *Instituto de Pesquisas Ecológicas* (IPE) has been working with several communities in the Cuieiras River, a tributary located in the other margin of the Rio Negro. The overall perceptions about the work done by FVA and IPE was very positive, since the ongoing NGO-communities partnership were reported to be bringing new socio-economic opportunities and new concepts of management (e.g., cooperative work and gardening without the need to burn the slashed forest), among others things.

The third NGO, *Fundação Amazonas Sustentável* (FAS), has been implementing a grandiose and very complex project of community infrastructure, including a whole new concept of rural schools, the use of solar-powered electricity in community public spaces and households, and other experimental activities. The perceptions of FAS's activities varied a lot. The bulk of the negative ones were

mostly related to a recent change of many communities' land tenure status, due to the fact that the State Government of Amazonas created a Sustainable Development Reserve encompassing the area where most communities are located. Although, to the best my knowledge, this had nothing to do with any action done by FAS itself, in the absence of Government officials, the *ribeirinhos* from many communities considered FAS as co-responsible or, at least, "not doing anything concrete to change the dire conditions imposed by the creation of the reserve." The other common critique was related to "the lack of new job positions for the men, since only the wives were given new opportunities to generate more income for the household."

Finally, all the communities seemed to be experiencing further difficulties in reaching agreements on the best way to invest funds channeled by FAS toward community infrastructure projects. Some respondents told me that FAS would even have changed the disbursement plans and annual budgets, transferring to the locals the responsibility to raise the funds needed to finish the projects. Apart from the many versions of what the main problems were, it seemed that most interviewees were struggling with the opportunity to engage in some sort of "cooperative work to generate revenue and better off [‘better off]? Perhaps ‘improve’ would be better] the entire community." While the intentions seemed very good, because the *ribeirinhos* may lack a historical tendency to engage in cooperative projects, the very inspirational concept FAS has been using may seem alien to the recipient communities, who end up being addressed in a top-down manner. In comparison, FVA and IPE have been working with their local partners for longer periods of time, and have introduced ideas and concepts in a way that allow them to be selected, interpreted and adapted by the communities, generating a bottom-up line of action.

As mentioned in Chapter 5, the communities' local councils are very few, aligned with the external agenda of the powerful indigenous NGO, FOIRN; most respondents are still trying to figure out if they could be of any benefit to their communities or not. Meanwhile, most respondents seemed to agree about who are the real "bad guys" in the Middle and Lower Rio Negro basin. First, the State and Municipal Governments and their Secretaries, institutions and officials who were often described as, "They only pay a visit to the communities every four years, looking for votes, then disappear again!" The only very positive feedback was given by wageworkers whose salaries are paid by the Governments themselves. Second are the invading marauders, the commercial fishers and hunters who come from as far away as Manaus to fish in the communities' waters and lakes, as well as to hunt for precious game that is an important source of protein for the locals. Only communities located in narrow rivers managed to negotiate or even

completely block the passage of such illegal competitors who deplete the fish stocks of communities. Third, the expresso boat, a large passenger speedboat that generates displacement waves that cause extensive damage to canoes, small boats, and all the belongings the *ribeirinhos* traditionally leave at the river margins, like the wooden platforms containing clothes to be washed, pots, and other kitchen utensils.

The rapidly increasing sports fishing industry produced contradictory responses. Those who do not like it mention the amount of garbage thrown right onto the river island beaches, and the death rate of large peacock basses (*Cichla spp.*) that are the main target of the catch-and-release fishing activities. Although the companies in charge advertise their work as an environmentally friendly activity, *ribeirinho* fishers from dozens of different communities told me that many of the released large fish have been found dead or dying after having their mouths torn apart by the fishing hooks, unable to eat.

Peace Without Price Tags

Since the apparent abandonment of communities' subsistence grounds seemed to be an anomalous phenomenon, it was necessary to further investigate the *ribeirinho* perceptions about their own communities and the regional cities. Therefore, at the end of the household survey, each respondent was asked to provide as many answers as they wanted to three open ended questions: 1) What is good in your community? 2) How do you see the nearest city? and 3) How to make your community a better place? The top responses for each of them are presented in the following paragraphs.

According to 73.19% of the respondents (Table 6.2), peace and calm are among the most important qualities their own rural communities have. Abundance of fish and game, and safety, are also very prized.
The perspectives provided by respondents on how they see the cities they regularly visit helped identify the boundaries of the two-fold universe from which present-day *ribeirinhos* harvest different products and services. In this dualistic yet complementary reality, composed of rural communities and the urban sphere, one seems to be the opposite of the other.

What is good in your community? Non-mutually exclusive answers (n = 388)		
Top 10 responses	#	%
Peaceful and calm	284	73.19
Abundance	190	48.97
Feel good in my community	166	42.78
Safety	156	40.21
Like rural life	128	32.99
Good location	118	30.41
Good people	108	27.83
Good quality of life	77	19.84
Choice of food	67	17.27
No price tags	67	17.27

Table 6.2. Non-mutually exclusive perspectives on what is good in the communities, per respondent (n=388).

Coincidentally, 73.19% of the respondents considered the cities agitated (Table 6.3), while the exact same percentage considered the communities to be peaceful and calm (Table 6.2).

How do you see the city? Non-mutually exclusive answers (n = 388)		
Top 10 responses	#	%
Agitated	284	73.19
Everything has a price tag	254	65.46
Violent	185	47.68
Can't trust anybody	149	38.40
Not good as my community	123	31.70
Access to public services	75	19.33
City is too hot	73	18.81
Scarcity of natural resources	58	14.95
Noisy and polluted	52	13.40
Can’t produce food	49	12.63

Table 6.3. Non-mutually exclusive perspectives on how the nearest cities are seen, per respondent (n=388).

The cities are seen as really bad and expensive places, "where everything has a price tag," violence is rampant, nobody is trustworthy, the environment is

unpleasant (i.e. hot, noisy and polluted), and it is impossible to produce food. The only exception that allowed cities to be seen through more positive lenses is when they are recognized as providing access to public services that, in an ideal world, were supposed to be available in the rural communities as well.

The last open-ended question was meant to identify the *ribeirinho* perceptions on not only their communities' existing conditions and problems, but also to get a sense of their self-awareness in regards to their citizen rights of access to public services and other forms of State support. My general interpretation about their responses reflects a tendency to accept harsh conditions without much complaint. It resonates perfectly with what is expected from the ideal clients in the *aviamento* system: Hard workers who do not complain about the dire nature of their livelihoods. Communities' members always seemed eager to tell me how things were much more difficult a few decades ago. In general, respondents tended to concentrate their attention on very specific subjects, thus providing a large number of answers (n=1904) on many different subjects, and therefore producing modest percentages for the top ten responses. Nevertheless, the evident need for more general State assistance was identified by 66.49% of the interviewees (Table 6.4).

How to make your community better? Non-mutually exclusive answers (n = 388)		
Top 10 responses	#	%
More State assistance	258	66.49
Better healthcare	189	48.71
Better education	177	45.61
More community maintenance	151	38.92
Extend education to high school	105	27.06
More cooperation/participation	93	23.97
More remedies	79	20.36
Family leaving due to lack of education	70	18.04
More jobs and salaries	62	15.98
More fuel for electric generators	54	13.92

Table 6.4. Non-mutually exclusive perspectives on how to make the communities better places to live, per respondent (n=388).

This was followed by more detailed descriptions of the kind of State support needed: Better healthcare with more remedies, better education, education extended to include high school in rural areas, more overall community

maintenance including public buildings, ports, and a better distribution of electricity to every household, etc.

A very interesting and somewhat counterintuitive response was the need to have more cooperation among the households, and participation of all families in matters related to the development of each community (23.97%). This seems to point to a new and emergent way of thinking about the role of each household in shaping the future of the communities. Cooperation suggests an idea that stands in the extreme opposite to the concept of "working hard without complaining," that reproduces the acceptance of an immutable role for the *ribeirinho* client.

The fact that many families have been forced to leave their communities to continue providing access to education for their children was also mentioned as a serious problem. This happens when most small communities provide education only until the 4th or 5th year, while in the Brazilian educational system high school is only fully completed at the 12th year. Therefore, families either move to larger communities that have junior high or high school, or they move to a city. Children that are not attending school not only lose the opportunity to continue their studies, but also cease to satisfy one of the conditions for the maintenance of the *Bolsa Família* (family grant) payments, which on average is the fourth most important source of income for the surveyed *ribeirinhos*.

Finally, the households want to have more job and salary opportunities in their own communities (15.98%). This seems to be another clear sign of a slow yet growing tendency to move towards wage labor, even in the rural areas.

Urban Social Settings

> *Urbanization per se, in these small towns, is diffuse. Forest based and peasant livelihoods are mixed with new values been assimilated...the city has become the condition and strategy for the division of labor...The formation of social identities is now conditioned by the introduction of new livelihoods, in which urban parameters intermingle with traditional cultures* (Yara Vicentini 2004:177-178).

Pride and Prejudice in Barcelos

As mentioned earlier, some urban institutions may evoke the aura of the rural patron in *ribeirinhos* when they enter private and governmental institutions like

banks and municipal secretaries, triggering an extra humble and complacent "client behavior," as if they were facing a real *coronel de barranco* or his managers. On a related note, during my research in the town of Barcelos, I was able to witness and record other social settings that seemed to be based on the appropriation of some of the typical patrons' exclusive premises related to their almost infinite leverage and flexibility towards deciding if and how to make payments to third parties.

The *aviamento* system seems to reproduce a moral code that resonates with the mindset of the 18th century Portuguese settlers who believed that they had a natural, almost divine, right to enslave the infidel indians and to use their labor for life, and free of any regrets (Anderson 1999). Likewise, the *aviamento* main premise is that the patron has the natural right to change the rules of calculation and payment in the middle of the game, always to his advantage, in order to perpetuate the debt bondage of the client. This notion of natural right may originally have been related to socio-economic and ethnic status, like being part of a small elite of European descent (Anderson 1985). This has gradually changed, first by the addition of nouveaux riche patrons, then the arrival of businessmen from overseas and other regions of Brazil (Anderson 1985, Anderson 1999, Hemming 1995). Finally, with the emergence of the *ribeirinho* patrons, the natural right of patrons to rule over clients was quite reduced and maintained by economic power alone.

The fundamental socio-economic principle that used to guide the patron-client relations established that debt had to be paid by the client, no matter what, while the patron had no pity or responsibility for the well-being of the client. It was an extractive relationship wherein the patron used the clients' skills and labor with no commiseration, always postponing, deducting, taxing, and changing the rules and amounts to be paid to the client. While this was done with impunity to maximize the gains of the patron, the clients knew they were being manipulated, but had no option but to accept it ,because it was how the *aviamento* system was supposed to be. A client could only pay his debt and walk away, or keep showing he was a hard worker not afraid of working even harder to try to keep paying his debts.

What I found in Barcelos was a very intriguing urban culture and etiquette to deal with commercial relations, debt and honor. First, different versions and adaptions of the *aviamento* procedure and principles are found everywhere in the town shops and in informal commercial relations. For instance, since the City Hall constantly delays the payment of salaries of all the lower-status civil servants by up to three months after they are due, many urban families have no option but to buy food and other goods on credit in the local markets. The market cashiers receive payments

in cash, or note the credit extended on *cadernos* identical to the ones used by patrons. The market owner is a patron himself, and adds interests depending on the social status, level of friendship, and time each client takes to pay the debt. This is clearly based on the same *aviamento* rationale used by many generations of rural patrons.

However, another very different and counter-intuitive type of informal business deal is also common in Barcelos. If, for example, if someone needs plank wood to refurbish a house, the person will have to hire a *serrador* to cut it in a nearby forest and deliver the required material. Any *serrador* will typically ask for 50% of the payment in advance, in order to buy fuel, food and other items needed to travel and execute the work in the forest, and then to transport it in a small, motorized canoe back to the city and deliver it to the person who hired him. Quite often, the *serrador* expends the first half of the payment on items or services unrelated to the work he was hired to do. Once he runs out of money, he no longer can buy what he needs to complete the enterprise. Then he owes the person who hired him both the plank wood and the advanced payment. This initial phase in such an informal commercial relation is very similar to the debt bondage experienced by extractivism workers under the *aviamento*. What is the solution for contracting debt under *aviamento*? Simply, augmenting the debt with the patron and going back to the hinterlands to produce as much as possible and then coming back to pay the ever increasing debt. Of course, what seemed simple at first glimpse usually turned into a life-long cycle of debt (see Chapter 1).

Indeed, this is precisely what the patron expects to happen. Now, going back to the *serrador* example, the person who needed the plank wood is not a patron, and has no interest in augmenting the debt of the *serrador*. In fact, all he wants is to have the plank wood delivered, make the second half of the payment, and move on with his life. The *serrador,* however, keeps acting accordingly to the *aviamento* script, and asks for the other 50% in order to, perhaps, cut, process, transport and deliver the plank wood. There is no easy solution to this situation. Finally, the person who hired the *serrador* runs out of patience and demands either the delivery of the plank wood according to the original plan, or the reimbursement of what was paid in advance. In this moment, the *serrador* inverts the perspective of the negotiation dramatically. The *serrador* acts as if his honor has been tainted, as if the person who hired him has suggested that he is a liar, a second-class person not able to perform the job, not a good client who could fix the problem if given another chance, meaning, a la *aviamento,* more credit extended to do it. The deal now is over, and the *serrador* delivers neither the wood nor the money, acting as if he is the party who suffered the loss, since his honor was attacked.

This anecdote is based on real cases that I witnessed or was told by key informants. It helps to highlight urban social settings that seem inspired by the traditional patron-client relationships where, even though the client may fail to follow the agreement, he still needs to protect his honor at all costs. Nobody can touch his *macho* pride. If the honor of the client is put in check, the debt is cancelled as a symbolic payment for such an insult. In other words, what was once the prerogative of patrons, meaning the delay and manipulation of their part of the deal, has been co-opted by 'clients' in the urban sphere. I was able to amass more than a dozen cases of this type of procedure mainly related to traditional professions like *geleiro*, *serrador*, but also contractors, boat carpenters, furniture builders, etc.

Another even more frequent type of business deal is more clearly based on the traditional patron's role. In other words, many commercial relations are performed as contracted, but the party that hired the service does not pay in full. In order to justify the delay or even total lack of payment according to the original agreement, the party that refuses payment may point out non-existing defects and irregularities that would cancel the original agreement. Again, what started as a business deal ends as a dispute of honor, and a contest of who can sustain the more consistent argument for walking away from the initial agreement. A town like Barcelos does not offer any practical legal support for its citizens, therefore suing someone for one of the reasons exemplified above is virtually impossible. Not to mention that such a suit would be seen as a futile scandal by the local society, which most probably would consider the party trying to get reimbursed as the one in the wrong! These observed social settings suggest that the whole regional society, rural and urban, has been profoundly influenced by the ethics and principles of conflict resolution predicated on the *aviamento* system. The rationale of the *aviamento* has been incorporated into *ribeirinho* daily life, and these seem to have become the best business practices in the Middle Rio Negro.

It Belongs to the Government

The inhabitants of Barcelos, as many other Brazilians, seem to have a cultural lack of care, or even a destructive behavior, towards public property. Public phones, concrete square benches, streetlights and other town structures seem to be turned into targets for people's frustrations, lack of jobs, social justice and opportunities in general. On the one hand, this could be interpreted as a weak or non-existent sense of belonging, as if the public properties did not belong to the collective as well as to each individual. On the other hand, in a country that always has been ruled by the few, where elite domination "has characterized Brazilian society from

its founding" (Roett 1984:17), and in the Rio Negro basin, where patrons have been omnipotent and monopolized all the riches for centuries, public property may also assume the role of exposed parts of an otherwise unbreakable ruling system that can be reached and hurt. This rationale would go along the lines of a symbolic revenge against the oppression or indifference of the State, the patrons, or even both together (Scott 1987).

However, the same destructive behavior towards public property also was observed in most of the surveyed communities. One could expect that small isolated communities should value the little State support they may get. In fact, on the rare occasions when the City Hall sends contractors to build or refurbish rural schools, community centers, riverbank stairways and the like, there is almost no participation from community members in the maintenance work. Many contractors are said to prefer to work alone and to leave the community as soon as they are finished. Sometimes they leave even before finishing their task, giving many unsupported excuses for having to go. Every community has a number of unfinished, abandoned buildings or services. Typically, no community member ever finishes the job initiated by a municipal contractor that left behind a job undone or badly executed: "We don't touch it because it's a government project. It's the government's responsibility to finish it."[35] There are no legal accountability issues involved, since justice almost never reaches the rural sphere of Amazonia. These are matters of social responsibility and honor. Many contractors do an awful job in rural communities, although most of them were born and raised in rural communities and know very well how important it is to have a basic functional infrastructure. They seem always to be in a hurry to leave and go back to town, and tend to downgrade structures that end up bending, breaking and falling into pieces. These contractors also cut and use poor quality wood that every woodsman knows will not last more than a couple of years in the super-wet local climate. Good quality wood is available, but sometimes it means walking another half hour to reach the right kind of tree. Half an hour could make the difference of a decade's worth of hard wood material. However, neither contractor nor locals join efforts to make it happen. The locals consider it the contractor's responsibility to do a good job, and the contractor seems to consider his work not as his professional duty, but almost like a favor to the locals. The contractor acts as a client whose patron is the "mayor," meaning the City Hall — not the community people. Therefore, in his mind, if he is doing them a favor, no one should complain — and, if they do, he does not care. The patron "mayor" is not complaining either, and could not care less for the low quality of the work done. At the end of the day, the fact that a poor performance earns him the same pay as a

[35] Portuguese original: "A gente não mexe por que é obra do governo. Então é o governo que tem de fazer tudinho."

good and more demanding performance is the only thing that matters to the contractor.

Local daily maintenance is yet another big time problem. Constructions that were already very low quality when brand new get much worse after some rainy seasons. Respondents reported near fatal accidents when school and community centers' roofs collapsed, and walls and floors turned into traps for students and community members in general. Still, even though the very minimal community infrastructure serves all, very few people actually get involved in volunteer building or maintenance work. The lack of a cooperative mindset is very evident when it comes to communities' public property. Maintenance activities may be mainly absent, but the same destructive behavior observed in urban areas is fiercely expressed in small rural communities. No wonder the majority of rural communities have extremely precarious infrastructure conditions.

Apart from these problems, during the survey, many interviewees mentioned, for instance, how the president had monopolized the community boat, or how the teacher would use the school butane gas for his or her personal use, that the generator operator stole fuel and lubricants and sold them to the locals for high prices, etc. Then, when these public properties went broken or lacking something to function properly, the same people who allegedly were responsible would ask for all community members to help solve the problem, or to contribute money or labor to fix it. This could be seen as a *ribeirinho* example of privatizing the benefits, while socializing the burden. This has undoubtedly been one of Amazonian patrons' main *modus operandi*, frequently co-opted by other people.

The rural communities seem to have become microcosms of the interior towns, and towns like Barcelos, with only 16,000 inhabitants, seem to replicate the urban problems of the state capital, Manaus, with its 1,8 million people (IBGE 2012). Nine years after 2003, when I first visited Barcelos, it had become a chaotic interior town. In 2012, the mayor that was reelected that same year was said to spend less than a week in town and the rest of the month "travelling in constant search for funds and other benefits for the municipality." However, this honorable pilgrimage for the benefit of all allowed him to add some 20 days of *per diem* to his monthly earnings, totaling the equivalent of about US$100,000 per year, according to an informant who was an acquaintance of the mayor. While the salaries of the top City Hall employees seem to be paid without any delay, most of the other public servants typically have to wait up to three months to receive theirs. Even though urban violence had become rampant, the police officers were reported to be lazy and inefficient, even complacent, with some notorious troublemakers. The visually impacting hospital was nothing but a freshly-painted,

empty husk: It had not even a single hired medical doctor, and was run mostly by nurses, nursing assistants and other technicians. There were no X-rays, no surgery room, and very few medicines.

The Barcelos hospital exemplifies the whole town: a façade hospital for a make-believe town; a small interior town plagued by 'big city problems' like drug trafficking, gang violence, teen prostitution, and car and motorcycle fatalities. All this is due to a total lack of proper governance and urban planning. In fact, the City Hall of Barcelos maintained programs of distribution of building materials and land in the outskirts of town for poor people. It was their own version of a municipal "cash transfer program" that used barter instead of cash. These actions could be also seen as an effort to attract more people from rural communities to move to town and live in the shanty neighborhoods, even though no jobs were available and more people cannot be accommodated without making much-needed investments to expand and enhance the quality of most basic public services. One should not be surprised if the very financial resources sent by the State and Federal Governments to fix and maintain the town's public services have been diverted towards this populist "social program" of distribution of cement, mud bricks, asbestos roof sheeting, butane gas containers, and small land plots, none of them with land tenure documents. The main reason for emphasizing this kind of rapid urbanization regardless of the problems it would generate is that it may also have its roots in some sort of patron premise: The annual budget that a municipality submits for review is calculated based on the size of the municipality’s rural and urban population, where the urban contingent gets most of the funding, So, increasing the numbers for the urban population would automatically translate into increased funding for the City Hall and, due to lack of monitoring, these funds could be used for purposes other than for what they were originally allocated.

Urban vs. Rural Segregation

Apart from the obvious socio-economic and cultural dichotomy that defines and separates patrons from clients, I also observed another not-quite-visible but no-less-important segregation perpetrated by people living in the city towards those still living in rural areas. In 2012, the colonial European elite's assumption of a pervasive primitiveness of Amazonian indigenous peoples still seems to echo in the streets of Barcelos, Manaus, and other towns and cities in Amazonia. Now, however, it is the urban population who sees itself as the elite, while the rural population is treated as if it were still embedded in backwardness and ignorance. According to my observations and interviews, the shift from this "primitive" to a "modern" or urban lifestyle may happen in a matter of several weeks or months,

once someone moves to the city and starts adapting to the urban culture. Unfortunately, for many this rapid "upgrade" can have side effects that may even result in the collapse of family integrity and cohesion, as described in Chapter 1. This horizontal urban-rural segregation is found even within one's extended family, where the relatives living in the city tend to assume a snobbish posture towards their "hillbilly" relatives who still "struggle" in their rural communities. However, as seen earlier in this Chapter, the comparative perception of quality of life from *ribeirinhos* interviewed while living in the communities is clearly favorable to the rural lifestyle. Nevertheless, a widespread phenomenon in traditional communities, either in Amazonia or around the world, is a dissatisfaction shared by younger generations who seem eager to move to the cities (Corry 2011), trading off the chance to learn and maintain the livelihoods and traditions of their parents for having access to the romanticized lifestyle portrayed in the TV propagandas and soap operas popularly watched in the Rio Negro rural communities.

The strongest segregation and pressure for behavioral changes seem to happen precisely within the children and teens who have arrived from rural communities. Children who were born and raised in communities where all the families knew each other, where violence and harassment were virtually non-existent, need to learn as quick as possible how to survive in the urban jungle, and how to identify and avoid its many pitfalls. Within weeks, their jargon starts to change; so does the way to salute others. These transplanted rural kids start spending more and more time in the streets with new acquaintances, and so on and so forth, until the transformation is complete, and another young urban dweller arises. However, in a poorly-urbanized interior town like Barcelos, where even informal jobs are not easily available for newcomers, adapting to the urban periphery lifestyle may include getting dangerously close to street gangs, drug traffickers, pickpockets, prostitutes, and other people who are more or less involved with illegal activities and crime. Even the more fortunate children and teens, who manage to enroll in school soon after arriving in the city, will most likely face vigorous segregation within the classroom, as well (Socorro Batalha, pers. comm.) The burden of making the transition from a rural community to the urban sphere affects the entire household in different ways. Overall, it is a dramatic change from a very family-oriented, traditional rural household-driven lifestyle to its extreme opposite — the urban individualistic survival mode.

Cooperative Work

The research carried out in Barcelos also aimed at understanding more about the apparent socio-economic or even cultural rejection of the concept and praxis of cooperative work. One of my key local informants had participated in the foundation of the *Cooperativa Mista Agroextrativista dos Povos Tradicionais do Médio Rio Negro*[36] (COMAGEPT). In 2006, when it was founded, COMAGEPT quickly amassed more than 150 members. They were mainly clients still working in the extractivism of *piaçaba*, Brazil nuts, *cipó*, *caçari* or *camu-camu*[37], etc. During the first meetings, the recently enlisted cooperates seemed to be excited about becoming members of the new collective institution. They managed to get a room that was turned into the co-op office, and also got it officially registered so that it could negotiate with Manaus and even overseas buyers on behalf of all the members. The initial COMAGEPT administrative structure replicated the typical model found in most rural communities and was composed of the unpaid roles of President, Vice President, Secretary, Treasurer and a Board of Councilors.

The first problems started to emerge after the initial months of excitement spent saluting the opening and initial organization of the co-op infrastructure. Soon enough, it became gradually clear that most people who signed up as co-op members did not understand a thing about the new underlying concept of cooperative work, as explained by the COMAGEPT founders. In fact, during the first meetings to start organizing the working teams and dividing members by extractive regions and specialties, the co-op members continued to act as if they were still clients, expecting to receive orders and to have access to an *aviamento* (upfront credit) of fuel, working tools, motorized canoes, food, etc. In other words, COMAGEPT was interpreted as if it was a *ribeirinho* patron organization where its administrative board was seen as a group of *patrões fracos* (low capital patrons) who were planning to accumulate power by working together. It seemed unconceivable to the co-op members that another completely different socio-economic system could possibly work for them. Even more educational, the co-op members realized that *patrões fracos* would get stronger by joining efforts; still the same rationale could not be applied to the co-op members themselves. This may suggest that clients do understand, agree with and maintain the intrinsic competitive nature of the client-client relations. According to this logic, patrons could work together and join forces, but clients should remain individualized and

[36] Translation: Agro-extractivist Cooperative for the Traditional Peoples of the Middle Rio Negro
[37] *Caçari* or *camu-camu* (*Myrciaria dubia*) is an Amazonian black-water flood plain fruit, very rich in vitamin C content, that is gradually becoming a forest commodity. It is collected by canoe and exported to overseas markets as the US, France and Japan (Alves et. al. 2002).

still competing for the favor of the patrons. Why would the *ribeirinhos* be actively refusing to engage in cooperative work with their peers?

Even before one would attempt to address the question above, it should be recognized that this tendency to avoid structural changes is found in many traditional peoples of the world (Corry 2011). Sometimes it may seem better to stick to a difficult livelihood than exchanging it for another untested model, risking losing even the little bit that the initial system managed to yield. Thus, instead of a mere psychological, cultural barrier, what seems to really matter for the *ribeirinhos* is the real-world logistics; the definition of a concrete and, ideally, previously-tested way for the productive labor to be set in motion. With that said, how would a poor *ribeirinho* household manage to get a motorized canoe, fuel, utensils and food to perform the extractive work proposed by COMAGEPT, for instance? If the State were made present by means of establishing lines of credit, rural development policies, market regulations and other constructive ways of fostering the *ribeirinho* productive chain, the patrons' niche would be fulfilled by the State, and there would be neither room nor need for them. Once the State has not only been absent in terms of offering any support to its common citizens, as it also has historically supported the patrons, it becomes clear that the bare concept of cooperative work deprived of lines of credit, access to markets, and social inclusion programs may sound like nothing but a utopic concept that no experienced head of family would dare to buy.

Instead of interpreting the *ribeirinhos* as being stubbornly attached to the past, reproducing an obsolete socio-economic system based on debt bondage, and actively avoiding the adoption of more socially-just modes of production (Hemming 1995, Meggers 1996), one should acknowledge that they have managed to survive through centuries of hardship, whereas other apparently more sovereign peoples perished along the way (Nugent 1993, Wright 2005). Moreover, cooperative work not only exists in *ribeirinho* society and socio-economy, it is a hallmark of their survival skills. However, it seems restricted to the household or extended family level (Harris 2000, Lima 2006, Wagley 1985). When it comes to put the well-being of their kin on the line, the *ribeirinhos* are not just being passive and accepting the dominance of a patron; in fact, they are actively perpetuating the survival of their families against many odds, in a culturally, politically, and socio-economically very hostile environment. Throughout *ribeirinho* history, there has been a very thin line between sovereignty and servitude, and the *ribeirinhos* have become masters in navigating across this border to make the best possible use of the opportunities that they could identify on both sides.

CHAPTER 7: THE FUTURE OF THE *RIBEIRINHO* AND THE RIO NEGRO BASIN

> *The Krenak are neither the same as the Xavante, nor are like the Guarani, nor are equal to the Yanomami. I am Krenak, but I can't think that I know what is good for the Guarani, understand? Go ask the Guarani... we want to continue feeding our infinite capacity to reinvent, to revolutionize, to turn one thing inside out - and this needs to be the expression of [each indigenous] culture, otherwise it will turn into accommodation.*
>
> Aílton Krenak (2010, my translation).

Figure 7.1. A *ribeirinho* youngster and her proud grandmother (Photo © F.B. Pontual).

Ribeirinhos and Rio Negro's Perspectives

About 40% of the world's remaining tropical forests are located in the Brazilian Amazonia. The main national and international responses to a rate of deforestation of two million hectares per year have been a number of "initiatives to help promote conservation planning and sustainable development" in the region (Laurance *et al*. 2001:1). The Rio Negro basin is considered as one of the highest priority areas for the conservation and sustainable use of biodiversity as well as the maintenance of extant socio-cultural diversity in Amazonia (ISA 2002, MMA 2001), harboring very few development activities compared to the other regions to the south and east (Moran 1993:152-153). The *ribeirinho* population is, by far, the largest indigenous and human contingent living and working in the rural areas of Amazonia (Nugent 1993, Parker 1985, Ribeiro 1995). Yet, very few of these 'conservation planning and sustainable development projects' seem to be willing to considerer and take into account the *ribeirinho* traditional knowledge, regional experience, socio-economic and ecological perspectives, nor their basic needs, during the design and implementation phases of such initiatives (Folha 2014, Lima and Pozzobon 2005, Little 2010, Murrieta *et al.* 2006). Meanwhile, the Brazilian Government continues to foster conventional development projects that include the expansion of extractive industries (e.g., mining of ferrous, precious and rare minerals, oil and gas, etc.), hydro dams, road building, cattle farming, soy monoculture, and other high socio-environmental impact activities (ISA 2013, Fearnside 2002, Fearnside 2008, Kirby 2006, Laurance *et al.* 2001).

As mentioned in previous chapters, the *ribeirinhos* have participated in all of the major phases of Amazonian history, not only as the main labor force that fueled all the socioeconomic cycles, but also as very important actors of cultural and environmental change. In recent decades, *ribeirinhos* have operated the axes and chainsaws that cut down the forest, have been overfishing the rivers, and have been invading indigenous tribal territories during recurrent gold fever periods, helping to pollute the environment with the mercury used in gold mining. On the other hand, *ribeirinhos* maintain the forests standing around their communities, vigilantly blocking professional hunters and fishers from dilapidating local natural resources.

In short, the *ribeirinhos* have been the historical Amazonian driving force, not the machine. Therefore, the future of both the region and its main rural human population depends on the roles the Brazilian State will decide to play, and how it will play it. The future of Amazonia and the Rio Negro basin is directly related to the main kind of development orientation to be adopted by the State, and the

socio-environmental and economic policies that will set the priorities and directions to be followed. The *ribeirinhos* not only will follow these guidelines, in fact, they will once again be the driving force implementing them, either in the construction of huge infrastructure projects like hydro dams and industrial mining (Laurance et al. 2001), or the more collaborative work emerging in the many extractive and sustainable development reserves that have been created in the past decades (ISA 2008, IPE 2013, FVA 2011).

Drivers of Mobility

As mentioned in Chapter 6, one of the *ribeirinhos* most noticeable traits is their high mobility and low territoriality (Little 2001), expressed in a very fluid relationship to the places where they were born, have lived or harvested, and prospect for work (Harris 2006, Leonardi 1999, Parker 1985a, Parry *et al*. 2010). This contrasts sharply with what is observed in most tribal peoples who tend to have a very close cultural, historic and spiritual connection to their traditional territories (Carr In press, Corry 2011, Roosevelt 1994). On average, each of the 388 survey respondents had lived in 4.08 different places (ranging from 24 to 0) other then where they were interviewed. These other places varied from neighboring localities to different river basins, or even interstate distances superior to 1,500 miles (e.g., Upper Juruá River, Acre and Imperatriz, Maranhão).

During the household survey, respondents were asked about the main drivers for: 1) moving from the community where they were interviewed to some other place 2) moving to the current community, and 3) all past moves during the life history of the respondent. All the answers were recorded, and results were organized in a non-mutually exclusive order.

The drivers for future moves were based on a smaller set of answers (n=203), since only 39.95% of respondents expressed intentions to move from the communities where they were interviewed. In comparison, 96.91% of respondents mentioned drivers for historical moves and their last move. Once the historical moves relates to the whole lifetime of each respondent, it was already expected to be a larger set of answers (n=912). Finally, the interviewees mentioned 569 drivers for their last move.

Drivers of mobility	*Future move n=203*	*Last move n=569*	*Historical moves n=912*
	%	%	%
Education	45.32	8.79	14.91
Better off	14.78	30.40	20.83
New job	14.78	9.14	7.57
Reunite family	10.34	9.14	6.14
Follow family	3.94	15.82	31.69
Closer to city	3.45	1.05	0.77
Healthcare	3.45	1.41	1.43
Disenchantment	1.48	5.27	3.18
Take chances	0.99	-	1.43
Extractivism	-	4.04	5.48
Agriculture	-	5.62	2.96

Table 7.1. Top 11 drivers for mobility mentioned by respondents, organized in columns according to future, last, and historical moves, following the descending order of the second column.

Deciphering "Access to Education"

Access to education (45.32%) was not only the main driver for those planning to make a future move. It was also, by far, the largest percentage of all responses for any driver of mobility. Interestingly enough, this driver was not so preeminent for the last move (8.79%) and historical moves (14.91%). Considering that most of the surveyed communities only offered schooling until the 5th grade, it is reasonable to believe that access to education may not have been among the main drivers for moving there, although it was still the 5th-most important driver for the last move. In a life history perspective, respondents repeatedly mentioned that gaining access to, at least, basic education (e.g., 5th grade) for their children was a priority. Indeed, it was the 3rd most important driver for historical moves.

Based on the survey and other interviews, allowing children to have "access to education" has been an important issue for most *ribeirinho* households when it comes to deciding where to go and make a living. However, the reasons education seems to be such a key driver remain unclear. As mentioned in Chapter 5, higher levels of education does neither automatically translates into better chances to get one of the few jobs available in rural communities, nor to gain one in the interior towns of the Middle and Lower Rio Negro basin. The observed regional reality does not seem to corroborate the prediction that "completing secondary education in Latin America provides a child with a fair chance to escape poverty (Aldaz-Carroll and Moran 2001 *apud* Parry *et al*. 2010:165)."

On the other hand, families do count on rural schools to entertain the children and teens in constructive activities for many hours a day. Since younger generations seem to have lost their interest in reproducing their parents' socioeconomic activities (see Chapter 5), school may play an important socio-cultural role towards establishing some discipline and daily tasks that need to be accomplished. This seems to have become more important after the traditional *ribeirinho* "respect for the elders" has been softened by the "modernity" of external influences like TV soap operas and urban culture (see Chapter 5). Many parents mentioned that they expect the rural teacher to exert a rigid discipline on the students, even though discipline at home has been relaxed, according to interviewed old timers. A statement given by a head of a household helps in understanding the uncertainty inherent to these transition times — "When I was a boy, I had to work with my father and had no time to study. Today, I want a different life for my children. But jobs are scarce even for those who went to school."[38] Younger generations' perceptions about the outside world are mediated by TV and visits to local towns, and quantitative access to education has boomed within the past decades. However, rural teachers are unanimous in admitting that the quality of learning most rural students have acquired places them bellow the minimum standards. "I have 5th grade students who can barely read and almost only write their own names,"[39] said one rural teacher with 25 years of experience. Thus, apart from what happens in a few exceptional communities, most surveyed rural students were far from receiving even a little bit of quality education that could make a difference for them to succeed in the very limited job market.

Several decades ago, during the Salesian Boarding Schools period, indigenous parents used education as a means to hide the indigenous descent of their children (see Chapter 3 and 5). Back then, missionary teachers kept a very strict discipline and the quality of instruction reached the highest quality the Rio Negro has ever seen (Peres 2003, Wright 2005). Some survey respondents, *ribeirinho* patrons and *patrõezinhos,* attended the *internato dos padres* (priest's boarding schools), in Barcelos, Santa Isabel or São Gabriel da Cachoeira. "One year of boarding school was worth more than ten in one of today's little rural schools,"[40] — an interviewed *patrãozinho* proudly told me. As a matter of fact, until the last decades, most clients in the Rio Negro were typically illiterate, whereas patrons, managers,

[38] Original quote: "Quando eu era menino, tinha de trabalhar com o meu pai e não tinha tempo pra estudo. Hoje quero uma vida diferente pros meus filhos. Mas emprego tá ruim até pra quem foi pra escola."
[39] Original quote: "Eu tenho alunos do 5° ano que mal conseguem ler e quase só sabem escrever o próprio nome."
[40] Original quote: "Um ano de internato valia mais que dez dessa escolinha rural de hoje"

administrators and rural teachers were among the few rural community inhabitants who could read, write and have more than purely basic notions of calculus.

The rural communities' cultural and socio-economic panorama have been undergoing adaptations to cope with the reality of the present-day Rio Negro basin, which seems to be biased toward rapid urbanization and private investments aimed at the local services and emerging tourism industries. Interpreted through this perspective, "access to education" seems to have acquired an overarching meaning that may include some or all of the dimensions mentioned above with the one main objective: Venture to the outside world to harvest what it has to offer to better the *ribeirinho* households. Today, in the Middle and Lower Rio Negro, high school-level education is available only in towns or in very few rural communities. *Ribeirinhos* share a very realistic notion of what to expect from towns and cities. However, in spite of not appreciating the socio-economic and physical attributes of the urban environment, 19.33% of respondents recognized the access to public services as the almost only positive thing towns and cities have to offer (see Table 6.2).

Therefore, by using the expression "access to education," the *ribeirinhos* may in fact be referring to having access not only to public education, but also to State services and benefits, in general. The very State that had historically neglected the *ribeirinhos* and their communities has just recently shown a more benevolent side (see The Electronic Patron) and seems easier to reach now. This new access to the State has acquired a concrete interface through the education, healthcare, and social security services — translated as family grants, rural pensions and fisher subsidies — that all are performed by the Federal, State and Municipal Government institutions located in the urban sphere. However, complete access to State services and benefits cannot be accomplished in one visit to the city, due to the complex nature of the interactions and rampant bureaucracy that permeates all official institutions. If, for instance, the main goal is to enroll the kids in an urban school, the family obviously will have to move and make a living in the city. Similarly, if the household is applying for family grants, pensions and other subsidies, it may be necessary to stay in town for weeks, or months, to find out what is necessary to apply for different services and benefits, where to get them, to amass all the necessary documents in a pilgrimage through different governmental agencies and offices, and answer all the questions from public servants in charge of the processes. All this is necessary to satisfy the many bureaucratic steps until the application finally is accepted. Then, the last step is to wait another period of time, which may vary from a couple of weeks to half a year, until the applicant receives the magnetic cards that will be used to withdraw the monthly payments.

Last but not least, in the past 15 years, having continued access to education has acquired a totally new socio-economic meaning for the *ribeirinhos*, since it became a pre-condition to receive the *bolsa família* poverty-alleviation grant. In order to be eligible and remain entitled for the *bolsa família* payments, all school-aged children need to be enrolled and attending classes. Children who finish the highest grade available in their rural communities are forced to become idle and their families will have their *bolsa família* payment reduced. This is certain, unless the family moves to another larger community or town were continued education is available, and manages to enroll the kids back into school.

Therefore, under the umbrella driver "access to education," a *ribeirinho* household may be referring to plans for a short-, mid-, or long-term move to a larger community or town, depending on the specific goal(s) to be achieved.

Socio-economic Drivers

More than just another socio-economic driver, the will to always look to better the household could be considered the main *ribeirinho* historical survival strategy. Table 7.1 shows that "better off" was mentioned consistently in all columns: future move (14.78%), last move (30.40%), and historical moves (20.83%). Compared to the driver "taking chances", "better off" is a more responsible strategy since it involves a previous analysis of a place for the potential betterment of the household. Typically, this driver was mentioned when the household moved to a new place following an invitation from a relative or a friend who was already living there, or was preceded by a visit to scout out the place.

Conversely, "taking chances" was a driver more often mentioned by single men who were driven by risky decisions in a display of *macho* boldness; or very poor families who could not afford making a scouting visit before moving to a new place. "Taking chances" may have been a common driver during the time of the *patrões fortes* (powerful patrons), when client families knew upfront what conditions to expect, since it tended to be always more of the same. In other words, back then, "taking chances" was based on blindly following the patron, considering that the working and living conditions would follow a well-known and accepted pattern. Today, with the accentuated reduction of rural patrons' activities, this driver seems to be fading out. "Extractivism" of non-timber forest commodities is another socio-economic driver that has been fading out — historical (5.48%), last (4.04%), and future move (0%) — and was not even once mentioned as a driver of a future move. These respondents' perceptions seem to

confirm that the Middle and Lower Rio Negro basin has been entering another bust period, indeed.

The driver "new job" only applies to the highly mobile emergent middle class composed mainly of rural teachers, school directors, and healthcare agents who tend to be bound by annual contracts with the municipal City Halls, and are frequently moving to new work places. "Agriculture" is a driver mentioned by households that are fond of gardening and value good soil and other environmental conditions relevant to the production of *farinha.* While "new job" seems to be an ascending tendency, the opposite applies to "agriculture". A context-based comparison between these two drivers provides a snapshot of what seems to be the main *ribeirinho* socio-economic orientation for the 2010s. It suggests an increasing tendency of livelihood shift from traditional subsistence activities (e.g., agriculture and extractivism) towards the emergent wage labor opportunities that are still quite limited but may be expanded in the near future.

Disenchantment

Among the cultural traits shared by *ribeirinhos* that come from undisputable indigenous heritage mixed with European and African religions, myths, and assorted cultural influences (Guzmán 2008, Ribeiro 1995, Weinstein 1985) is the *desgosto* (disenchantment). Most *ribeirinho* families have other layers of relationship to the place where they live that are not purely related to the physical world and conventional reality. *Ribeirinho* culture and folklore include the belief in nature spirits, supernatural entities like the *cobra grande*, the *caipora*[41], etc., and *visagens* (visions of deceased people, ghosts, demons and spirits) (Ribeiro 1995, Slater 2002, Weinstein 1985). The *desgosto* or disenchantment happens when a person or a family interprets a varied range of signs as a message that the place where they live is no longer suited for their safe stay and continued happiness. More mundane things also can trigger disenchantment such as death, disease, gossip, blackmail, subtle feelings and presages, bankruptcy, etc.

In 2005, I met a *ribeirinho* household living in a very isolated former *piaçaba colocação* (labor camp). Three years later, they moved from that location after two

[41] *Cobra grande* is a mythic giant anaconda, which is believed to live hidden in the depths of the main channel of the rivers. Several respondents described encounters with what they believed to be a *Cobra Grande*. The *caipora* is another mythological creature that has the shape of a *curumim* (indian boy) with red hair and inverted feet. The *caipora* is the protector of the forests and hates unfair hunters who kill for sport or more than needed to feed their families. The *caipora* punishes the hunters by using tricks to make them get lost in the forest (Slater 2002).

children died of perfectly avoidable causes. A young teenage girl choked on a fish bone and suffered for more than a week until she died in a public hospital in Manaus. A few months later, the younger brother of the deceased girl contracted a vicious malaria, and after three days of high fever and dehydration his father paddled him down river in a small canoe for several days. The heroic effort to save the boy's life was in vain; the child already was dead when the canoe arrived at the first community with a health agent. The two deaths brought a profound disenchantment with the place where the household had lived for the past decades. In a matter of weeks, they moved to another community where I met them in 2008. Then, in 2012, they moved to a third community where they participated in the household survey. They were living happily in the second community until another child died, fatally struck by lightning.

Table 7.1 shows that "disenchantment" was a one of the top drivers for historical, last and future migrations. A young couple, which was still on probation in the community where they were interviewed, explained to me that, "When one feels disenchanted, the best thing to do is to move away and start over in a different place."[42]

Ribeirinho *Life Cycles*

Ribeirinho high mobility is neither restricted to the household level, nor purely determined by a continuous search to socio-economic betterment. The survey results indicate that there is also a *ribeirinho* life cycle of migrations that has been followed by at least 59.79% of the respondents. This cycle started during childhood, when the young respondents followed their family, travelling together to different communities or *colocações* (extractive labor camps), learning how to garden, perform extractive work and other occupations from their parents. When the respondents became young adults, most moved away from their parents' community or place of living, in order to get married and start their own family. Then, when respondents reached 40 or more years of age, a tendency to reunite with family members started to express itself in different ways. Sometimes it meant moving back to where either the husband's or wife's parents were living, in order to give them the opportunity to interact with their grandchildren and vice-versa. Conversely, many retired respondents mentioned plans of moving to reunite and live with their grown-up siblings.

[42] Portuguese original: "Quando dá desgosto, a melhor coisa é ir embora e começar de novo em outra paragem".

Table 7.1 shows that the data for the drivers "follow family" and "reunite family" present inverted tendencies. The results for "follow family" descend from historical moves (31.69%), to last move (15.82%), and finally future move (3.94%). Conversely, the results for "reunite family" follow an ascending orientation from historical moves (6.14%), to last move (9.14%), and reaching 10.34% for intended future move. These evidences provide support for the *ribeirinho* life mobility dynamics as described above.

Overlaying this main scheme, husbands used to show higher mobility than wives, which could be directly related to their traditional role as main providers for the family, while the wives used to run the house, take care of the children, and tend the garden. Today, with the region coming to a bust period and other socio-economic changes (see Chapter 5), at least in some places, male mobility may no longer be higher than female. Many other variants are possible; widowed and separated *ribeirinhos* also tend to re-approach their relatives or friends, and live with them at least for a while. Therefore, reconnecting to "family" shall be interpreted as even more than the extended family — for instance, also including an uncle, a distant aunt, or even a *compadre* (godfather) or dear friend from the past. In spite of the multiple variations, the main theme seems to be well defined, and consists of three main vectors of movement. The first is the learning phase, where young *ribeirinhos* usually follow their parents' migrations. The second is the independence phase, when the original family splits, originating new *ribeirinho* families that will explore the world on their own. The third is the reuniting phase, when the world was already experienced and the priority becomes reconnecting with family members to close the life cycle. After this reconnection to the family, especially when the arriving family or person finishes a period in mourning of a dear one, a new cycle may start.

Although Figure 7.2 shows some drivers for future migration plotted by respondent age group, representing the perspective recorded at the time of the survey (2012), it may also be extrapolated to provide a sample picture of some tendencies for each driver along the lifetime of the *ribeirinhos*. The curve for

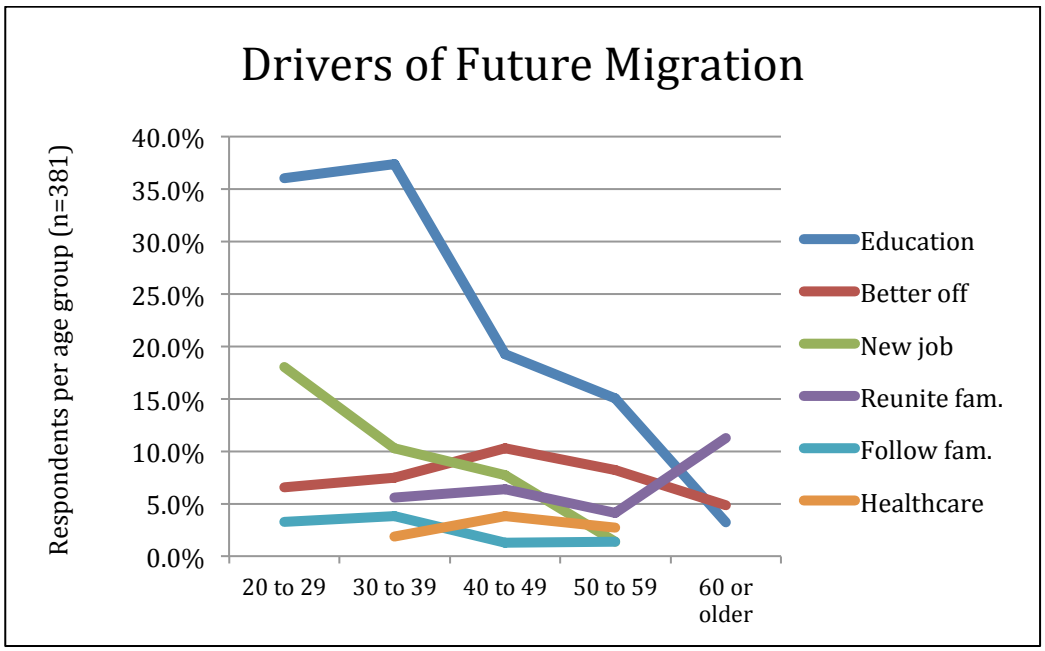

Figure 7.2. Non-mutually exclusive drivers of future migration plotted per age groups (n=203).

"education" shows it to be the most important driver for a future move. It starts at 36.1% of the respondents of age group 20-29, and peaks at 30-39 with 37.4%, then descends rapidly all the way to the end. This curve's peak aligns perfectly with the age group of parents who have most children at school age.

The "better off" curve increases slightly and peaks at age group 40-49, then decreases smoothly, suggesting a slight deceleration of the effort to betterment after 50 years of age. The curve representing "new jobs" starts peaking at 20-29 and goes downhill to the end, indicating a decrease in mobility in inverse proportion to age. The driver "reunite family" starts only at 30-39, suggesting it happens later the respondents' life, then slightly decreases to peak at the very end, indicating the tendency of retired *ribeirinhos* of moving to reunite and live with their siblings. Conversely, the curve for "follow family" starts early at 0-15 (not shown in Fig. 7.2), decreases after 30-39, and plateaus after 40-49. This plateau may indicate the move of spouses following those who were moving under "new jobs", for instance. Finally, the curve for "[access to] healthcare" shows up only in the second half of respondents' lives, and may also indicate its role in maintaining access to the *bolsa famíla* poverty-alleviation program, since vaccination for children is one of the pre-conditions to entitlement for receiving payments.

Dismissing the Paradox

The apparently paradoxical rural exodus described in Chapter 1, where *ribeirinho* families would be abandoning their rural based subsistence grounds and migrating to towns that offer no jobs or social safety nets, may be better understood as a present day expression of *ribeirinho* historical survival strategies that kept them alive as cultural entities, and has been delivering an adaptive response to new circumstances of the 21st century.

Although rural exodus has become an inexorable reality in Pan-Amazonia and, likewise, Rio Negro towns and cities have been receiving thousands of new inhabitants in the last several decades (IBGE 2012a, Pinedo-Vasquez and Padoch 2013), not all *ribeirinhos* moving to the urban areas may be planning to stay there indefinitely. The results of logistic regressions[43] run with household survey data, provide support for the hypothesis that securing access to the State-funded sources of income is one of the main reasons for families to head to the nearest town. (see Table 7.2).

Logistic regression — Number of obs = 210; LR chi2(10) = 29.26; Prob > chi2 = 0.0011; Log likelihood = -127.83054; Pseudo R2 = 0.1027

h_exodus	Odds Ratio	Std. Err.	z	P>|z|	[95% Conf.	Interval]
h_male_0_15	1.02587	.339869	0.08	0.939	.5359088	1.963785
h_female_0_15	1.565988	.5167931	1.36	0.174	.8201297	2.990158
h_hist_mob_sq	1.00374	.0020591	1.82	0.069	.9997123	1.007784
h_have_urb_house	2.040519	.7537116	1.93	0.054	.9893053	4.20873
h_like_com	.3504083	.133837	-2.75	0.006	.1657531	.7407765
h_last_12_month	1.921698	1.084302	1.16	0.247	.6359193	5.807222
h_better_off	.3472241	.1907679	-1.93	0.054	.1182912	1.019218
h_last_5yrs	.5155564	.2254805	-1.51	0.130	.2187762	1.214933
h_buy_farinha	1.101865	.35341	0.30	0.762	.587646	2.066051
h_no_state_income	2.039496	.6792535	2.14	0.032	1.06177	3.917556
_cons	1.334185	1.084915	0.35	0.723	.271049	6.567265

Table 7.2. Logistic regression run using ten dummy variables to test the household willingness (h_exodus) to move from the surveyed community to another place (n=210).

[43] *Logistic regression is a standard statistical tool to evaluate factors affecting a binary choice. For a detailed explanation on the Logit model, see Cameron and Trivedi (2005:Section 14.3).*

The dependent variable, 'willingness to migrate' (h_exodus) is a binary choice variable that equals 1 if a household is willing to move from the surveyed community to another place. Odds ratio, a term widely used in biostatistics and economics, is the ratio of the probability that the dependent variable equals 1 (the event happens) over the probability that the dependent variable equals 0. The 'Odds Ratio' column in the table reports the change in odds ratios if a specific independent variable increases by 1 unit. For example, the odds ratio coefficient on h_have_urb_house (households that also have urban houses) is 2.04. This suggests that the relative probability for a household willing to move away is higher by 104% (= 2.04 – 1) if a household have an urban house, which agrees with the intuitive expectation. Four of the estimated odds ratios are statistically significant or almost statistically significant at the 5% confidence level[44] and these estimates confirm our intuition. In addition to the urban house dummy effect described above, the relative probability of moving is 65% (= – (1 – 0.35)) lower for households who like their communities (h_like_com=1) or for households that were "better off" at the time of the interview compared to five years earlier (h_better_off=1). The variable of interest here is h_no_state_income, which equals 1 if a household has no State-funded income. The estimates suggests that for those households who have no State-funded income, the relative probability of moving is elevated by 104% (= 2.04 – 1), which confirms the hypothesis that securing access to the State-funded sources of income is one of the main reasons for families to head to the nearest town. To check the robustness of the results, the logistic regression was run using several different sets of independent variables. The effect of having no State-funded income is always positive and statistically significant at the 5% confidence level (see Appendix B).

Divided, Not Conquered

Eduardo Galvão mentions the four categories of contact between the Brazilian indigenous peoples and the national society described by Darcy Ribeiro — isolation, intermittent contact, permanent contact, and full integration — and adds one of his own: total assimilation. Galvão explains that this new category is "distinct from integration, in that tribal identity and culture are completely lost," remarking that "Where this occurs, the [tribal] Indian is simply transformed into a *caboclo*" (*ribeirinho*)(Ribeiro 1967 *apud* Galvão 1979:25).

Contrary to Galvão's predictions, however, this study shows that the Middle and Lower Rio Negro *ribeirinhos* were never fully assimilated. Indeed, they have

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[44] This is demonstrated in the 'P-Value' column. The coefficient is statistically significant at the 5% confidence level if the p-value is smaller or equal to 0.05.

adopted the dominant society's tools, languages, religions, settlement patterns, and socio-economic system. Apart from all the forced displacements and acculturation, they had to serve slavecratic patrons, and even fought a civil war that only brought them death and misery, with no tangible benefits. They gave their blood to extract the latex that fed the rubber hunger of the industrial revolution. They also have actively suppressed aspects and expressions of their indigeneity to protect their children when they were neglected by the Brazilian State and had to make a living in rural communities dominated by riverbank colonels and other patrons who kept them under a tight grip. They also had to cope with several bust periods, when the patrons would leave them behind to their own fate. However, the *ribeirinhos* managed to endure all these adversities by sticking to their survival strategies. The ethnic transfiguration (Ribeiro 1995) that catalyzed the emergence of the generic Indians is not over, and the *ribeirinho* ethnogenesis keeps going strong, manifesting itself in every new adaptation and different procedure created by these Amazonian champions of socio-cultural resilience and physical resistance.

The foundation of *ribeirinho* historical survival strategies has been the ability to navigate between their sovereign will and the many necessary roles of servitude. After the missionary and the Directorate periods the proto-*ribeirinhos* had lost their tribal socio-political organization and adopted the European settlement patterns, adapting it to their changing livelihoods. Galvão describes this passage as a "substitution of the chiefly functions by the growing independence and importance of the household unit, which individually contracts for labor assignments" (Galvão 1979:37). His interpretation suggests a lose-lose situation, where the tribal organization is lost and nothing is gained in the process. However, it is precisely the emergence of the household as the unit of socio-political organization that allowed the *ribeirinhos* to adapt to the requirements of the patrons without ever threatening their power or authority. The *ribeirinho* collective has always been the household or the extended family at the most, but never the settlement, and even less so any kind of ethnic identity. The first *ribeirinho povoados* (villages) were basically an aggregate of independent households sharing the same geographic location and competing among themselves for the favors of the patrons (Almeida 1997). This intra-competitive nature of the *povoados*, *vilas* and present-day communities may seem the utmost example of dependence and servitude, where households gave up working more cooperatively as they would still be doing if the tribal socio-political organization had been maintained. The unexpected bonus that was created with this shift provided the *ribeirinhos* with an advantage over the surviving tribal peoples: By lacking a group identity and central representation, the *ribeirinhos* were considered as *índios mansos* (tamed Indians), not identified as potential aboriginal enemies that would have to be broken apart and civilized (Anderson 1999,

Guzmán 2008). Since the arrival of the Portuguese, Spanish and other colonists and mercenaries from overseas, the Amazonian conquest wars, the slave raids, the epidemics, the forced displacements, and everything else had followed the colonization mantra: divide and conquer (Hemming 1995)!

The *ribeirinhos,* however, emerged from this devastating process as the generic Indians whose main goal was to guarantee the survival of their families. They came into existence already lacking the sense of belonging to a cohesive group or some other form of socio-cultural fellowship found in tribal peoples and ethnic groups in general. Thus, the very dividing strategy that brought ruin and extinction to many tribal peoples generated the *ribeirinhos* and provided them with a cultural adaptation to it. On the other hand, the *ribeirinhos* had been able to maintain a good level of ecological and geographical knowledge necessary to survive and thrive in Amazonia. They had developed a somewhat simplified generic indigenous livelihood based on the production of *farinha*, hunting and fishing and extracting forest commodities for their patrons (Parker 1985b, Nugent 1993, Ribeiro 1995). The Luso-Brazilian colonists and officials depended on the emerging *ribeirinhos* for their own physical and economical survival (Anderson 1985, Wright 2005).

By retaining the same independent household based socio-political organization throughout the centuries, the *ribeirinhos* used this otherwise-weakening characteristic to their advantage. They remained divided socio-politically, yet united by sharing common livelihoods and survival strategies to the point of being considered as a quasi-ethic group (Chibnik 1991). The *ribeirinhos* also have been depicted as the generic indians, a traditional people, the Amazonian historical peasantry, or the main regional labor force (Ribeiro 1995, Barretto Filho 2006, Nugent 1993, Hecht and Cockburn 2010). They survived by accepting subservient roles in the dominant socio-economic system, and remained available to engage in any labor without challenging the power and authority of their many patrons (Santos-Granero 2011), and they did it by developing and keeping mainly vertical relations with their patrons (Maybury-Lewis 1968). What could have been interpreted solely as a life of servitude seems also to have served as a disguise mantle that covered the sovereign essence of *ribeirinho* key decisions that granted them survival throughout the darkest periods of recent Amazonian history. In spite of the price they had to pay, the *ribeirinhos* never were conquered or wiped out like hundreds of other indigenous groups in Amazonia were (Lima and Pozzobon 2005, Lima 2009, Nugent 1993, Ribeiro 1995, Roosevelt 2005). Finally, the *ribeirinho* ethnogenesis and history provide a fine example that not all the tribal heritage was lost, since even severe "acculturation does not always end in total assimilation" (Galvão1979:38).

A Long-range View

> *One of the common points to all is the need to cut to the historical root of what we have called the ideological invisibility of the caboclos [aka ribeirinhos]... If the generalized figure of the Indian blends easily enough into this natural world, even if through naïve representations based upon a supposed pre-disposition to conservation, the same cannot be said of those who make up the historical Amazonian peasantry: the caboclos... [whose] 'opportunistic' nature of ...social relations and economic practices... mix 'purely' capitalist roles, especially in their integration with the global market, with recognizably pre-modern (or, perhaps non-modern would be more accurate) quotidian modes of social organization and subsistence* (Murrieta *et al.* 2009:335-336).

As seen earlier, the intense *ribeirinho* mobility drivers and mechanisms cannot be fully understood and explained in a simplistic way, nor be reduced to purely deterministic reasoning and interpretation (Alexiades 2013, Murrieta *et al.* 2009). *Ribeirinhos* have developed a general pattern of looking everywhere for labor and income-generating opportunities, which may involve having multi-sited households (Pinedo-Vasquez and Padoch 2013) and transiting between the rural, urban and peri-urban spheres (Eloy and Lasmar 2011, Emperaire and Eloy 2008, Stoian 2005).

Just like the *ribeirinhos* managed to transform their household-based socio-organization into a successful adaptation to the dominant socio-economic system, their high mobility may itself constitute an important resource (Casimir 1992 *apud* Alexiades 2013:17) for taking advantage of potential opportunities that are available on a regional scale (Moran 1993).

Since *ribeirinho* survival strategies are traditional, they tend to reproduce themselves throughout generations, in a quite stable way (Barreto Filho 2006, Weinstein 1985). However, even if the guidelines remained virtually unchanged, the subsistence activities still needed to be constantly adapted to the ever-changing political, socioeconomic and environmental conditions in order to continue helping the *ribeirinhos* to make a living and prosper (Harris 2006).

After enduring atrocious adversities that included genocide, acculturation, forced displacement, and servitude to a variety of patrons, the *ribeirinhos* nonetheless maintained their sovereignty over the design and adaption of their survival strategies, the central part of which coalesced around the ever-morphing patron-client relationships. Protected by the disguise of being *índios mansos* (tamed

Indians) who did not belong to any organized ethnic group, and providing the much-needed labor force that fueled the entire Amazonian colonial enterprise, the *ribeirinhos* became experts at reaping whatever they could from different patrons throughout different development phases and socio-economic cycles. Trying as much as possible to actively choose which patron to follow, and when and how to disband from one and shift to another patron, labor camp or forest commodity.

Therefore, in the absence of the State, "following a patron" became one of the main guidelines of *ribeirinho* survival strategies. Ideally, following a *patrão forte* who would surely demand a lot of hard work, but could also present potential opportunities for the client. However, what kind of benefit could a *ribeirinho* typically get from a *patrão forte*? At the most, some sort of social safety net, translated as emergency foodstuffs to feed their families in case crops had failed, transportation and medicines in times of illness, and maybe even a social network that would intermingle with the extended family members — for instance, where the patron would become the godfather of the client's children (Maybury-Lewis 1968). In this case, working for a patron would almost be like working for a rich and distant second-degree relative. Apart from providing steady labor, the client should also be clearly devoted to his patron. Long-term loyalty was almost as prized as the consistency and quality of labor itself. Loyalty was also key to entitle the client and his family to receive any special attention or favor from the patron (Leonardi 1999, Menezes 2014).

Obviously, the *ribeirinhos* did not invent the rules of debt-peonage systems, but they learned very fast and well how to obey and remain aligned with them. The *ribeirinho* ethnogenesis coevolved with the development and adaptations of patron-client relationships along the past four centuries or so, reaching its climactic hardship during the rubber booms (Weinstein 1985) and gradually relaxing thereafter when new adaptations and institutional versions of the patron emerged, as mentioned earlier in this Chapter. This long journey started when the *ribeirinho* tribal ancestors were 'convinced' by missionaries to be relocated in their missions, where they were acculturated for many decades (Ramos 1998), forced to speak *Nheengatu*, produce a surplus of foodstuffs and forest commodities, and ultimately turned into generic indians (Ribeiro 1995). During the Directorate period, the generic and tribal indian women were induced to start families with European colonists and move with them to colonial settlements, while indigenous men, tribal and generic, followed, attracted by tools and other industrialized goods, just to find themselves forced to labor for their new masters (Anderson 1999, Farage 1991, Guzmán 2006). When the Cabanagem Revolt started, the main rebel force was composed of captive and free slaves, indigenous and African, following orders from their rich commanders, all of them patrons — farmers and

traders — who wanted to secure better conditions to commercialize their products (Anderson 1985, Harris 2010), Hecht and Cockburn 2010). Before and after this bloody civil war, *ribeirinho* clients followed their patrons during forest commodities' boom and bust periods, heading either to rural or urban areas, depending on the humor of their bosses (Leonardi 1999, Parker 1985a, Weinstein 1985). In the second half of the 20th century, dozens of thousands of *ribeirinhos* migrated *en masse* to gold and diamond mining fields, sometimes across the entire Amazon basin and international borders (Gordon 1995, Hemming 2003). In the past decades, thousands more travelled long distances to enlist in government-driven development projects like hydro dams and extractive industries (e.g., mining, oil and gas in Brazil, Peru and Ecuador) (Laurance *et al.* 2001, MacMillam 1995, Pinedo-Vasquez and Padoch 2013). Finally, in the last 15 years, many Brazilian *ribeirinhos* have been applying for and receiving State-funded socio-economic benefits and subsidies, and have either decided to try to make a living in urban areas or returned to their rural communities.

The *ribeirinho* historical strategy of following the patron — individual or institutional — has warranted them a life of hard labor and very few benefits, yet they managed to survive throughout the centuries. One could interpret this historical record as an immutable tendency for playing roles of servitude in the Amazonian socioeconomic panorama. However, the *ribeirinhos* always have been scanning the horizon for opportunities to better themselves (Harris 2006). During hard times they managed to endure the most grueling labors and conditions without much complaint. Given better conditions, however, the *ribeirinhos* are always willing to make the best use of natural, human and financial resources to enjoying life with their families and friends. It seems even more preferable if this better life can happen in the rural communities that this study has shown to be their prime option for living most vibrantly, raising children and embracing leisure time hunting, fishing or playing soccer.

Even after a scorching long day of hard work, when the light starts to dim and the temperature drops slightly, men, women and teenagers gather on the soccer field with colorful jerseys of their preferred national teams. Suddenly, someone kicks the ball up high and the game starts. Everybody runs as if there would be no tomorrow — shouting, teasing and laughing at each other as to celebrate the end of another day of life in a *ribeirinho* community. The light goes out while bats and nightjars start flying over the field. The game continues, though. The ball keeps rolling and people are having fun in the dark, enjoying that precious moment of infinite freedom on some isolated riverbank of the Rio Negro basin. The indigenous free spirit continues to beat strong in the *ribeirinho* hearts.

Next: A Functional State or Another Patron?

Presenting a Baseline

This study presents the first regional scale *ribeirinho* household survey for the Middle and Low Rio Negro Basin. It encompassed many rural communities located in the Rio Negro main channel and ten of its tributaries from both margins. Some communities are very isolated, others just a few hours' speedboat ride to the nearest town. Places changed a lot, but livelihoods were in essence very similar in all of them. The survey interviewed heads of families of 210 households and depicts a snapshot of present day *ribeirinhos* where their communities are multiethnic but everyone speaks Portuguese, while some still speak indigenous languages. *Ribeirinhos* are very religious, but the regional syncretism includes influences from African and aboriginal origins. They get married and divorced by simply deciding to live together or moving away from each other. Households have about five people on average, and the most common life occupations remain quite traditional (agriculture, forest commodities extractivism, household work, fishing, etc.). In spite of that, monthly wage labor has increased steadily in the past years, giving rise to a rural middle class. Only about half of the respondents share at least one similar occupation with their parents, suggesting that very important *ribeirinho* livelihood adaptations can happen in the timeframe of just one generation.

Households also seem to be increasing their levels of dependency on the external market, fuels, electricity and industrialized goods. Many *ribeirinhos* have adopted modern working tools (e.g., chainsaws, motorized canoes, and electric generators). Butane gas was reported as the main energy source for cooking, whereas a generation ago it would have been charcoal and firewood. Likewise, most *ribeirinho* houses now are covered with asbestos cement sheets, while their parents used to have palm leaf roofs. TV sets are present in the majority of households, and watching Hollywood movies and Brazilian soap operas has become part of the daily routine.

Although almost all respondents have worked in their family gardens at least for a moment in their lives, subsistence and commercial agriculture production seem to be far from their heydays, and continue to decline. Only six out of ten households have functional gardens, yet more than half of the families reported the need to buy *farinha* (roasted manioc flour — the main staple) for their own consumption. Therefore, food security seems to be decreasing and even has been lost for many

households. Hunting and fishing also have suffered from unequal competition with invading professional hunters and *geleiro* fishers who do not respect the boundaries of traditional subsistence grounds of *ribeirinho* communities.

The vast majority of rural communities are virtually abandoned by the State, and many public buildings like community centers, rural schools and healthcare huts have been collapsing or have been dismantled to avoid further accidents. In general, access to basic public services (e.g., education, healthcare, piped water, electricity, radio or telephone communication, and transportation) in rural communities is very limited to critical. Yet, most respondents clearly prefer to live in their rural houses, enjoying their communities' peace, abundance, silence and natural landscapes, as opposed as living in agitated, violent, polluted and pricy regional towns and cities.

Salaries provide more than half of the surveyed *ribeirinhos*' income, in a clear sign that the emerging waged rural middle class is changing the traditional way families used to make a living. The other main sources of income are pensions, patron credits, *bolsa família* poverty alleviation grants and temporary jobs and services. The grouped State-funded sources of income accounts for 1/4 of the households' total income. Furthermore, having access to these grants and benefits has been identified by this study as the main driver for the rural-to-urban *ribeirinho* migration to towns and cities.

Patron-client relationships have unfolded through many phases — yet maintaining the same guiding principle based on debt-slavery practices — during the past four centuries of *ribeirinho* history. This long-term process was key to *ribeirinho* ethnogenesis and generated many patterns and cultural influences that are expressed today both in rural and urban social settings. Some of these cultural expressions are identified and explained, helping to provide a grounded context to better understand the present-day socio-economic and environmental realities of the Rio Negro Basin.

The historical *ribeirinho* survival strategies have been derived from the high mobility and low territoriality associated with generalist indigenous livelihoods always looking for opportunities on a regional scale, having household independence without a true sense of inter-household community, and cooperative work existing but restricted to the household and extended family levels. The main guideline has been associating and following different kinds of patrons, always expecting to benefit from this vertical relationship in a hostile socio-economic environment where the State was always absent or supporting the patrons actions and policies. The emergence of a new relationship with a more 'benevolent'

institutional yet still absent patron, represented by access to State-funded income grants and benefits, seems to be the first real change in *ribeirinho* patron-client relationships ever. The observed behavior seems to highlight the *ribeirinho* sovereign option for returning to their rural homes after gaining access to these financial benefits. It suggests that following different patrons throughout the centuries might have been a decision aimed at utter survival, but never an orientation they would have taken if they had had freedom of choice.

Future Perspectives

The *ribeirinhos* may continue to shift towards more clearly sovereign survival strategies, provided the State substitutes for the niche that has been historically occupied by a myriad of patrons (e.g., missionaries to oligarchs and even peer or kin patrons). However, this niche should not be filled by a paternalistic State that only makes itself visible and appreciated by providing conditional cash transfer programs as well as other benefits and subsidies. Ideally, one day the State will provide access to quality public services of education, healthcare, transportation, access to credit and markets, rural extension, and many others that are nothing more than the constitutional rights to which *ribeirinhos* and any other Brazilian should have full access.

The ongoing partnership projects between socio-environmental and rural development Non-Governmental Organizations (NGO) and assorted *ribeirinho* communities located in the Lower Rio Negro seem to corroborate the hypothesis that once alleviated from debt-slavery and other peonage relations to any patron, and without risking the near future of their families, *ribeirinho* households could organize themselves into community-based cooperative production projects where the scale of cooperation could be expanded from the household to the settlement level. It should be noted that some of these partner NGOs are playing a para-governmental role, meaning that by providing the necessary support for the *ribeirinhos* to engage in independent modes of production and socio-economic organization, the NGOs are mimicking the main role a functional State should be able to play. In these ongoing experimental projects, the immense *ribeirinho* creativity and labor capacity have finally found the necessary conditions to be channeled toward their own benefit as opposed as the infinite greed of a patron. In short, provided the necessary conditions (i.e. *ribeirinho* labor and socio-environmental expertise, and forest products) and basic State support (i.e. access to markets and credit, and rural extension associated with inter-community meetings), the construction of another world for the next generations of *ribeirinhos* is indeed a real possibility.

As for today, however, the Middle and Lower Rio Negro *ribeirinhos* are moving to urban areas mainly to secure access to State-funded sources of income. Some may end up staying in the urban sphere for good, although the majority of them still seem to prefer enjoying a better life, partially supported by the family grants and other benefits, in their rural communities. Rural life keeps going at a slow pace, even more so now in these years preceding another bust period that already is announcing itself on the horizon. Hopefully, the *ribeirinhos* will be able to adapt their lifestyle to a more independent mode before the next boom of some forest commodity happens, or the arrival of another *patrão forte* looking for hard-working clients.

In other words, the future of the *ribeirinhos*, all other indigenous peoples, and Amazonia depends upon a clear definition of the policies of the Brazilian State addressing its developmental, socio-environmental and economic plans and priorities for the region and its inhabitants. The present-day policies clearly are aligned with a model of high socio-environmental impact with low long-term development gains based on extractive industries such as mining, oil and gas, and heavy deforestation for timber, cattle ranching and soy monoculture (Laurance *et al.* 2001). In order to provide energy and access to markets for these production facilities, new hydro dams have been built and many others are planned, as well as new roads that will require more deforestation and costly maintenance during the rainy seasons.

Why would the Brazilian government continue to show a clear proclivity towards, for instance, building a network of roads in a region where hundreds of rivers have served as the natural highways since time immemorial? By continuing to implement regional infrastructure projects from a fabricated perspective of a need to work against nature, seen as an obstacle to development – and, by extension, its indigenous inhabitants — the present-day State keeps alive a dangerously similar mindset to that of the heydays of the devastating 1970s Amazonian development programs launched by the military junta (Baines 1990, Davis 1984, Ramos 1998). Apart from an obvious misuse of the region's environmental and socioeconomic potential, it continues to allow the Brazilian government to allocate much more financial resources claiming a quixotic plan to tame an 'aggressive' nature at the cost of taxpayers' funding and indigenous peoples' lives (Clements 1999). One of the results to such State priorities and policies is that the immense *ribeirinho* potential to be the main driving force of a new cycle of Amazonian sustainable development based on more socially just and environmentally sound practices remains equally underestimated and misused.

This political and economic scenario suggests that the development frontier may soon arrive to the Rio Negro Basin, which may be targeted with the implementation of hydro damns and mining industries. Many mining concessions were already negotiated and paid for in the 1970s and 1980s, and could shift from dormant to installation and production phases in a short time frame (ISA 2009). If extractive industries and the like move into the Rio Negro Basin, they would be seen by the locals as the return of the *patrões fortes*, and another boom period would soon get started. This could even offer higher waged jobs for those who get hired, but would also bring a myriad of problems as the side effects that typically accompany this type of development approach (Brum 2014, Carr in Press, Fearnside 2008).

On the other hand, if the Brazilian government finally defines grounded policies to support the design and implementation of 'conservation planning and sustainable development' projects, as mentioned in the beginning of this chapter, the *ribeirinhos* would have the chance to see their historical dreams come true. Such decisions would allow them to contribute to the making of a better future for their families, communities and the region as a whole, putting to good use their immense traditional ecological and geographical knowledge, their life experience, and their immense capacity to work tirelessly toward hard-to-reach goals. Past experience has shown that — as has happened all over the world — Amazonian high-impact development projects tend to privatize the benefits while sharing the burdens with the local society (Colchester 2000, Fearnside 1989, Fearnside 2008, Finer *et al.* 2008). Meanwhile, the ongoing NGO-supported community-based projects established in the Lower Rio Negro may be interpreted as very promising pilot projects that could help show the way to another socioeconomic paradigm for Amazonia and its indigenous and traditional peoples (IPE 2013, ISA 2008, FAS 2014, FVA 2011) maybe even gradually substituting the patron-client vertical relations for *ribeirinho* to *ribeirinho* horizontal cooperation and support (Holt-Gimenéz 2006, Pontual and Boubli 2005).

While savoring some ripe cashew fruits from the orchard of a sarcastic *ribeirinho* key informant who, among many other things, had been a truck driver and travelled throughout Brazil, he shared with me his personal view for the future of the Rio Negro: "The government has been so hungry to get more and more things for itself that it became blind, and now it is roasting the chicken that laid the golden eggs!"[45].

[45] Portuguese original: "O governo tá sempre com tanta fome de pegar tudo pra ele que deu até cegueira nele, e agora tá fazendo um assado com a galinha dos ovos de ouro!"

Figure 7.3. *Curumins* keep their daily training to inherit and play their historical role as the main labor force at the service of Amazonian rural development (Photo © F.B. Pontual).

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APPENDIX A: Additional Maps

The household survey was conducted with *ribeirinho* families from 40 different rural communities. For mapping purposes the rural communities were divided in three sub-regions: 1) Middle Rio Negro, 2) Lower Rio Branco, and 3) Lower Rio Negro.

Figure A.1. 'Middle Rio Negro surveyed *ribeirinho* rural communities (Campina do Rio Preto, Tapera, Canafé, Floresta - AM, Cumaru, São Luís, Ponta da Terra, Bacuquara, Elesbão, Romão, Samaúma, Bacabal, Dom Pedro II, and Cauburis).

Figure A.2. 'Lower Rio Branco' surveyed *ribeirinho* rural communities (Carvoeiro, Panacarica, Cachoeirinha, Canauini, Lago Grande, Terra Preta, Remanso, Floresta - RR, Itaqüera, Palestina Nova Vista, Tananaú, and Moura).

Figure A.3. 'Lower Rio Negro surveyed *ribeirinho* rural communities (Bacaba, Três Unidos, Nova Esperança, Nova Canaã, São Sebastião, Tumbira, Tiririca, Saracá, Nossa Senhora do Perpétuo Socorro, and São Tomé).

APPENDIX B: Additional Logistic Regression Results

To check the robustness of the logistic regression results presented in Chapter 7, the regression was run using several different sets of independent variables (see Figures B.1, B.2, and B.3). The effect of having no State-funded income (h_no_state_income) is always positive and statistically significant at the 5% confidence level. These additional results suggest that the relative probability (Odds Ratio) for a household willing to move from the place of the interview is higher by 90% (= 1.90 -1) or more.

Logistic regression — Number of obs = 210; LR chi2(9) = 29.17; Prob > chi2 = 0.0006; Log likelihood = -127.87633; Pseudo R2 = 0.1024

h_exodus	Odds Ratio	Std. Err.	z	P>|z|	[95% Conf.	Interval]
h_male_0_15	1.025386	.3396156	0.08	0.940	.535751	1.96251
h_female_0_15	1.569403	.5176379	1.37	0.172	.8222081	2.995624
h_hist_mob_sq	1.003758	.0020539	1.83	0.067	.9997405	1.007792
h_have_urb_house	2.068345	.7580234	1.98	0.047	1.008481	4.242072
h_like_com	.3454146	.1309627	-2.80	0.005	.1642899	.726224
h_last_12_month	1.907185	1.073206	1.15	0.251	.6330046	5.746174
h_better_off	.3438549	.1886228	-1.95	0.052	.1173399	1.007638
h_last_5yrs	.5201852	.2269498	-1.50	0.134	.2212026	1.22328
h_no_state_income	2.03471	.6770749	2.13	0.033	1.059875	3.906163
_cons	1.442964	1.111438	0.48	0.634	.3188751	6.52966

Table B.1. Odds ratio coefficient for h_no_state_income (households with no State-funded income) is 2.03. This suggests that the relative probability for a household willing to move away is higher by 103% (= 2.03 -1) when this independent variable equals to 1 (the event happens).

Logistic regression — Number of obs = 210; LR chi2(10) = 27.08; Prob > chi2 = 0.0025; Log likelihood = -128.9184; Pseudo R2 = 0.0951

h_exodus	Odds Ratio	Std. Err.	z	P>|z|	[95% Conf.	Interval]
h_male_0_15	1.028955	.3439739	0.09	0.932	.5343727	1.981291
h_female_0_15	1.493729	.4859987	1.23	0.217	.7894515	2.8263
h_hist_mob_sq	1.003756	.0020764	1.81	0.070	.999695	1.007834
h_have_urb_house	1.94314	.7100545	1.82	0.069	.9494268	3.976919
h_like_com	.3544692	.1406518	-2.61	0.009	.1628642	.7714921
h_confidence	1.139942	.436779	0.34	0.732	.5379439	2.415618
h_last_12_month	1.776359	.989329	1.03	0.302	.5962948	5.291766
h_better_off	.3265307	.1789698	-2.04	0.041	.1115282	.9560117
h_buy_farinha	1.071123	.3406465	0.22	0.829	.5742939	1.997767
h_no_state_income	1.944096	.642198	2.01	0.044	1.017509	3.714473
_cons	.8390379	.6758146	-0.22	0.828	.1730492	4.068118

Table B.2. Odds ratio coefficient for h_no_state_income (households with no State-funded income) is 1.94. This suggests that the relative probability for a household willing to move away is higher by 94% (= 1.94 -1) when this independent variable equals to 1 (the event happens).

Logistic regression — Number of obs = 210; LR chi2(8) = 23.50; Prob > chi2 = 0.0028; Log likelihood = -130.71007; Pseudo R2 = 0.0825

h_exodus	Odds Ratio	Std. Err.	z	P>|z|	[95% Conf.	Interval]
h_male_0_15	.9907683	.3272218	-0.03	0.978	.518615	1.892775
h_female_0_15	1.459781	.4699148	1.18	0.240	.7767463	2.743443
h_have_urb_house	2.043128	.7309029	2.00	0.046	1.01342	4.119098
h_like_com	.3442822	.1336818	-2.75	0.006	.1608423	.7369344
h_confidence	1.120574	.4241718	0.30	0.764	.533623	2.353134
h_last_12_month	1.792116	.9906184	1.06	0.291	.6065297	5.295174
h_better_off	.3275448	.1772556	-2.06	0.039	.1134046	.9460427
h_no_state_income	1.908308	.6225677	1.98	0.048	1.00682	3.616971
_cons	1.119245	.8243756	0.15	0.878	.2642264	4.741048

Table B.3. Odds ratio coefficient for h_no_state_income (households with no State-funded income) is 1.90. This suggests that the relative probability for a household willing to move away is higher by 90% (= 1.90 -1) when this independent variable equals to 1 (the event happens).

APPENDIX C: Household Survey Questionnaire

The final household survey questionnaire was based on the baseline questionnaire used in Poverty and Sustainable Development Impacts of REDD (POVSUS-REDD) projects in many tropical countries around the world (ENGOV 2013) adapted by myself to the Amazonian conditions. I also added many new sections to address the specific questions relevant to this study.

The household questionnaire presented here had its tables and overall margins altered to comply of this dissertation formatting requirements.

POVSUS-REDD QUESTIONNAIRE FOR HOUSEHOLD SURVEY
(Adapted for FBP PhD *Ribeirinhos* Research)

01. Country: BRAZIL	05. Code for respondent:	
02. Village:	06a. Rural address of respondent:	
03. Pilot/study area:	06b. Urban address:	
	07. Name of interviewer: Pontual, F. B.	
04. Questionnaire number:	Date:	
	Starting time:	Finishing time:

SECTION A: Household structure and livelihood assessment

I. HOUSEHOLD CHARACTERISTICS AND COMPOSITION

		A1[1)]	A2[2)]	A3	A4a[3)]	A4b[4)]	A4c[5)]	A5	*A6*
ID	Hierarchy	Gen.	Civil status	Age	Education	Main occupations	Outros cargos, etc.	Years here	Place of birth
1	Head								
2	Spouse								

1) Codes: 1=male; 2=female
2) Codes: 1=single; 2=married; 3=divorced; 4=separated; 5=widowed; 6=amigado; 7=outro:
3) Codes: 1=no formal education; 2=primary; 3=secondary; 4=higher education; outro:
4) Codes: 1=roça; 2= extrativismo*; 3=caça subs.; 4=caça com.; 5=pesca subs.*; *6=geleiro; 7=outro:*
5) Codes: 1=gerente de roça; 2=patrãozinho; 3=Pres. com.;4=Vice; 5=Ag. saúde; 6=rezador; 7=liderança indígena; 8=outros:

A7.1. Ethnicity, languages and religion

	1.Ethnicity: [1)]	*2.Languages:* [2)]	*3.Religion:* [3)]
Head			
Spouse			

1) Code: 1= Baré; 2= Baniwa; 3=Tukano; 4=Tariano; 5= Desana: 6= Ribeirinho; 7=Quilombola; 8=outros:

2) Code: 1=Nheengatu; 2=Tukano; 3= Baniwa; 4=outras

3) Code: 1= Católico; 2=Evangélico; 3=Sem religião; 4=outros:

A7.2. Number of permanent household members in each age group:

	Sex	Age group				
		0 to 15	16 to 21	22 to 45	46 to 60	Above 60
1	Male					
2	Female					

A8. Family history (Head/Spouse):

1.Father's name:	*2.DOB:*
3.POB:	*4.Occupation:* [1)]
5.Ethnicity: [2)]	*6.Languages:* [3)]
7.Mother's name:	*8.DOB*
9.POB:	*10.Occupation:* [1)]
11.Ethnicity: [2)]	*12.Languages:* [3)]
13.Patrons (names/occupation [1)]*):*	

1) Codes: 1=roça; 2= extrativismo*; 3=caça com.; 4=pesca com.; 5=outros:*

2) Code: 1= Baré; 2= Baniwa; 3=Tukano; 4=Tariano; 5= Desana; 6= Ribeirinho; 7=Quilombola; 9=outros:

3) Codes: 1= Nheengatu; 2= Tukano; 3= Baniwa, 4=Castelhano; 5=outras:

A9. History of family mobility (intercommunity and rural-urban-rural):

1.Drivers for moving here: [1)]	*2.Previous place:*
3.Other places lived:	
6.Drivers for future moving: [1)]	*7.Next place:*
8.Historical drivers per importance(3 higher to lower): [1)]	

1) *Codes: 1=seguir a família; 2=tentar a sorte; 3=educação; 4=roça; 5=saúde; 6=ficar mais perto da cidade; 7=melhorar qual. de vida; 8=emprego; 9=extrativismo; 10=ganhar terreno; 11= seguir patrão; 12 = outros:*

II. LAND

A10. Please indicate the size of farmland (in hectares) that currently has been in **use** (last 12 months). If type of ownership, rental status and land conversion is the same for all land, please treat as one 'parcel'. If there are different tenure arrangements for different part of the farmland, please specify accordingly.

	Area used (ha)	Ownership (tenure)[1)]	Rented[2)]	Land conversion type[3)]
'Parcel 1'				
'Parcel 2'				
'Parcel 3'				
'Parcel 4'				
Total				

1) *Codes: 1= private; 2= state (ordinary); 3= state (JFM); 4= state (CBFM); 5= state (individual); 6=common property;7= open access*
2) *Codes:1=not rented; 2= rented from state; 3=rented from non-state, e.g. community or individuals,*
3) *Codes: 1= permanent agriculture land (cleared more than 10 years ago); 2= land cleared in shifting cultivation areas; 3= cleared forest last 10 years to become permanent agricultural land; 4= other.*

III. ASSETS AND SAVINGS

Habitation		
A11	Housing contract *Code: 1=owner; 2=tenant; 3=free; 4=not owner; but exclusive use rights*	
A12	Material used in construction of walls of the main house? *Code: 1= cement bricks 2= mud bricks; 3= wood; 4=sticks with mud plastering ; 5=mat/leaves; 6=other:*	
A13	Material used for roofing the main house *Code: 1= tiles; 2=iron sheet;3=thatch/mat/leaves; 4= other:*	
A14	Number of sleeping rooms?	
A15	What is the main source of potable water used by the household *Code: 1=personal tap; 2=public tap; 3=improved well/spring; 4=traditional well* *5=surface water (river/lake/pond, etc.); 6= other:*	

A16	What is the most important source(s) of energy for cooking?[1)] Please rank your answer in the order of importance[2)]	Rank 1[2)]	Rank 2	Rank 3

1) *Code: 1=electricity; 2=gas; 3=kerosene; 4=charcoal; 5=bought fuelwood; 6=fuelwood collected from area that will become REDD pilot forest; 7=fuelwood collected from other forested landscapes; 8= other:*
2) *Please rank (1, 2,...) if more than one type of energy is used.*

A17. Please indicate the number of implements and other large household items that are owned or rented by the household.

No	Assets	*Rural*	*Urban*	Owned[2)]	Rented[3)]
1	House(s) (for living in)				
2	TV				
3	Radio				
4	Telephone ***Celular***				
5	Bicycle				
6	Motorbike				
7	Car, pickup, truck etc				
8a	Boat ***Canoa mad/alum.***				
8b	***Barco motor centro***				
8c	***M. popa/rabeta***				
9	Generator ***Motor de luz***				
10	Ri/wh/cor ***Casa de farinha***				
11	Shotgun ***Espingarda***				
12	Gas stove ***Fogão à gás***				
12	Computer				
13	DVD Player				
		Rural[1)]	**Urban**	**Owned[2)]**	**Rented[3)]**
	Agricultural implements and draft animals				
14	Hoes ***Enxada***				
15	Cutlass ***Foice***				
16	Pangas ***Terçado***				
17	Axes ***Machado***				
18	Buffalo ***Boi***				
19	Horse ***Cavalo***				
20	Tractor ***Trator/girico***				
21	Chainsaw ***Moto-serra***				
22	Grinder ***Ralador mandioca***				

1) Measure in number. If the HH does not have access to the item, write 0.
2) Code: 1=owned; 2= not owned
3) Code: 1=rented; 2=not rented

IV. SOCIAL ASSETS

A18. Do you consider your village/community a good place to live?
Code: 1=Sim ; 2=Mais ou menos; 3=Não; 4=Não sei dizer ☐

A19. What is your level of trust in people in your village/community?

1 Very low	2 Low	3 Fair	4 High	5 Very high

A20. How do you rate your household's relationship with the following?

No		1 Very bad	2 Bad	3 Fair	4 Good	5 Very good
1	Neighbours					
2	People from other communities					
3	NGO workers					
4	Village council					
5	Local Gov. Off. (Saude, Edu, Pref.)					
6	***Geleiros invasores***					
7	***Caçadores profissionais invasores***					

A21. Does any member of your household belong to the following groups?

No	Groups	Member[1)]	Function in the group[2)]
1	Farm groups		
2	***Comitê Com. Local***		
3	Local NGOs		
4	Traditional council		
5	Local political group		
6	Religious group		
7	Credit union		
8.	Savings group		
9.	***Pres./Vice Com.***		
10.	***Agente saúde***		
11.	***Rezador/pajé***		
12.	***Liderança indígena***		
13.	***Pastor/Catequista***		

1) *Code: 1=belong; 2=do not belong: 9=does not exist*
2) *Code: 1= leader; 2=ordinary member*

A22. Has the household's income over the past 12 months been sufficient to cover what you consider to be the needs of your household? ☐
Codes: 1=yes; 2=reasonably; 3=no

A23. How well-off is your household compared to other households in the village/community ☐
Codes: 1=worse-off; 2=about average; 3=better-off

A24. How well-off is your household today compared to the situation 5 years ago? ☐
Codes: 1=less well-off now; 2=about the same; 3=better off now

A25. Has your household faced any major income shortfalls/unexpectedly large expenditures during the past 12 months? ☐
Codes: 1=Yes; 2=No (If 'no', go to Section B)

A25a. If 'yes', please complete the table

No	Serious event	How severe[1)]?	Como resolveu a dif. de perda ou ganho?
1	Falha na safra/roça		
2	Doença ou morte na fam.		
3	Perda de terra/roça		
4	Major livestock loss		
5	Alguém ficou desempreg.		
6	Clima/seca/cheia		
7	Mud. preços estivas etc.		
8	Área de reserva foi criada		

1) Codes: 1=somewhat severe; 2= severe; 3= very severe; 9= not relevant

V. COMMUNITY INFRASTRUCTURE ASSETS

A26. School (Escola):

1.Wall material:[1)]	*2.Roof material:*[2)]	*3.Rooms:*	*4.Electricity:*[3)]	*5.Distance:*[4)]
6.Classroom mat:[5)]	*7.Edu books:*[6)]	*8.Classes/day:*	*9.Days/week:*	*10.Multi-grade:*

11.Maximum degree:	*12. # profs.:*	*13. Prof. edu:*[7)]	*14. # students:*
15. Age/grade gradient:	*16.Evasion 2010/12:*	*17.Merenda:*	*18.Local merenda:*
19. Obs.:			

1) Code: 1= bloco cim. 2= tijolo; 3= tábuas; 4=taipa; 5=palha; 6=other:
2) Code: 1= telhas; 2=zinco; 3=palha; 4=amianto; 5= other:
3) Code: 1= não; 2=ger. diesel; 3= ger. gasolina; 4= painel solar; 5= other:
4) Code: 1= dentro comunidade; 2= fora com. <2h rabeta; 3=fora com. >2h rabeta
5) Code: 1=cadeiras; 2=lousa; 3=lápis; 4=cadernos, 5=mat. artístico; 6=A/V equip.; 7=outro:
6) Code: 1=2012; 2= >2010; 3= < 2010; 4= other (specify):
7) Code: 1= primário; 2=médio; 3= lic. curta; 4= lic. plena; 5= Escola Ativa; 6= outro:

A27. Community center (Casa de Apoio):

1.Mat. paredes:[1)]	*2.Mat. teto:*[2)]	*3.Qtas. salas:*	*4.Eletricidade:*[3)]	*4. Radiofonia:*

5.Contatos fonia:	*6.Equipamentos:*[4)]	*7.Freq. reuniões:*	*8.Representantes:*
9.Processo decisão:	*10. Uso:*[5)]	*11. Obs.:*	

1) *Code: 1= bloco cim. 2= tijolo; 3= tábuas; 4=taipa; 5=palha; 6=outro(especificar):*
2) *Code: 1= telhas; 2=zinco; 3=palha; 4=amianto; 5= outro:*
3) *Code: 1= não; 2=ger. diesel; 3=ger. gasolina; 4=painel solar; 5=outro:*
4) *Code: 1= mesa, 2= bancos/cadeiras;3= TV; 4= Ant. parabólica; 5= som; 6=DVD; 7= outro:*
5) *Code: 1= reuniões; 2=festas; 3=alojamento visit.; 4= culto religioso; 5= outros (especificar):*

A28. Healthcare center (Posto de saúde):

1.Wall material:[1)]	*2.Roof material:*[2)]	*4.Eletricity:*[3)]	*3.Polo saúde:*	*5. Salas:*
6. Atend. prenatal:[4)]	*6.Distance:*[5)]	*7.Ambulancha:*	*8. # health agents:*	
9.Health agent edu:	*5.Microscopista:*	*6. Main occurrences:*	*7.Medications:*	
8. Obs.:				

1) *Code: 1= bloco cim. 2= tijolo; 3= tábuas; 4=taipa; 5=palha; 6=outro(especificar):*
2) *Code: 1= telhas; 2=zinco; 3=palha; 4=amianto; 5= outro:*
3) *Code: 1= gerador diesel; 2=ger. gasolina; 3= painel solar; 4=outro:*
4) *Code 1=nenhum; 2=sem sala própria; 3=com sala; 4=por ag. saúde; 5=enfermeira; 6=outros:*
5) *Code: 1= dentro comunidade; 2= fora com. <2h rabeta; 3=fora com. >2h rabeta*

A29. Other community assets (Outros bens comunitários):

1.Capela/Igreja:[1)]	*2.Cantina/merceria:*[2)]	*3.Sistema cantina:*	*4.Roça/canteiro:*
5.Casa de farinha:[3)]	*6.Flutuante:*	*7.Barco(metros?):*	*8. Quadra esportes:*
9.Praça:	*10.Festas:*	*11.Outros:*	

1) *Code: 1=católica; 2=evangélica(qual?); 3= alvenaria 4= madeira; 5=taipa; 6=trançado/palha; 7=outro:*
2) *Code: 1=estiva; 2=ferramentas; 3=outros:*
3) *Code: 1= mutirão; 2=uso intercalado; 3=subsistência; 4=comércio; 5=outro:*

SECTION B: Resource use, income and constraints

I. AGRICULTURAL PRODUCTION FOR THE PAST 12 MONTHS

B0. Garden agriculture

Roça	*1.Quant./status:*[1)]	*2.Tamanho:*	*3.Idade:*	*4.Trato do solo:*[2)]
	5.Subs./com.:	*6.Agrofloresta:*	*7.Vegetação:*[3)]	*8.Abertura:*[4)]
Queimada	*9.T secagem:*	*10.T queimada:*	*11.Intensidade:*[5)]	*12.Época ano:*
Culturas	*12.Mandiocas:*	*13.Bananas:*	*14.Outras anuais:*	*15.Permanentes:*
Mão-de-obra	*16.Abertura*	*17.Plantio*	*18.Limpeza*	*19.Colheita*
Obs:				

1) *Codes: 1=derrubada; 2=queimada; 3=plantada; 4=produzindo; 5=agrofloresta; 6= abandonada; 7=outro(especificar):*
2) *Codes: 1=pleno sol; 2=semi-sombreado; 3=liteira; 4=composto; 5=coivara; 6 =outros:*
3) *Codes: 1=virgem; 2=capoeira <15anos; 3=cap. >15anos; 4=outros:*
4) *Codes: 1=moto-serra; 2=machado; 3=outros:*
5) *Codes: 1=fogo alto; 2=fogo médio; 3=queimada lenta; 4=outros:*

B1. List the most important crops that your household has produced, consumed and/or sold the **last 12 months.**

No	Crop type[1)]	Area (ha)	Labour[2)]	Total output (kg)[3)]	Sold (kg)[3)]
1	*Mandioca*				
2	*Macaxeira*				
3	*Banana*				
4					
5					

B2. Do you have any problem(s) that limit your agricultural production?

Codes: 1=Yes; 2 =No (If 'no', go to B3)

B2a. If 'yes', what do you consider to be the most important problem limiting your agricultural production?

_____

B3. If you were to expand your agricultural production, how dependent would you be on clearing forests?

1. Not dependent at all	2. A bit dependent	3. Quite dependent	4. Very dependent

B4. Is it easier to get new land for agriculture today than five years ago?

1. By inheritance	2. By buying	3. By renting	4. By clearing forest

Codes: 1=easier; 2=as before; 3=more difficult

B4a. If you have marked 'more difficult' (3) in any of the above categories, why is it so? Please state the most important reason: _____

B5. Have you had any conflicts over access to land for agriculture in the last five years?

Codes: 1=Yes; 2=No (If 'no', go to B6)

B5a. If 'yes', how would you describe the seriousness of these conflicts?

1 Very low	2 Low	3 Intermediate	4 High	5 Very high

II. LIVESTOCK PRODUCTION FOR THE PAST 12 MONTHS

B6. What is the number of livestock and livestock products that your household has sold, bought, slaughtered or lost during **the last 12 months**? What is the present number of livestock?

No	Livestock	No	Product produced	Sold (incl. barter)[1)]	For own use	Total number owned
1	Cattle ***Boi***	1	Live animal (no)			
		2	Meat (kg)			
		3	Milk (litres)			
		4	Dung (kg)			
		5	Hide (kg)			
3	Goat ***Cabra***	10	Live animal (no)			
		11	Meat (kg)			
		12	Milk (litres)			
5	Pig ***Porco***	16	Live animal (no)			
		17	Meat (kg)			
6	Poultry ***Frango***	18	Live animal (no)			
		19	Egg (kg)			
		20	Meat (kg)			
7	Outro	21				
		22				
		23				

1) *Please indicate sold live animals in numbers and sold meat from slaughtered animals in kg – please convert local measuring units into kilos and litres as appropriate when entering into database.*

B7. Do you have any problem(s) that limit your livestock production?

Codes: 1=Yes; 2=No (If 'no', go to B9)

B7a. If 'yes', what do you consider to be the most important problem limiting your livestock production?

_____

B8. What do you consider to be the most important suggestion to improve your livestock production?

_____

B9. How do you feed your livestock[1)]?

No	Type of animals	A. Forest land (grazing and/ or collected fodder)	B. Non-forest land (grazing and/or collected fodder)	C. Using crop residues	D. Other (specify)
1	Cattle ***Boi***				
3	Goat ***Cabra***				
5	Pig ***Porco***				
6	Polt ***Frango***				
7	Other animal Specify type:				
8	Other animal Specify type:				

III. FOREST RESOURCE USE

B10. How far is it in minutes (walking) from your house to the edge of the nearest forest that you often use?

B11. What is the importance of the following forest products that the members of your household have collected from the forest both for own use and sale over the last month? Where and how is it collected?

	Main forest products	Collected where		Collected by whom		Own use (kg)	For sale (kg)
		Forest type[1)]	Owner-ship[2)]	Labour[3)]	Sex/age group[4)]		
1	Fuelwood						
2	Poles & timber						
3	Charcoal						

When coding, use the number for the dominant category. Hence, if one category clearly dominates, do not use 'mix'/'both'.

1) *Codes: 1= primary forest; 2= secondary forest; 3= mix*
2) *Codes: 1= private; 2= state (ordinary); 3= state (JFM); 4= state (CBFM); 5=state (individual); 6= common property; 7= open access; 8= mix*
3) *Codes: 1= household; 2= hired; 3= both*
4) *Codes: 1= men; 2= women; 3= children; 4= mix*

B12. How would you rate your access to and use of forest products (fuelwood, poles & timber, charcoal) today compared to five years ago?

1 Much reduced	2 Reduced	3 The same	4 Increased	5 Much increased

B12a. If 'much reduced' or 'reduced', what do you consider to be the most important factor(s) limiting your access to and use of these forest products today? If more than one, please rank up to the three most important factors.

1	
2	
3	

B12b. If 'increased' or 'much increased', what do you consider the most important factor(s) for increasing your access to and use of these forest products today? If more than one, please rank up to the three most important factors.

1	
2	
3	

B13. How important are the other forest products, i. e. non-timber forest products (NTPF) that the members of your household collect from the forest both for own use and sale?

No	Other forest products	1 Do not collect	2 Somewhat important	3 Important	4 Very important
1	Fodder (collected or grazed)				
2	Bamboo ***Cipó***				
3	Rattan ***Piaçaba***				
4	Medicinal plants				
5	Wild fruit ***Camu-camu***				
6	Nuts ***Castanha***				
7	Bush meat				
8					
9					

B14. If you sell any of the above products (question B13), how much income does your household make on average in a month (in $): _____

B15. How satisfied are you with how the forests of your community are managed?

1 Very dissatisfied	2 Somewhat dissatisfied	4 Somewhat satisfied	4 Very satisfied

B16. How would you rank your relationship with other forest users in terms of access to and use of forest resources (fuelwood, poles & timber, charcoal)?

1Very bad	2 Bad	3 Fair	4 Good	5 Very good

If 'Fair', 'Good' or 'Very good, go to B17

B16a. If 'bad' or 'very bad', why is it so? Please rank

No	Response	1 Disagree	2 Disagree somewhat	3 Agree somewhat	4 Agree
1	No cooperation				
2	Poor communication and dialogue				
3	Ethnic conflicts				
4	Unequal distribution of rights				
5	Others (specify)				

B17. Has your household planted any woodlots or trees on the farm over the past 5 years?
Codes: 1=Yes; 2=No (If 'no', go to B18)

B17a. If 'yes', what are the main purpose(s) of the trees planted? You may emphasize more than one purpose

	Purpose	Ranking[1)]
1	For own use	
2	For commercial use	
3	Carbon sequestration	
4	Other environmental services If 'other', please specify here:	

1) Indicate importance by ranking the purpose(s): 1,2,3…

B18. Did your household clear any forest during the past five years?
Codes: 1=Yes; 2=No (If 'no', go to B19)

B18a. If 'yes' to B18, how much forest was cleared on average per year: _____ (ha)

B18b. If 'yes' to B18, answer also the following questions concerning cleared forests over the last five years

		Rank 1[1)]	Rank 2	Rank 3
1	What was the cleared forest (land) used for? *Codes: 1=cropping; 2=tree plantation; 3=pasture; 4=other*			
2	What type of forest did you clear? *Codes: 1= primary forest; 2=secondary forest; 3=mix*			
3	What was the ownership status of the forest cleared			

1) Ranking using row 1 as example: If e.g., 'pasture' is the most important use of cleared forests, write '3' in the column 'Rank 1'. Similarly, if 'cropping' is the second most important use of cleared forests, write '1' in column 'Rank 2', etc. Do similar for rows 2 and 3

B19. How much land used by your household has been abandoned on average over the last 5 years? (Left to fallow or converted to natural re-vegetation). Please denote as ha per year

B20. How much fish did your household catch in the streams, rivers and small lakes of the forest both for own use and sale over the last month?

No	Main fish species (common names)[1)]	Ownership[2)] where caught	Caught by whom[3)]	Own use (kg)	For sale (kg)	Unit price ($/kg)
1						
2						
3						
4						
5						

1) Codes: The local team must identify the main fish species. Please use common names
2) Codes: 1= private; 2= state (ordinary); 3= state (JFM); 4= state (CBFM); 5= state (individual)l; 6=common property; 7= open access. Use the code for the dominant category
3) Codes: 1= men; 2= women; 3= children; 4=mix

B21a. HH sources of income

No	Source of income	Valor/mês/ano[1)]	Quem paga e para qual serviço?
1	Patrão		
2	Salário		
3	Bolsas oficiais		
4	Aposentadoria		
5	Pensão		
6	Ajuda familiar		
7	Extrativismo		
8	Geleiro		
9	Peixe seco		
10	Caça		
11	Doação (pol.,etc)		
12			
13			
Obs:			

B21b. Has the household received any cash or in kind payment or compensation related to the following forest services over the past 12 months?

No	Principal purpose	Received[1)]	If 'yes', please indicate the amount received ($)
1	Tourism		
2	Carbon projects		
3	Water catchment projects		
4	Tree planting		
5	Benefits from logging companies		
6	Other, please specify here:		

1) Code: 1=Yes; 2=No

B22. What is the average income from paid work that the household members together receive in a month (in $): _____

NOTE: Payments already covered in B21 must not be included here

B23. Are you or any other member(s) of the household involved in any type of business, and if so, what is the **net income** related to that business **per month?**
NOTE: Income directly from crops (B1), livestock (B6), forest products (B11, B14) or income covered above in questions B20; B21 and B22 must not be included here
NOTE: If the household is involved in different types of business fill in one column for each business.

	Business 1	Business 2	Business 3
1. What is your type of business?[1)]			
2. Net income (in $)			

1) Codes: 1=shop/trade; 2=agricultural processing; 3=handicraft; 4=carpentry; 5=other forest based; 6=transport (car, boat,...); 7=lodging/restaurant; 8=brewing; 9=brick making; 10=landlord/real estate; 13=herbalist/traditional healer; 12=quarrying; 13=fishing outside of the forest; 14: Other

B24. What is the average income received from income transfers (state support; remittances etc.) the household members together receive in a month (in $): _____ *NOTE: Must not overlap any income already covered in questions B21-B23.*

SECTION C: Property rights, use rights and management

The main issue here is to map out ownership, management and use rights to forests land and forest resources.

C1. Do any members of your household belong to any forest management group in your community?
Codes: 1=Yes; 2=No (If 'no', go to C2)

C1a. If 'yes', please indicate the name of the group:_____

~~**I. PRIVATE FOREST (PRIVATELY OWNED FORESTS)**~~

II. STATE FORESTS (FORESTS UNDER STATE PROPERTY)

~~**IIa State forests (Ordinary)**~~

IIb State forests (Joint Forest Management)

IIc State forests (Community-Based Forest Management)

~~**IId State forests (Individual Use Rights - leases, permits, etc)**~~

III. COMMUNITY FORESTS (FORESTS UNDER COMMON PROPERTY)

C17. Do you have user rights to resources in state forests in your community?
Codes: 1=Yes; 2=No

C17a. Are your user rights to state forest formal or informal?
Codes: 1=Formal; 2=Informal; 3=Both

C17b. Do you have individual or common use rights to state forest?

Codes: 1=Individual; 2=Common (as member of community); 3=Both

C17c. Are your user rights limited to particular resources in the state forest?
Codes: 1=Yes; 2=No *(If 'no', go to C18)*

C17d. If 'yes', which are the most important forest resources you can use?

_____

C18. Do you have any influence on the rules that govern use and management of the state forests? You may tick more than one option.

1 Yes, during village assembly meetings	2 Yes, during other meetings	3 Yes, through general discussions in my community	4 No, we have not taken part at all	5 I do not know

C19. How satisfied are you with the rules that govern use and management of the state forest?

1 Very dissatisfied	2 Somewhat dissatisfied	3 Somewhat satisfied	4 Very satisfied

(Note: Dependent on responses to C19, you proceed by going to C19a or C19b)

C19a. If 'somewhat dissatisfied' or 'very dissatisfied' with the rules, why is it so?

No		1 Dis-agree	2 Disagree somewhat	3 Agree somewhat	4 Agree
1	My/our interests are not taken into account				
2	Unclear boundaries/outsiders are intruding				
3	Unequal distribution of use and benefits				
4	Too strong limitation on access to resources				
5	Rules are not followed				
6	The local community is not enough involved in making rules				
7	Conflict resolution mechanisms are inappropriate				
8	Too weak enforcement of rules/sanctions				
9	Creates opportunities for corruption				
10	Bad management/lack of coordination				
11	Other (specify)				

C19b. If 'somewhat satisfied' or 'very satisfied' with the rules, why is it so?

No		1 Dis-agree	2 Disagree somewhat	3 Agree somewhat	4 Agree
1	My/our interests are well taken into account				
2	Clear boundaries/outsiders are kept out				
3	Equal distribution of use and benefits				
4	Good access to resources				
No		1 Dis-agree	2 Disagree somewhat	3 Agree somewhat	4 Agree
5	Rules are followed				
6	The local community is involved in making rules				
7	Conflict resolution mechanisms are appropriate				

8	Proper enforcement of rules/sanctions				
9	Good management and coordination				
10	Other (specify)				

C20. Do you feel bound by the rules that govern use and management in the state forests?

1 I feel bound by them and follow them always	2 I feel quite bound by them and follow them mostly	3 I feel somewhat bound by them and follow them sometimes	4 I don't feel bound by them and do usually not follow them	5 Not relevant to me

C21. Have there been any changes in the rules that govern use and management of the state forest (JFM) in the last five years?

Codes: 1=Yes; 2=No; 3=Not aware *(If 'no' or 'not aware', go to C22)*

C21a. If 'yes', have the changes influenced your use of state forests?

1 It has worsened my livelihood a lot	2 It has worsened my livelihood to some extent	3 It did not have any effect on my livelihood	4 It has improved my livelihood to some extent	5 It has improved my livelihood a lot

C22. How is your relationship with the forest management committee under the arrangement?

1 Very bad	2 Bad	3Fair	4 Good	5 Very good	6. Not relevant

SECTION D: Perceptions, attitudes and norms concerning resource conservation

D1. Are there any forests in your community that are protected by the state/public authorities?

Codes: 1=Yes; 2=No *(If 'no', go to question D3)*

D2. If 'yes', how do you feel about this protection?

1 Against	2 Somewhat against	3 Somewhat supportive	4 Supportive

D2a. If 'against' or 'somewhat against', why is it so?

No	Response	1 Disagree	2 Disagree somewhat	3 Agree somewhat	4 Agree
1	It restricts my access to forests				
2	No compensation for losses				
3	No access to benefits from tourists				
4	Other (please specify)				

D2b. If 'supportive' or 'somewhat supportive', why is it so?

No	Response	1 Disagree	2 Disagree somewhat	3 Agree somewhat	4 Agree

1	Protection is important				
2	Protection increases long-term access to forests resources				
3	Receive compensation for reduced use				
4	Secures access to income from tourists				
5	Other (please specify)				

D3. Does your community have any locally developed conservation measures for the forest?
Codes: 1=Yes; 2=No *(If 'no', go to D6)*

D3a. If 'yes', what are these measures?

No		Response[1)]
1	Controlling harvest of forest products	
2	Limiting farm land in the forest	
3	Protecting some areas in the forest	
4	Placing guards to control illegal use of the forest	
5	Other (please specify):	

1) Codes: 1=Yes; 2=No

D4. How satisfied are you with these locally developed conservation measures?

1 Very dissatisfied	2 Somewhat dissatisfied	3 Somewhat satisfied	4 Very satisfied

D4a. If 'very dissatisfied' or 'somewhat dissatisfied', why is it so?

No		1 Disagree	2 Disagree somewhat	3 Agree somewhat	4 Agree
1	It restricts my access to the forest				
2	Unequal distribution of benefits				
3	Increased illegal use of forests				
4	Other (please specify)				

D4b. If 'somewhat satisfied' or 'very satisfied', why is it so?

No		1 Disagree	2 Disagree somewhat	3 Agree somewhat	4 Agree
1	Increases long-term access to forests resources				
2	Equal distribution of benefits				
3	Reduced illegal use of forests				
4	Other (please specify)				

D5. Have these conservation measures affected the way you use forests resources?

1 Not at all	2 Not so much	3 Quite a lot	4 Very much

D6. Are there any sacred forest(s) in your community?
Codes: 1=Yes; 2=No *(If 'no', go to Section E)*

D7. Are the sacred forests sacred to you as well?
Codes: 1=Yes; 2=No *(If 'no', go to Section E)*

D8. In what ways is this/are these forest(s) important to you?

_____

D9. Does the fact that some forest(s) are sacred to you influence your view about forests in general?
Codes: 1=Yes; 2=No (If 'no', go to Section E)

D9a. If 'yes', explain in what ways this influences your views about forests more generally.

_____

SECTION E: Pre-REDD Analysis

E1. Are you aware of the role forests play in climate change?
Codes: 1=Yes; 2=No (If 'no', go to E2)
E1a. If 'yes', what relationships between deforestation and climate change do you find especially important? _____

E2. Do you think you would stop clearing forest land for agriculture/stop harvesting wood resources from the forest (fuelwood, poles/timber and/or wood for charcoal production) if you get compensation for your loss of income? Please evaluate the below options.

No	Types of compensation	1 Disagree	2 Disagree somewhat	3 Agree somewhat	4 Agree
1	By payments				
2	By increased employment opportunities				
3	By alternative sources of livelihoods				
4	By better social services in my community				
5	Other (specify)				

(Note: Dependent on the responses to E2, please proceed to E2a, E2b or E3)

E2a. If you cannot be motivated by the above options to stop clearing forests/stop harvesting wood resources from the forest (the respondent has answered 'disagree' or 'somewhat disagree' **to all options** 1-4 in question E2), why is it so?

No		1 Disagree	2 Disagree somewhat	3 Agree somewhat	4 Agree
1	My livelihood depends too much on the forest				
2	The forest has a strong cultural value to me and it is wrong to accept compensation to stop present use				
3	Money cannot compensate for reduced use of the forest				
4	I do not think I will be compensated enough				
5	Other (please specify):				

E2b. If you can be motivated by some of the above options to stop clearing forests/stop harvesting wood resources (the respondent has answered 'strongly agree' or 'agree' to **at least one** of the options in question E2), why is it so?

No	Response	1 Disagree	2 Disagree somewhat	3 Agree somewhat	4 Agree
1	The compensation will make me equally well or better off				
2	Forest protection is important				
3	It will improve our environmental conditions				
4	I need more income				
5	It will improve the conditions of our village/community				
6	Other (please specify)				

E2c. What commitments could you make to avoid deforestation in your community if compensated for that specific activity? (This question is only relevant for those answering question E2b)

No	Response	1 Disagree	2 Disagree somewhat	3 Agree somewhat	4 Agree
1	Stop expansion of farming activity in forests				
2	Reduce wildfires in forest				
3	Stop harvesting fuelwood				
4	Stop harvesting poles/timber				
5	Stop producing charcoal				
6	Other (please specify)				

E3. Could the following manage a programme against deforestation in your community well?

No	Response	1 Disagree	2 Disagree somewhat	3 Agree somewhat	4 Agree
1	Government officials				
2	The village leader(s)				
3	Specially elected village committee				
4	NGOs				
5	Other (please specify)				

E4. What kind of issues do you think could be associated with such a programme?

No	Response	1 Disagree	2 Disagree somewhat	3 Agree somewhat	4 Agree
1	The overall income situation in the village/community will be better				
2	It will result in corruption				
3	Unequal distribution of payments				
4	Payments will go only to land owners				
5	There will be less conflicts in the village/ community				
6	It will increase privatization of land				
7	Other (specify)				

E5. If you foresee any problems, how do you think they could be best handled?

_____

Final open questions:

1. What are the things you like the most in your community?
2. What do you think about the city?
3. What do you think you make your community a better place to live?

* * * * * * * * *