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**SUPERIMPOSED COSMOGRAPHIES ON
REGIONAL AMAZONIAN FRONTIERS.**

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INTRODUCTION

Territorial disputes over Amazonia are an integral part of the history of this vast tropical forest biome, and continue to be waged today. Perhaps the most enduring, and brutal, of these disputes has been the centuries-long conquests by European powers seeking to dispossess indigenous nations of their historically occupied territories. These conquests were accompanied by efforts of European colonial powers, notably Spain and Portugal, to claim this area as part of their monarchic domains. By the nineteenth century, these disputes had turned into diplomatic and military disputes between the newly emerged South American nation-states to incorporate parts of Amazonia into their respective national territories. By the twentieth century, most of the territorial disputes in this biome occurred within the boundaries of nation-states where social and ethnic groups with radically differing ideologies —most recently, developmentalism and environmentalism— were pitted against each other.

As a political space, while Amazonia may appear to be clearly divided into nation-states, each with its own color and firmly drawn boundaries (Malkki 1992), each of these colors hides the hotly disputed territories of social groups. A similar situation exists with reference to Amazonia as an economic space, since it is not neatly partitioned off into neatly delimited parcels of private lands, but has large chunks of “public” as well as “social” territories interspersed with numerous tracts of “private” and “squatted” lands, most of which have highly diffuse boundaries.

This paper offers a highly synthetic historical, ethnographic, and comparative analysis of these territorial disputes in two sub-national micro-regions (hereafter, simply ‘regions’) located along the equator at extreme ends of the Amazon basin: the Aguarico region in Ecuador and the Jari region in Brazil.¹ This analysis not only seeks to delve into the particularities of these disputes, but attempts to construct both broader and deeper insights about the spatial constitution of Amazonia and about the process of human territoriality in general. The historical focus provides the temporal depth necessary to view human territorialization as an on-going, highly contested process. The ethnographic perspective attempts to understand this complex historical process from the perspective of the multiple social groups that are struggling over their territories by describing not only their specific collective claims to the areas they physically occupy, but also the political means they use to assert and defend these claims. Finally, the comparative perspective

¹ A more extensive and thorough treatment of these two regions can be found in Little 1996.

allows for the detection of key diachronic and structural parallels that can tell us more about the specificity of *Amazonian* territoriality.

Both the Aguarico and Jari regions have long experienced historical and contemporary frontier scenarios and as such offer privileged sites from which to view the complexity of the process of establishing territories in areas already occupied by other groups. The common definition of a frontier as a sparsely populated geographic area which is peripheral to political and economic centers of power and that experiences accelerated rates of demographic, agricultural, or technological change offers a starting point for this analysis, but remains inadequate for the purposes of this paper. The notion of the frontier being developed here also emphasizes its dimension as a *contested space*, one in which the rules of social interaction are not clearly established and where different social groups contend for the political hegemony of their distinct claims (Becker 1988).

In Amazonia, the frontier process did not take the form of a “tidal wave” marked by massive immigration flows during a single epoch (Kopytoff 1987), but rather has been a continual process spread out over numerous regionally distinct sites and has been occurring since pre-Colombian times with the regular expansion and contraction of indigenous groups. The creation of new frontiers in Amazonia greatly accelerated with the long series of European conquests beginning in 1500. Given the vast expanse of Amazonia, the high degree of social and biological diversity it contains, and the difficulty of access among its distant parts, most of the frontier scenarios have been regionally based. As such, in Amazonia *regional* frontiers have been opened and closed, only to be reopened and reclosed again and again with the emergence of ever-new resources sought by newly arriving social groups. This leads me to refer to the frontier history of Amazonia as one of perennial frontiers.

Before entering directly into the analysis of the two regions under study here, several conceptual guides need to be presented. The concept of *cosmography* will be used here to analyze the process of establishing human territories. In 1887, Franz Boas (1940: 646) made a call for the founding of a science of cosmography which would encompass the study of the “mutual influence of the earth and its inhabitants upon each other.” By reviving and adapting this concept, and giving it specific cultural content, geographical referents, and a historical time frame, it can serve as a guide for the analysis of territorial disputes on Amazonian frontiers. Cosmography will be defined here as collective, historically-contingent identities, ideologies, and environmental knowledge systems developed by a social group to establish and maintain human territories.

Cosmography can be understood as a conjuncture between *cosmology* and *geography* whereby cultural visions of the world (cosmos) are inscribed (graphy) into geographical areas. The concept of cosmography is different from that of the more general notion of ‘worldview’ since it is invariably linked to specific geographical locations with unique biophysical characteristics. By linking cosmographies to social groups, historical and ethnographic analysis is facilitated. Each cosmography is capable of spawning different types of human territories that are uniquely tailored to the biophysical characteristics of the areas where they have been installed. Thus cosmography, as it will be used here, is a broader concept than that of territory, though the two concepts are directly linked since a social group’s territory is invariably founded upon a distinct set of cosmographical principles.

Cosmographies, and the human territories they engender, are *superimposed* upon

each other in time, space, and power. The notion of superimposition carries with it both temporal and spatial connotations. When a photographic image is superimposed upon another, for example, this superimposition is made in a temporal moment that succeeds the impression of the first image and is achieved through the spatial overlap of one image upon another within the same physical space. By analogy, cosmographies exhibit successive overlaps since one comes after another in historical time. This successive character, however, does not imply an improvement upon the previous one, only that a different social group has arrived afterwards and is promoting the installation of a new territory. Hence, cosmographies *succeed* but do not necessarily *supersede* each other in time. Geographically, a horizontal overlapping occurs in which one group's spatiality is placed over part or all the spatiality of another group without necessarily extinguishing it. Cosmographies *overlap* but do not necessarily *supplant* each other in space, since various cosmographies can exist simultaneously even though they lay claim to the same geographical space.

The superimposition of cosmographies creates a complex power dynamic which is invariably asymmetrical. New cosmographies emerge during particular historical epochs and are generally backed by powerful forces that seek to impose their hegemony over preceding cosmographies. This invariably produces situations of conflict that may provoke—if the power inequality between these forces is sufficiently great—the extinction of entire societies and their territorialities. But the process of superimposition is not limited to situations of conflict and conquest. Invariably, simultaneous situations of incorporation, interpenetration, and accommodation emerge that provoke the continual transformation of cosmographies and territorial claims, resulting in multiple forms of overlapping territorialities.

Since many social actors, each with their own sources of power, are involved in the frontier, there is no formula for determining just how this dynamic will unfold historically. Ethnographic analysis offers a means of deciphering this situation since it places all the disputes within their respective geographical, historical, political, and cultural contexts. It also places the competing *claims* to territory made by social groups at the center of analysis. These claims represent the translation of cosmographical principles and historical presence into specific political forms of struggle. For these reasons, human territoriality can be best understood as a highly contested, continual process of occupation, affirmation, and defense.

The territorial dimension of regional Amazonian frontiers can now be reconceptualized by taking into account the presence of superimposed cosmographies throughout history. Particular attention will be given to three types of cosmographies—indigenous, development, and environmental—though mission, mercantile, and national ones will also enter the analysis. By holding geographical space relatively constant—in this case the Aguarico and Jari regions—this paper will analyze the historical human flows into and out of these regions in order to detect the territorial dynamic that these flows have generated.

INDIGENOUS COSMOGRAPHIES

In presenting the principal dimensions of pre-Colombian indigenous cosmographies, one must take into account the fact that native Amazonian peoples were (and are) incredibly diverse in their cultural expressions, ecological adaptations, and their territorial occupations of the jungle. The use of rivers, and the watersheds within which they are located, provides a starting point for understanding the various indigenous cosmographies that have operated, and continue to operate, in Amazonia. Within the framework of these river systems, indigenous territorialities are often proscribed by kinship and descent systems (Weiss 1969; Descola 1994). Furthermore, an indigenous groups' territory "is related to a cultural history. This history, often placed within a mythic-religious language, orients and defines the spatial movements of settlements from their current location to a new one" (Ramos 1986: 19). The practice of collective access to the land coupled with specific cosmologies form the foundation of indigenous cosmographies in Amazonia.

The perennial frontiers mentioned above have brought about centuries of regional conquests in which multiple and often contradictory cosmographies were superimposed upon each other in a process that radically altered indigenous cosmographies without necessarily eliminating them, though of course many indigenous groups, along with their respective cosmographies, were brought to extinction. One important result of the ethnocide that these conquests produced was a subsequent process of ethnogenesis of new social groups —some speaking indigenous languages while others adopted the languages of conquest (Portuguese or Spanish)— that were culturally and ecologically distinct from the societies of the conquerors.

I have chosen to group these newly emergent societies together with the those surviving indigenous societies under the broad term of autochthonous societies. The term autochthonous has historical, ecological, and territorial dimensions. From an historical perspective, to be Amazonian autochthonous is to be *of* the Amazon: to have been born there; to have ancestors that are of the region; to have origin myths located in the region; to identify with this biome as ones' home. From an ecological perspective, the forms of biophysical adaptation of autochthonous peoples are based upon intimate knowledge of Amazonian ecosystems and are finely honed to its natural cycles, providing them with long-term sustainability. From a territorial perspective, autochthonous peoples have developed collective forms of access to and use of geographical space, a modality which places their territorial claims outside of the market realm of private property. This definition of autochthonous does not seek to eliminate internal distinctions between indigenous, *cholada*, *riberinho*, *quilombola*, and *caboclo* peoples, but rather serves to distinguish these peoples as a general grouping from recent arrivals such as colonists, oil workers, gold miners, and environmentalists who are entering onto and creating new regional Amazonian frontiers. At the same time, this definition does not ignore the centuries of extra-Amazonian influences which have molded contemporary Amazonian autochthonous societies, and leaves open the possibility of new mixtures in the future occurring on Amazonian soil between the current autochthonous groups and the recent arrivals.

Autochthonous homelands: The Aguarico region

The Aguarico region of the Upper Amazon Basin is nestled along the escarpment of the Andes mountains at their junction with the lowlands of the Amazon jungle. The Aguarico River Basin forms the heart of this region and is situated between the larger Putumayo and Napo River Basins. The Aguarico River has its source high in the Andes mountain range, descends rapidly along its eastern slope, and then flows through the Amazonian lowlands before emptying into the Napo River, a major tributary of the Amazon River.

Archeological excavations in the Napo River Basin reveal a series of intermittent occupations by a variety of groups, apparently of different origins over the past two millennium (Meggers 1967). Despite differing archeological reconstructions of the peopling of this region (Lathrap 1970; Reichel-Dolmatoff 1973), most studies postulate the existence of numerous small, semi-nomadic groups occupying the tropical forest uplands, who were sandwiched between, and influenced by, larger river-based societies. The intergroup relations in the Upper Amazon Basin were multiple and based upon a complex mix of conflict and cooperation. From a territorial viewpoint, the Upper Amazon was the home of relatively autarkic indigenous societies.

Shortly after the Spanish conquest of the Inca empire and the various Andean highland indigenous groups that comprised it, the Spaniards turned their sights to the Amazonian lowlands as part of their incessant search for gold. The major entry point for Spaniards into the Upper Amazon Basin was from Quito in the northern Andes. By traveling due east from Quito, passing over the eastern range of the Andes and descending into the jungle, one gains direct access to the Napo River Basin. It was from this route that Francisco de Orellana entered Amazonia and eventually sailed down the Napo River to its mouth at the Amazon River and, from there, the remaining length of the Amazon River, arriving at its mouth at the Atlantic Ocean in 1542. Over the succeeding decades several attempts to establish settler towns and gold mining centers in the Napo River Valley were made, but these met fierce indigenous resistance and a hostile natural environment and did not prosper.

One of first incursions by Europeans directly into the Aguarico region was made by Jesuit missionaries whose presence dates from 1595 and lasted until their expulsion from Spanish America in 1767. The two major indigenous groups of the Aguarico region at the time of the Jesuit arrival were the Cofanes, located along the upper Aguarico River near the foothills of the Andean range, and the Encabellados, who were situated along the middle and lower Aguarico River. With European contact, and the diseases it brought, these two groups began a four-century-long process of demographic decline that would only subside in the mid-twentieth century when these two groups numbered only a few hundred each.

Along with their evangelizing project, the Jesuits brought with them a key territorial strategy, in what I call a mission cosmography, founded upon the relocation of indigenous groups into large, sedentary mission towns (*reducciones*) located along the major rivers of the region, where the natives were to be evangelized, learn agriculture, give up their 'savage' customs, and in general, become 'civilized' within the European mold of the time (Golob 1982). The Jesuit program of establishing sedentary villages based upon agriculture represented a major shift in the settlement patterns of the native Amazonian groups of the area who lived from a vital mix of mobile hunting, fishing and foraging and

temporary sedentarianism for the planting of their gardens. Another crucial impact of the mission towns was the forced grouping of different indigenous societies, a situation that provoked a breakdown of internal indigenous social organization, usually based either on kinship ties or ties to a shaman-headman, as well as of the geographical use-area of each of the indigenous groups. The mixing of many indigenous groups in the mission villages and their adoption of the Quichua lingua franca used by the missionaries, coupled with massive rates of depopulation, set in motion a process of ethnogenesis which over the coming centuries would turn the emergent Quichua speaking peoples into the most numerous group in the region (Whitten 1976).

In 1830, the state of Ecuador was formed from the dismantling of Gran Colombia, and laid formal claim to the Aguarico region as part of its national territory, ostensibly placing it within the domain of a national cosmography founded upon the ideal of exclusive, sovereign control over all the lands within its realm. Ecuadorian leaders, however, were little interested in this inhospitable jungle region and it languished in neglect throughout the nineteenth century, witnessing only a few half-hearted (and failed) attempts at colonizing the area (Muratorio 1991). It was only in 1920, ninety years after the founding of the Republic, when the Amazonian provinces of Napo-Pastaza and Santiago-Zamora were created, that Amazonia finally began to be integrated into the political-administrative structure of the Ecuadorian state. And it was in 1937 that the first road into the region was completed, connecting Ambato with Puyo, and this was constructed by the Shell Oil Company as part of its petroleum exploration work in the jungle.

While the Ecuadorian State demonstrated a general lack of interest in its Amazonia, the forces of the world market were operating throughout the region, installing what can be called mercantile cosmographies tied to the geographical distribution of natural resources and their collection, extraction, transportation and subsequent sale by specific social groups. The demand for forest products from the Upper Amazon increased dramatically during the eighteenth and nineteenth centuries and included such products as gold, *pita*, vanilla, wild cocoa, resins, quinine, tagua, and sarsaparilla. Yet it was the rubber boom, which gained strength in the Upper Amazon Basin starting in the 1880s and continued until its dramatic demise in 1913, that would produce profound transformations among the indigenous peoples living in the Aguarico and Napo River Valleys. The source of greatest impact was the incessant need for Indian labor to find, collect and harvest rubber for the powerful rubber traders (*caucheros*) and brutal methods, including slavery and wanton killing, were used to secure this labor force (Taussig 1987).

The rubber boom also produced a rapid expansion of Peruvian interests into large parts of Amazonia formally claimed by Ecuador. The fact that all the rubber was exported downriver through the Peruvian-controlled port of Iquitos and that almost all consumer goods were imported via these same fluvial routes consolidated Peruvian presence in the region and helped incorporate it into the Peruvian economy. This situation was aggravated by the difficult access to the Amazon from the Ecuadorian highlands due to the lack of basic infrastructure. The territorial gains that Peru would make in the 1941 war coincided almost exactly with the area under their regular control gained during the rubber boom.

Petroleum was another resource that was being sought after in this region. Explorations in the 1920s, 1930s, and 1940s did not find oil at this time and with the pullout of the oil companies at the end of the 1940s, a despondent Ecuadorian President Galo Plaza affirmed that "Amazonia is a myth." It is important to note that the 1941-2 war

between Ecuador and Peru was fueled by the oil interests of two competing firms —Royal Dutch Shell in Ecuador and Standard Oil in Peru— with Peru’s military victory giving Standard Oil control over a large concession previously claimed by Ecuador. As we shall see shortly, petroleum later became a major force for territorial change in the Aguarico region.

Circa 1950, the Aguarico River Basin was occupied and used by four indigenous populations —the Siona-Secoya and the Tetete (both descendants of the Encabellados), the Cofán, and the Quichua— located in several scattered communities. The territorial occupation of this region by these indigenous groups —the “survivors” of the multiple forces briefly mentioned above (Vickers 1983)— was loosely defined since their relatively small demographic presence did not create enormous resource pressures, nor did it provoke direct territorial conflicts amongst them. This region also was home to a smattering of Ecuadorian ranchers, Catholic and Evangelical missionaries, Amazonian river traders, and Ecuadorian and Peruvian soldiers. There was a notable absence of Ecuadorian government officials, since they mainly operated out of Tena, the provincial capital, well to the south of the Aguarico region.

Autochthonous homelands: The Jari region

The Jari region is located in the Lower Amazon Basin and comprises the left bank of the North Canal of the Amazon River, where it encompasses the lower portions of the Paru, Jari, Cajari, and Maracá Rivers. This region gets its name from the Jari River, which flows through the heart of the region and is an important fluvial crossroads at the intersection of the Amazon Delta and the Lower Amazon River. Its headwaters are formed along the southern slopes of the low ranging Tumucumaque mountains which separate Brazil from Surinam and French Guiana.

Archeological evidence reveals a long history of occupation by a series of different groups whose original entry point is hotly debated (see Prous 1991). What is emerging from the archeological record is that by the second millennium A.D., the Amazon Delta was controlled by relatively large, sedentary populations who maintained extensive trade networks with indigenous groups in other parts of Amazonia (Roosevelt 1991; Whitehead 1993). Many smaller, mobile groups occupied forested uplands located on the fringe of the areas controlled by the chiefdoms of the Amazon floodplain.

The first European incursions into the Lower Amazon Basin occurred in 1500 and produced the first case of the seizing of indigenous peoples by European explorers (Hemming 1978). At this time, the Jari region was home to the Tucujú peoples, an Arawak-speaking society and one of the most populous indigenous groups along the left bank of the North Canal of the Amazon River. The Tucujús maintained peaceful relations with their Aruã and Nheengaíba neighbors who inhabited the delta island region. These groups would be left relatively undisturbed by the Europeans for most of the sixteenth century. The arrival of Dutch, English, and Irish traders and settlers into the area beginning in 1590 was predicated upon friendly trading relations with the local indigenous groups. These trading alliances quickly turned into military ones as the Portuguese initiated a series of wars in the area starting in 1620 designed to expel the other European powers from the region. The

Tucujús suffered heavily from these wars since their alliances with the English, Irish, and Dutch made them the target of brutal Portuguese attacks and provoked their flight inland, whereby they abandoned their fertile riverside and island homelands.

These conquests were followed by the arrival of first the Franciscans and then the Jesuits, who began the difficult process of installing mission cosmographies that so altered the territorial landscape of the indigenous inhabitants. The Indian manpower for the Jesuit system came from the practice of *descimentos* (literally “descents”) whereby Indians were enticed with gifts or forced to move into Jesuit villages (*aldeias*) located along the Amazon River and its main tributaries (hence the need for the Indians to “descend” to them). These villages were highly structured political entities in which rigid work schedules were established for these so-called “free Indians” (Leite 1938). However, since the “priests had a monopoly over all operations of production, transport and sale of commercial goods” (Moreira Neto 1988: 24), the work of the Indians helped enrich the Company of Jesus and turn it into the wealthiest group in all of the Amazon.

In the Jari region, as opposed to the Aguarico region, the missions had competition from a growing number of Portuguese settlers who had entered the area and participated in the Indian slave trade. Both the Jesuit and settler systems, however, established sedentary settlements in riverside areas which were tied to the commercial demands of distant markets and, in fact, often made their settlements close to each other where they formed a symbiotic relationship. Neither system respected the specific ethnic heritage nor the particular lifeways of indigenous peoples. Together, these two systems provoked the breakdown of internal social structures that were the principal means through which indigenous societies reproduced themselves as a people. This dual process of exploitation led to the extinction of the Tucujús people by the beginning of the nineteenth century (Gallois 1981).

The new associations and interactions among the Indians that had been “descended” and the Europeans were conducted in the *língua geral* (literally, general language), an indigenous creole tongue derived from the Tupi language family, one of the principal linguistic stocks of the entire Brazilian portion of South America. The Jesuits played a key role in the establishment of the *língua geral* as the lingua franca of the Middle and Lower Amazon Basins since their missionary work with the Indians was conducted in this language. The use of a single indigenous-based language greatly facilitated the mixing of disparate ethnic groups within the mission villages and also served as the language of commerce along the river. The depopulation process resulting from the Indian slave trade and introduced diseases gave rise to an ethnogenesis process. In the Lower Amazon Basin this process can be divided into two stages: the emergence of the *tapuio* population, a group of ethnically-mixed, full-blooded Indians who spoke the *língua geral*, and the subsequent demise of this population and its restructuring into a mixed-blood, Portuguese speaking *caboclo* population (Galvão 1976; Parker 1985). It is this population that came to dominate the Jari region.

The existence of local Portuguese speaking population assisted in the installation of a Brazilian national cosmography that emerged after Brazil independence from the Portuguese crown in 1822. The Cabanagem revolt of 1835-1840 represents a key event in this consolidation process. Though this revolt began as a dispute between two competing factions within the city of Belém’s elite leadership, it rapidly spread up the Lower and Middle Amazon valley and took on racial, cultural and economic undertones whereby poor

tapuios and mixed-blooded settlers (the lines between these two groups were beginning to blur) rose up against the Portuguese and Brazilian elite that was dominating them and waged a bloody campaign of revenge in which thousands of people were killed on all sides (Cruz 1960; Di Paolo 1990). The Brazilian imperial army was brought in and eventually quelled the uprising. With the crushing of the Cabanagem rebellion, the Brazilian State had demonstrated that it was the principal administrative authority over Brazilian Amazonia and began to implement a series of policies designed to integrate these lands into its political, legal, and administrative structures, and in the process consolidated a Brazilian territorial entity into which the *caboclo* population was incorporated. The formation of the state of Amazonas from the western portion of state of Pará in 1850, with Manaus as its capital, was a major step in that direction.

All throughout this time, various mercantile cosmographies —based in products such as wild clove and cocoa— were operating that brought new social groups in the Lower Amazon Basin. The rubber boom, however, was by far the most important of these and brought about major territorial changes. While rubber was produced from a variety of trees located throughout the tropics worldwide, none of these produced as high a quality of rubber as the *Hevea brasiliensis* (known in Brazil as the *seringueira*), the rubber tree found exclusively in the Amazon Basin and, within this biome, almost entirely within the territorial limits of Brazil. During the first four decades of the nineteenth century, rubber was collected in the immediate area of Belém and the Amazon delta islands by local *tapuio* and *caboclo* populations.

The initial system rapidly gave way to the *aviamento* system founded upon the supplying of trade goods on credit within a nested hierarchy of commercial relations extending from the exporter, at the upper end, through various levels of *aviadores* (creditors or ‘forwarders’) all the way down to the *seringueiros* (rubber tappers). Those *aviadores* who were able to control large tracts of land used for rubber collecting turned into extremely wealthy rubber barons and the tracts of land they controlled were called *seringais* (rubber tree stands). The creation of extensive *seringais* established a new territorial modality in Brazilian Amazonia (Santos 1980). The rubber boom came to an abrupt halt between 1911 and 1914 as plantation-grown rubber from Asia, grown from *Hevea brasiliensis* stocks stolen from Brazil in 1876, entered the world market in massive quantities and greatly undercut the price of Amazonian rubber.

Meanwhile, other extractive products arose to partially fill the gap left by the collapse of rubber such as Brazil nuts, *copaiba* oil and an assortment of resins. In the heart of the Jari region, a Brazilian named José Júlio de Andrade began, in 1899, buying up large tracts of land. He rapidly established himself as the most important *aviador* in the region and began to build an immense Brazil nut estate. This estate included the lower basins of the Paru, Jari, Iratapuru, and Cajari Rivers and covered an area of approximately 3,000,000 hectares, making him one of the largest of extractive *latifundiários* (estate bosses) in the entire Amazon River Basin (Lins 1991: 35-43).

The estate of José Julio had a structure similar to the *seringais* of the rubber barons with the important distinction being that he ruled supreme over *castanhais* (Brazil nut groves). His reliance on Brazil nuts rather than rubber as his principal extractive product, would spare him economic demise from the rubber boom collapse. José Júlio supplemented this extractive trade with the export of rubber, oils, and resins and raised thousands of head of cattle and water buffalo. After a half-century reign as undisputed ruler of this region

(1899-1948), José Júlio finally sold his company to a Portuguese firm in 1948.

José Júlio had thousands of locally-based *caboclos* working for him who were controlled by *capatazes* (local bosses) under his direct command. While some of these workers migrated each year to the Brazil nut groves from the delta islands, many of them began settling permanently along the rivers of the region. Here they developed an economic and adaptive system centered around the territorial unit of the *colocação*, a family-run productive unit on a small tract of land (20-100 hectares) which includes the *caboclo* family's house, manioc garden, fruit orchard, horticultural plantings, and *casa de farinha* (shed where manioc flour is made). The effective use area of the *caboclo* family is much larger than the *colocação* since it includes areas of hunting and fishing which are informally shared by the other *caboclos* living in the region. By establishing their *colocações* in the midst of José Júlio's Brazil nut empire, these *caboclos* created their own territorial presence and began turning this area into their new homeland.

Circa 1950, there were three principal territorial actors in the Jari region: (1) the Portuguese firm which bought José Júlio's Brazil nut estate and who claimed the entire area for themselves; (2) small-scale *patrões* who had established control over local *caboclo* groups and who laid claim to *castanhais* and ranches; and (3) the family claims of the *caboclos* who inhabited the area. These three territorialities were all spatially superimposed upon each other. The indigenous population had been effectively removed from the area, though the Waiãpi had a significant presence just to the north of the Jari region in central Amapá and a small community of Aparai was situated along the middle Jari River, also to the north of the region.

DEVELOPMENT COSMOGRAPHIES

By the 1950's, a new development ideology was emerging throughout Latin America centered around five key elements: import-substitution; rapid industrialization; nation-building; agrarian reform; and national security doctrines. During the sixties, Brazil and Ecuador, along with other Amazonian nation-states, opened the floodgates into their respective Amazonian lands and 'development' poured into them in such intense ways that the existing indigenous and *caboclo* territories would be radically altered. Regional frontiers that had been opened and closed in the past, would be reopened with the arrival of new social actors who installed development cosmographies, introduced new technologies and markets into Amazonia, and created new types of territories.

In Brazil, the State-run Superintendency for the Development of the Amazon (SUDAM), created in 1966, financed the installation of immense cattle ranches, while during the seventies two National Integration Plans (PIN I and PIN II) opened up major new roads in the jungle and promoted its massive colonization. By the eighties, the State's development interests had shifted to mining with the implementation of the Grande Carajás Mining Complex in Pará and the North Corridor (*Calha Norte*) national security program. In Ecuador, Amazonian development programs of the seventies promoted the dual strategy of oil development and agricultural colonization. By the eighties, this expansive drive included the installation of several large African palm plantations and a major wave of industrial logging.

The ideology of conquest, translated now into the notion of “taming the jungle,” would be principally implemented through the twin pillars of large-scale development projects and massive waves of colonization. The former represented a form of ‘internal colonialism’ while the latter unleashed waves of ‘internal colonization.’ Both would occur within the hegemonic nationalist framework of the nation-state, though this was directly influenced by and dependent upon global forces. Each method harbors specific territorial dimensions which stem from the differential application by different social actors of development cosmographies. Two types of territories will be analyzed here —enclave territories and migrant territories— each representing a particular territorial variant of the development cosmographies just described. Enclave territories formed around installation of the petroleum industry in the Aguarico region in Ecuador and a massive tree plantation and wood pulp factory in the Jari region in Brazil. Both projects began in the late 1960s and by the 1970s had become the hegemonic territorial presence in their respective regions. A brief presentation of these enclave territories will be followed by a description of the related migrant territories —one rural, the other urban— simultaneously installed. These territories were superimposed upon existing indigenous and *caboclo* homelands.

Enclave territories 1: Petroleum development in the Aguarico region

Enclaves, whether political, ethnic, or economic, are characterized by two key elements. First, they require either a large or strategic geographical base of operations. Foreign subsidiaries of large firms would only enter into this category if they depend upon exclusive control of extensive areas of land within another country or geographical region (e.g. mines, plantations, ports). Second, these enclaves must have direct ties to groups or institutions located outside the host country or geographical region. Thus while enclaves are insulated from their direct territorial neighbors, they are linked to larger entities beyond these neighbors. By cutting across different geographic regions and articulating them within a particular structure, enclaves can simultaneously function at local, regional, national, and international levels.

Large-scale development projects, which continue a long history of extraction in Amazonia geared to meet the demands of ever-changing international markets, are modern examples of economic enclaves. The extractive nature of these enclaves is a key factor in their specific location within Amazonia. The territorial dimension enters not only through the specific geographic dispersal of resources but also in the way these locations represent “islands of syntropy” (Altvater 1993), i.e. sites of concentrated energetic order. Prospering within the world economic system structured by the ever-changing demands of the world market is achieved through the import of syntropy and the export of entropy (see also Bunker 1985). The implementation of petroleum development in the Aguarico region exemplifies this process.

Petroleum first entered the Amazonian scene with oil explorations beginning in 1921. After decades of unsuccessful searches, oil was finally struck on March 29, 1967, in what was then the Napo Province, and the oil age finally arrived to Ecuadorian Amazonia after much anguish and wishful thinking. During the succeeding five years, the construction of the 500-kilometer trans-Ecuadorian oil pipeline —stretching from the

Amazonian lowlands, up and over two Andean mountain ranges, before descending to the Pacific Coast port of Esmeraldas— culminated in Ecuador’s first oil exports in August of 1972 (Vega 1980: 91-2).

The coming of the oil industry to Ecuadorian Amazonia reopened the Aguarico regional frontier through the arrival of social actors who constructed new territories there. The petroleum industry united under one activity the actions of geologists who do the seismic explorations, engineers who drill the wells, pipe fitters who construct the pipelines, road crews who build roads, workers who pump the oil, truckers who transport materials, accountants who keep the books, managers who run the operation, and a host of support personnel. Another key social actor in the region were the armed forces installed in this newly christened national security zone to defend the nation’s oil.

These social actors formed a petroleum enclave that was tied to the outside world via oil and gas pipelines, roads, airports, satellite dishes, and telephone lines, while it has maintained itself relatively isolated from the local populations that live in within the oil concessions. The enclave territory that the oil industry constructed in Ecuadorian Amazonia was of a qualitatively different order than all previous types of territoriality. The use of advanced geological knowledge and seismic technologies afforded this new social actor access to parts of the Amazonian lands never before explored: the extreme depths of its subsoil. Since petroleum and gas, both located in underground deposits, are the resources that the oil industry seeks, and in fact is its exclusive interest in coming to the rainforest, the territorialities that they imposed upon this region were vertical as well as horizontal. The subterranean territorialities that they introduced were based upon access to and control of the subsurface minerals that lie beneath a particular surface land area. This type of subterranean territoriality has taken on the legal form of oil concessions, now standardized into 200,000-hectare rectangular blocks. Since the Ecuadorian State claims all subsurface rights in the country, it has granted itself the right to divvy up the land and parcel out concessions to the highest bidder.

The exploitation of vertical territories requires the existence of horizontal ones which inevitably impinge upon the horizontal territorialities of other peoples. The installation of the petroleum industry in Ecuadorian Amazonia was centered in the lands occupied by small groups of Cofán, Siona, Secoya, Tetete and Quichua peoples. Since the oil industry was occurring in the name of national development, hailed as being beneficial to all Ecuadorians (since supposedly all Ecuadorians wanted ‘development’), the national government simply ignored the existence of indigenous peoples’ homelands and did not formally recognize the historically based territorial rights that they represented. The occupation of indigenous lands by the oil industry was not considered to be encroachment, but rather a type of manifest destiny, this time launched under the banner of development which granted the nation the ‘right’ to colonize its ‘own’ lands. The result was a particularly acute form of superimposed cosmographies detrimental to the territorial claims of the indigenous peoples who have historically occupied this area, and in fact pushed the small Tetete group into extinction.

Enclave territories 2: The Jari tree plantation and industrial complex

While some large-scale projects are founded upon underground resources, others are attracted to Amazonia by its vast expanses of low density, forested lands. Amazonia offers the distinct advantage of “appropriating large portions of space. This possibility is facilitated by its territorial expanse, its low population density and its weak social organizations which are not capable of resisting this new appropriation” (Becker 1989: 11). Furthermore, the industrial nature of these enterprises was wholly new to the area and represented a radical break with all of the previous forms of tropical forest adaptation, both in terms of the scale and impact of operations. With industrial extraction and production, major infrastructure works are built which facilitate the arrival of large populations. Part of these workers are directly recruited by the project and enter into the territorial realm of the enclave, while others who migrate on their own accord in search of work do not have direct access to the enclave and are forced to create their own migrant territories. The installation of the Jari Project in the Jari region exemplifies these tendencies.

In 1967, U.S. billionaire Daniel Ludwig bought an enormous tract of land in Brazilian Amazonia where he would install a massive development project that would become one of the most polemical projects in the history of Amazonia. Ludwig bought out the Portuguese firm that was operating in the Jari region, which in turn had bought out the Brazil nut estate of José Júlio de Andrade two decades earlier. Ludwig sought to transform the jungle through the creation of modern enterprises using the most advanced technologies of the time. The centerpiece of this economic endeavor was to be a large tree plantation that would furnish raw material for a wood pulp (cellulose) plant to be installed by the time the first round of planted trees were ready for harvesting. He also implemented an enormous irrigated rice plantation, established a large kaolin mine and processing plant, and installed an extensive cattle and water buffalo ranch (Pinto 1986).

All of these activities transformed Jari from a ‘development project’ into an ‘industrial complex’ and created a multifaceted, territorial enclave. The Jari Project’s connections with the world outside of Brazil were predicated upon two interrelated sets of networks: sectorial networks tied to the paper (wood pulp and kaolin), timber, cattle, and rice industries; and the economic networks that formed Ludwig’s financial empire. Each of Ludwig’s Jari operations were structured according to the specifications and demands of the worldwide industries of which they were a small part, but it was their union as part of the unique Ludwig fortune that personalized the Jari Project and tied it most closely into the world economy. The Jari Project reproduced the Ludwig structure of enterprises that were scattered throughout the globe.

Though Ludwig sold the Jari Project to Brazilian national industrial interests under heavy pressure from the military dictatorship in 1982, the territorial assumptions that the Jari Project maintained over the years have varied very little between international and national ownership. Both relied upon the capitalist principles of absolute control over the land which was only subject to change through the mechanisms of buying and selling on the market. The Brazilian owners claimed legal ownership over the same contiguous, compact 1,632,121 hectares claimed by Ludwig in spite of the numerous questionable and contested land titles of these properties.

None of the varied ‘bosses’ and ‘owners’ of the various Jari enterprises recognized the land rights of the *caboclos*. Their *colocações* were located in this region and they claimed control over them through the Brazilian law of possession which granted them rights to the land due to their continuous physical occupation of the land. These possession

rights were a constant source of conflict which was never given its due by the national press or by the government, both of whom were more concerned with the issues of sovereignty and geopolitics.

Migrant territories 1: Rural colonization in the Aguarico region

The massive rural colonization of the Aguarico region by small scale farmers and the concentrated urban growth of the Jari region are both directly related to the installation of the two large scale projects just described, and led to the establishment of what we shall call “migrant territories” which represent still another territorial result of the development cosmographies that were implemented in Amazonia.

The principal means of advancing agricultural fronts into Amazonia was through the mechanism of colonization in which peasant families would settle these lands, cut down the forest, and place the land in agricultural production. The ‘logic’ of colonization that guided national leaders contrasted Amazonia, which contained large parcels of “empty lands” (i.e. not in agricultural production), with the intense land distribution pressures existing in other parts of the country. The mechanisms used to accomplish this varied between small-scale directed and semi-directed colonization programs and massive, unplanned colonization, with the latter supplying the greatest number of colonists in all of the Amazonian countries.

The policy of expanding the agricultural frontier was founded upon the practice of granting individual titles to the migrating farmers in what would represent a massive transfer of public lands to private control. As such the expansion of the agricultural frontier was part and parcel of a broader capitalist logic of private ownership of land and sought to bring new parcels of Amazonian land into the capitalist productive sphere. These policies essentially precluded autochthonous Amazonian peoples as valid members of the national society, since they failed to recognize these peoples’ claims to the lands they had historically occupied and explicitly encouraged the invasion of these lands in the name of some vague notion of territorial security.

In the Aguarico region, a road connecting the town of Lago Agrio, the center of petroleum development, to Quito, the Ecuadorian capital, was completed in 1971, giving this region modern land access to the rest of the country for the first time in history and the oil industry opened up an extensive network of roads within the area in order to build pipelines and gain access to the wells. This new land access was promptly taken advantage of by thousands of colonists who were eager to lay claim to tracts of land where they could farm and ranch and produced a first wave of colonization in this area that lasted throughout the 1970s. Roads are of fundamental importance to the colonist enterprise because they provide direct and easy access to the land and facilitate the marketing of crops produced on the farm.

Land is the principal resource that the colonist seeks in his migration to the jungle. For the colonist, Amazonia does not represent a tropical jungle, nor a set of forest extractive products, nor a potential gold mine, but a place where land is available. And this land exists for agriculture, since that is the main function that the colonist has used in the past to make a living. Although subsistence crops are grown by the colonists, the goal of

the farm is to produce crops to be sold on the market. Income from occasional work with the oil companies provides much needed cash income, but this is at best an expedient; the goal remains to gain cash income from the agricultural production of the farm.

Once these new colonists were settled on the land, they sought political and administrative means to consolidate their territorial claims to the region. An implicit political strategy employed by the colonists was to use their voting rights as citizens within a national body politic, rights carried with them from their place of migration, as a means of pressuring the government to recognize their presence. A key element in this strategy is the establishment of ever-smaller political-administrative divisions within the state structure, which are then used to consolidate local power and push for increased state services and infrastructural works. In 1989 the province of Sucumbíos was created from the northern portion of the Napo province since the colonist and petroleum populations had grown sufficiently to justify the establishment of a new province. At a local level, this struggle was waged over the creation of new counties and parishes, efforts which culminated in the tripling of the number of counties within the area encompassed by the Sucumbíos province between 1982 and 1994. These victories further altered the territorial dynamic of the area while serving to integrate it administratively and political into the Ecuadorian state.

In all of these efforts, the colonists do not see themselves as ‘invaders’ of indigenous lands. From their agriculturally-based market perspective, this land is essentially unused and appears to exist in sufficient quantities that it can support Indians and colonists alike. Since colonists do not practice or understand the extensive ecological bases of indigenous adaptation, these are seen as ‘inefficient’ and result in the ‘exaggeration’ of the amount of land needed by a small indigenous community to support themselves. The colonists are reinforced in these beliefs by the government agencies which encourage colonization and by the oil industry which seeks access to the hydrocarbon resources located under indigenous lands. The colonists are unable to see that the historical occupation of the land by indigenous peoples is based upon a completely different set of ecological and social principles, linked to a cosmographies radically different from development ones of which they are a part, and hence the problem posed by superimposed cosmographies is not directly perceived.

Migrant territories 2: Improvisational urbanization in the Jari region

The industrialization of Amazonia was founded upon a set of state policies that included installing large-scale development projects in rural areas, expanding the existing industrial sectors of urban areas, creating free trade zones, and building hydroelectric dams to provide the electric power needed for industrial development. All of these efforts required the movement of large numbers of people to Amazonia where they would serve as a cheap labor force for these varied projects. In this variant of frontier expansion, jobs become the main resource that Amazonia has to offer. The creation of a stable workforce required the concentration of large numbers of people in one place which created the need to urbanize the jungle. As Becker (1989: 17) points out, “the project of the integration of Amazonia was predicated upon urbanization as the logistical base of its settlement, justified

by the necessity of offering attractive living conditions to the migrating population.”

The emergence of the towns of Laranjal do Jari and Vitória do Jari, in the Jari region are clearly a part of this larger process. The establishment of these two towns is an expression of a development cosmography as it has been appropriated and implemented by thousands of poor migrants. The town of Laranjal do Jari began in 1968 with a few scattered houses —built on stilts over the floodplain of the Jari River in typical *caboclo* style— along the eastern side of the river in what was then the Federal Territory of Amapá and earned the name of Zona Franca (Free Zone) (Raiol 1992). In the span of just twenty-five years, the population of this town had soared to 30,000. This rapid growth had created numerous problems such as lack of basic health and hygiene infrastructure, a shortage of schools, high crime rates and chronic diseases.

The installation of a wood pulp and a power plant by the Jari Project at the port of Munguba in 1978, located approximately 20 kilometers downstream from Monte Dourado on the western (Pará) side of the Jari River, gave impetus to the growth of another riverside settlement, called Vitória do Jari, also located on the eastern (Amapá) side of river just across from Munguba. Vitória do Jari also experienced a rapid growth pattern, reaching 10,000 people in its first two decades of existence, and suffered from a similar set of problems as Laranjal, its neighbor to the north.

These two towns have generated a unique territorial dynamic of their own as urban centers with their own needs and interests, one that is increasingly divorced from and exists in opposition to the Jari Project. The growth of Laranjal do Jari, for instance, has been spurred by many economic activities that are no longer directly tied to the Jari Project. These activities include new roles as a commercial center, a port, as a jumping off point for gold miners, and as a source of employment, most notably in the areas of construction and government jobs. Economic activity revolving around the largely illicit timber industry also provides jobs in the felling of trees, in sawmills and lumberyards, and in the construction of houses and boardwalks.

As in the case of the Aguarico region, the territorial strategy of these inhabitants is directly related to their demographic power and has focused upon the establishment of new political-administrative units by the government. Through this strategy, the local inhabitants ostensibly gain: (1) greater representation within the government; (2) access to financial resources earmarked for each governmental administrative unit; and (3) greater control over local affairs since the decision-making bodies are located within the region. In Brazil, this process is carried out at state, municipal, and district levels. Key accomplishments of these efforts were the granting of statehood to the Federal Territory of Amapá in 1988 and the creation of the new municipalities of Laranjal do Jari and Vitória do Jari in 1977 and 1994, respectively.

ENVIRONMENTAL COSMOGRAPHIES

The accelerating destruction of the world's tropical rainforests became one of the central issues of the worldwide environmental movement during the 1980s and was addressed from a variety of perspectives. The issue of tropical rainforests has specific geographical coordinates, i.e. those countries within the tropics that still have rainforests. Of all of these forested lands, Amazonia represents the largest single block of rainforest in the world, accounting for approximately 40% of the world total. Thus it is not surprising that within the rainforest issue, Amazonia became a privileged site of struggle and attention and turned into an issue in and of itself which has ecological, social, economic and historical implications that go far beyond the narrow scope of concern over the destruction of the rainforest. Amazonia was appropriated into the international environmentalist discourse as a world biome, a perspective which posed deforestation, the activity that most radically alters existing ecological relationships, as the most serious problem facing the rainforest. As the rate of deforestation increased dramatically during the 1980s, this topic became the principal cause of alarm and the rallying cry of environmentalists to the exclusion of almost all others.

By the mid-1980s, an environmental front had coalesced in Amazonia and the diverse set of social actors who comprised it began to establish new regional frontiers (Onis 1992: 173-248). New environmental programs were established in order to reverse the deforestation trend and remake Amazonian policies in an ecologically-sound mold. The environmental front introduced a series of new (and not so new) activities into Amazonia such as the implementation of agro-forestry projects, the restoration of deforested lands, the demarcation of Indian lands, the harvesting and marketing of forest products, the application of selective logging techniques, biodiversity prospecting, ecotours, and environmental education seminars. By pursuing their own interests, which in one way or another are related to environmentalism, the diverse social actors of the environmental front created a political space filled with new alliances formed around specific goals, created new contradictions, and produced the partial overlap of political interests amongst them.

The unique appropriation of the environmental discourse by these varied social actors based upon their specific interests has concrete territorial dimensions, thus giving substance to the notion of environmental cosmographies while at the same time requiring that it be a broad-based one. Two types of environmental territorialities will be dealt with here: preservationist territories and sustainable use territories. Environmental cosmographies have been superimposed over development ones just as the latter have been superimposed over preceding cosmographies. There was a difference now, however, since the superimposition was coming so quickly on the heels of the previous one, accelerating the process of change and making it ever more complex.

The two preservationist territories to be analyzed here —the Cuyabeno Wildlife Production Reserve in the Aguarico region and the Jari Ecological Station in the Jari region— are contemporary examples of these complexities. This will be followed by an analysis of the sustainable use territories of the enlarged Cuyabeno Wildlife Production Reserve in the Aguarico region and the Cajari Extractive Reserve and the Maracá Extractive Settlement Projects in the Jari region.

Preservationist territories 1: Cuyabeno Wildlife Production Reserve (1979-1991)

The establishment of governmentally sanctioned protected areas —national parks, wildlife sanctuaries, wilderness areas, forest reserves, etc.— is a defining practice of the wilderness preservation current of the environmental movement and represents the clearest expression of its territorial dimension. This movement began in the United States and Great Britain during the latter half of the nineteenth century (McCormick 1992). By mid-twentieth century it had gained a significant presence in the policies of several South American nations. In Amazonia, the installation of protected areas started slowly but quickly became an essential part of the territorial structure of most Amazonian nations. Peru was the first nation to establish protected areas in Amazonia, with the creation of the Pacaya Reserve in 1940 and the Samiria Reserve in 1954, both in the Marañón River basin. The first national park in Amazonia was the Araguaia National Park, established by the Brazilian government in 1959 in what is now the state of Tocantins. During the 1970s and 1980s, 86% (28% and 58% respectively) of all existing protected areas in Amazonia were created (Rojas and Castaño 1991: 65-75). This twenty-year period witnessed the formal installation of this current of environmentalism in Amazonia and is the temporal referent for understanding the way that these ‘preservationist territories’ competed with and were superimposed upon both enclave territories and migrant territories of development cosmographies which experienced peak installation during the 1960s and 1970s.

The establishment of the Cuyabeno Wildlife Production Reserve in 1979 by the Ecuadorian national government was clearly part of this new trend and placed it well within the bounds of the emerging environmental cosmographies being applied to Amazonia at this time. This Reserve encompassed the Cuyabeno River watershed located in the heart of the Aguarico region. The Cuyabeno River, the largest tributary of the Aguarico River, is a blackwater hydraulic system whose headwaters lie within the Amazonian lowlands where it drains most of the Amazonian lowlands located between the San Miguel and the Aguarico Rivers. The centerpiece of this area is the Cuyabeno Lakes district comprised of fourteen interconnected lakes and numerous seasonally inundated lands, making “the area a rare combination of rainforest and wetlands” (Nations and Coello 1989: 141). One of the key reasons behind the establishment of the Cuyabeno Reserve was the protection of the enormous diversity of faunal life found within this unique ecosystem.

This new cosmography was superimposed upon others that were already been established here, most notably indigenous and development ones, creating an increasingly complex and conflictive territorial dynamic. The establishment of the Cuyabeno Reserve directly affected two indigenous communities, Puerto Bolívar (Siona) and Playas de Cuyabeno (Quichua), located within its limits. This created initial conflicts between these communities and the governmental protected areas department, conflicts which would eventually be resolved through negotiations, as we shall see shortly.

Meanwhile, the western portion of the Reserve became the central battleground between two competing cosmographies: a developmentalist front advancing from the west comprised of the oil industry and agricultural colonists and an environmentalist one is resisting this invasion from the east. As the oil industry expanded into the area of the Reserve, it built new roads in order to gain access to newly drilled wells. As soon as these roads were built, colonists from other parts of the country began using them to stake out and settle upon 50-hectare plots. The numerous wells and roads in the Dureno and

Pacayacu area, towns located just outside the Reserve, made this a prime site for colonization. By the time the Reserve was established, as many as eight colonization lines had been established in this area, many of them within the Reserve's borders. Meanwhile, the towns of Tarapoa and Bellavista were well within the borders of the Reserve and all of the colonists in this area had plots within its limits. All of these developmentalist social actors sought to remove this portion of land from the Reserve and, in this way, put an end to the conflict with the environmentalists.

The social actors tied to environmental cosmographies were adamantly opposed to this solution. They argued that the Reserve was created to include an entire hydrographic basin and that this basin needed to be protected in its entirety. A social-legal argument was also made that claims that giving in to developmentalist forces would set a precedent that would encourage future invasions of this and other protected areas. While the environmentalist social actors did not possess either the political clout or the financial and human resources to turn the situation around, they were partially successful in slowing the developmentalist invasions and placing the environmental preservation of the area on the agenda.

Preservationist territories 2: The Jari Ecological Station

The establishment of protected areas introduces new social actors into the territorial struggles of an area and includes government bureaucrats, scientists from diverse disciplines, and environmentalists. This set of social actors exercises territorial control over protected areas even though, in many cases, they are both physically and culturally removed from the local populations that live in or near the geographical area to be protected. In addition to visits to the area, they have access to protected areas through the use of technologies such as satellite imagery, scientific studies, and photographs which permit them to 'know' an area in an indirect manner. Many Amazonian protected areas were drawn on a map and published in the federal register (which is what formally brought them into existence) by bureaucrats who had little, if any, first-hand knowledge of the area. But since they have considerable territorial power over this area, a power granted to them through the legal mechanism of the national protected areas system, they must be considered to be Amazonian social actors in their own right. This represents a major change in land management techniques since it turns the issue of territorial control over geographical areas into a bureaucratic and legal endeavor.

The Jari Ecological Station, created along the northern edge of the Jari Project by presidential decree in 1982, fits into this mold. The 207,307 hectares set aside by this ecological station for preservation and scientific research added a new and quite different layer of territoriality to this region. As first established it was located on the land between the Jari and Paru Rivers, south of the Carecuru River and north of the Jari Project in the Almerim municipality of the state of Pará. This area included the magnificent Paredão, a massive rock canyon that is part of the Plateau of Maracanaquara whose rocky terrain houses several large, natural clearings interspersed with numerous small niches rich in plant and animal life and many caves, and is surrounded by dense tropical forest. The biological, geological, and hydraulic wealth of the region provoked the researchers who

wrote the report to claim that “the natural ecosystems of this region have not yet suffered from human interference” (Castro and Elias 1981: 3). While this statement attests to the relatively unaltered state of these ecosystems, it neglects to mention that indigenous peoples have long used this area and that just a few kilometers north of the Paredão a small indigenous community of Aparai continued to live along the Jari River (CEDI 1983: 174-81).

The most serious crisis that the Jari Ecological Station faced in its early years was the invasion of the area by *garimpeiros* (wildcat gold miners). Though the middle and upper Jari River Basin had been the site of sporadic gold mining since the 1950s, with the astronomical rise in gold prices on the London market in 1979-80, “gold mines multiplied in all latitudes, provoking a gold rush without precedents” in the history of Amazonia (Salomão 1984: 62). The center of gold mining along the Jari River was located at the mouth of the Carecuru River, the northern border of the Jari Ecological Station, and by 1983 approximately 4000 gold miners had established themselves in the makeshift encampment there. By the mid-1980s, an estimated 5500 *garimpeiros* were working in the middle Jari River Basin during the peak seasons (CEDI 1983: 180-1). The reaction of SEMA, the government secretariat responsible for the Station, to this untenable situation was swift (by governmental bureaucratic standards). In keeping with its policy of avoiding social conflicts, and given the near impossibility of removing thousands of armed miners from the area, the boundaries of the Jari Ecological Station were modified in 1984, less than two years after their initial establishment. This new presidential decree removed from the Jari Station a large chunk of land south of the Carecuru River, the heart of the gold mining operations, and tacked on an even larger portion of land on the other side of the Jari River (in the state of Amapá), giving it a new size of 227,126 hectares.

The Jari Ecological Station suffered other threats in 1989 from the Jari Project which was in the process of switching all its new plantings to eucalyptus and was clearing native forest lands to expand this operation. Part of this expansion was to the north, activities which brought it ever closer to the borders of the Jari Ecological Station. Confronted with this expansion, IBAMA, the government environmental agency now responsible for the Station, decided to take forceful action and embargoed three Jari Project trucks loaded with freshly cut timber for lacking the proper authorization for cutting native forest in this area. The Jari Project did not challenge this embargo, choosing instead to halt its expansion to the north, and the Jari Ecological Station gained a 18-kilometer buffer zone of native rainforest along its southern border.

Sustainable use territories 1: Cuyabeno Wildlife Production Reserve (from 1991)

As the sustainable development discourse gained currency within the world environmental movement, the forms of resource use by autochthonous peoples began to be reevaluated and the contradiction between protected areas and local peoples began to lessen, as new forms of co-management of territories began to be sought. New proposals and practices were established whereby autochthonous populations would collaborate with government conservation officials in the control and use of protected areas while continuing to live within them. The use of the area, however, would now be done according

to formally established use patterns whose specific content was to be negotiated between the two parties involved. These developments led to the creation a new type of territoriality tied to environmental cosmographical principles.

The transformation of the Cuyabeno Wildlife Production Reserve from a preservationist territory to a sustainable use one exemplifies this process. On July 3, 1991, the Ecuadorian Ministry of Agriculture and Ranching expanded the Cuyabeno Reserve to the southeast to include the entire lower Aguarico River Basin from the mouth of the Cuyabeno River to the mouth of the Aguarico at the Napo River. This decree enlarged the Reserve from 254,760 to 655,781 hectares, nearly tripling its size.

By this time, the Ecuadorian tourist industry had grown in size and economic importance due to the growth in worldwide interest in Amazonia and was a major force behind the push to expand the Reserve and protect this rich rainforest. Just one week before the decree enlarging the Reserve was promulgated, Transturi Inc., the Amazonian operational division of Metropolitan Touring, moved its luxury liner “Flotel Orellana” from its previous base of operations in Limoncocha on the Napo River to the lower Aguarico River within the new boundaries of the Cuyabeno Reserve. It established two tourist encampments, equipped with cabins, boardwalks, and motor boats, at the Zancudococha and Imuya Lakes, and began selling package tours ranging from high luxury to high adventure. Thus when the Reserve was enlarged, it already had a major tourist operation functioning within it in exclusive form. In addition to Transturi, numerous smaller tourist companies, which had sprouted up the late 1980s in response to increased demand, began to conduct small-scale tours in the Reserve, and by 1991 thirteen different companies had been formally authorized to operate there tendency (PROFORS 1993: Anexo 3). This presence turned the tourism industry, together with the tourists who participated in the tours, into key social actors of the Cuyabeno Reserve.

The enlargement of the Reserve also expanded the role of its indigenous inhabitants. The new Reserve boundaries encompassed two other indigenous communities: the Cofán community of Zábalo and the Quichua community of Zancudo. With the incorporation of Cofanes, the Reserve now had to deal with segments of four different indigenous ethnic groups (Siona, Quichua, Shuar, and Cofán). In spite of the fact that the decree which expanded the Reserve stated that it should “promote the participation of the local population in the conservation of the area and in the benefit gained from the sustainable management of its renewable natural resources” (Registro Oficial 1991: 2), neither of these two communities were consulted prior to the Reserve’s expansion.

A new management plan was written for the enlarged Reserve by an interdisciplinary team of scientists. The central territorial innovation contained in the Cuyabeno Management Plan was its call for formal, written agreements (*convenios*) to be established between INEFAN, the governmental protected areas department, and the indigenous communities located within the Reserve which would outline the terms of co-management of specific areas. The co-managed territories proposed by this plan fused collective use principles (e.g. indigenous homelands) with State trust ownership ones (e.g. protected areas) whereby the State would maintain formal ownership of the land but would cede exclusive use rights to indigenous communities according to a set of written conditions negotiated and formally agreed upon by both parties. Each indigenous community would be designated a territory which they would use and manage in joint collaboration with the reserve rangers and other government conservation officials. While

this represented a territorial modality that did not exist in Ecuadorian law, by moving forward with these agreements, a de facto territorial entity —called sustainable use territories here— was established with its legal status still pending.

In all four indigenous communities entered into these agreements: Zábalo (Cofán); Puerto Bolívar (Siona); and Playas de Cuyabeno and Zancudo (Quichua). These four communities considered these co-management agreements as a formal recognition of their territories which was then used as a bargaining chip in their negotiations with the tourist companies. Since the four communities now had formal management duties over their respective territories, they claimed that they should also control and participate in the tourism that occurred with them. This created a another type of de facto territory —a tourist-indigenous one— in which tourist companies and indigenous communities entered into agreements stipulating the use of particular routes, the building of tourist infrastructure, and the hiring of personnel and revealed yet another variant of the notion of sustainable use territories. Though these agreements could not prohibit other tourist companies from using the area, since this control was formally in the hands of INEFAN, they could direct the tourist flow in ways that would directly benefit them. Through this joint collaboration, the Indians gained employment income and a ready market for their handicraft goods while the tourist companies gained cheap labor and the chance to offer encounters with ‘exotic, Indian tribes’ as part of their tourist package. Individual tourist companies preferred to negotiate directly with communities rather than with the ethnic confederations which represented these communities on a regional and national level since they had a great deal more leverage in the negotiations and would have to give far fewer concessions.

Sustainable use territories 2: Cajari and Maracá Extractive Reserves/Settlements

In Brazilian Amazonia, the rubber tappers, along with other extractivist populations, proved to be the key social force behind the movement for the creation of sustainable use territories. In their struggle to protect the forest from invasions by outside economic interests, primarily loggers and ranchers, they greatly strengthened their internal organization such that by 1985 they had formed the National Rubber Tappers Council, which gave them national visibility and political clout which they had never had before (Allegretti 1991). By this time they had entered into a tactical political alliance with environmentalists who were also interested in the protection of the rainforest.

The notion of ‘extractive reserves’ emerged from this interchange and contained the dual goals of ecosystem conservation and human use. This use was to be based upon the low-impact, long-term extraction or sale of renewable resources founded upon existing autochthonous use systems. The techniques used in these systems were to be improved upon through the incorporation of modern scientific knowledge and new technologies was also proposed. Agro-forestry systems based upon multiple forms of low-impact production are but one example of how local knowledge systems of autochthonous peoples are being combined with state-of-the-art western scientific knowledge to create new, sustainable means of profitably exploiting Amazonian ecosystems.

In 1987, the Ministry of Agrarian Reform and Development established the territorial modality of Extractive Settlement Projects within its administrative domain. The

modality of Extractive Reserves was established by Brazilian federal law in 1989 as a new type of governmental protected area, became a formal part of Brazilian environmental policy, and was placed under the responsibility of the IBAMA, which had been created earlier that year (IEA 1993: 123). A 1990 decree provided specific guidelines for the implementation of Extractive Reserves that defined them as “territorial spaces designated for the self-sustaining exploitation and conservation of renewable natural resources by an extractivist population” (Decree no. 98.897).

Meanwhile, the National Rubber Tappers Council was not limited to supporting rubber tappers, but also Brazil nut extractivists who lived in several parts of the Amazon. The Cajari and Maracá River Basins, located in the southern tip of the state of Amapá became the site of two new extractivist territories. Both rivers have their headwaters in the Iratapuru highlands of central Amapá, an area rich in natural Brazil nut groves which formed the ecological basis for extensive Brazil nut extractivism during the first half of the twentieth century.

Three Extractive Settlement Projects —Maracá I, II, and III— were created in 1988 as three contiguous projects of the lower, middle, and upper Maracá River Basin respectively, covering a total area of 363,500 hectares. In 1991, the local *caboclo* extractivists who lived in the Basin organized themselves into the Association of Agro-extractivist Workers of the Maracá Valley. The creation of the Cajari Extractive Reserve in 1990 set aside 481,550 hectares of the Cajari River basin in an area situated to the southeast of and contiguous with the Maracá Extractive Settlement Projects. In 1991 these local extractivists formed the Association of Workers of the Extractive Reserve of the Cajari River Valley. Together the Maracá Extractive Settlement Projects and the Cajari Extractive Reserve encompassed 845,050 hectares and formally and legally reaffirmed the extractivist vocation of southern Amapá. From a territorial perspective, the most important element of this large block of extractive land was the creation of a new type of social and political organization —the local extractivist associations— which were of a qualitatively different order than any other organizations that had existed before among the *caboclos*.

The most pressing challenge to these two extractivist associations arose from the multiple economic forces that sought access to these 845,050 hectares in order to exploit its many natural resources for private economic gain. The invasion of these areas by water buffalo ranchers and gold miners were two of the most persistent of these challenges. Another threat came from the commercial fishing boats that enter these two rivers where, through the use of predatory fishing techniques, they take large amounts of fish which are then processed, frozen, packaged, and shipped out to regional and national markets, leaving the local population without ready access to their key source of protein. The predatory cutting of assai palm trees for palm hearts is another activity controlled by external commercial interests which devastates natural palm tree groves and provides little economic benefit for the local population. The presence of illegal logging and clandestine sawmills is still another type of invasion that these two associations must confront. Finally, the invasion of lands within these areas by small-scale farmers who squat on lands next to the recently constructed state road represents a major threat to the territorial and ecological integrity of these areas (Little and Filocreão 1994: 101-113).

In spite of these many threats, in the span of a decade (1987-97), extractivist populations had made enormous gains in consolidating their political power and establishing territorial claims to the lands they occupied. Both the Maracá Extractive

Settlement Projects and the Cajari Extractive Reserve are legally established sustainable use territories in an incipient state of becoming economically profitable, socially viable, and ecologically sustainable.

CONTEMPORARY TERRITORIAL DISPUTES IN AGUARICO AND JARI

Within each of the two regions examined above, a diffuse and diverse set of alliances and conflicts was established by the multiple social actors with territorial claims within the area. Though each group seeks to gain political advantage to promote its territorial claims, the specific strategy and tactics employed may vary greatly. As such, the alliances and conflicts that develop can change according to the specific circumstances of the dispute and the historical moment.

In the Aguarico region, one can note the emergence of a two opposing, loosely-grouped, political alliances: one between indigenous communities, environmentalists and the ecotourism industry and the other between the petroleum industry and agricultural colonists. The unifying element of the first alliance is their common desire to maintain the forest in its standing state, free from environmental pollution. This unifying factor was employed in their struggle to stop the expansion of new oil development into the lower Aguarico River Basin during the early years of the 1990s, which included, among other events, the two-day occupation of a newly drilled oil well by the Zábalo Cofán community.

Yet this common factor has not always been sufficient to maintain the political unity of this tenuous alliance since the varied social groups also have a host of divergent interests which sometimes clash. The relations between the Ecuadorian protected areas department and the indigenous communities of the Cuyabeno area, for instance, has been marked by tension, and only time will tell if their joint collaboration in the co-managed territories of the Cuyabeno Reserve will continue to function smoothly. Meanwhile, tensions exist between the ecotourist industry and the indigenous communities over the proper distribution of profits generated by tourism to their tourist-indigenous territories. Finally, the presence of four distinct indigenous peoples in the Aguarico region is fraught with problems due to the long history of intertribal tensions between these groups.

On the other side of the political fence, the oil industry and the colonists have entered into a tacit political alliance due to their common interest in opening up the rainforest to the forces of modernization and development. A symbiotic relationship exists between the two groups, whereby the colonists benefit from the opening up of oil roads and the oil company gains a cheap labor force has helped maintain this alliance. Yet tension exists here too. The increasing amount of air, water and soil contamination caused by the oil industry has alienated many colonists who suffer directly from these negative environmental impacts. They also do not like the low salaries the oil companies pay them, though they are forced to accept them for lack of alternatives.

In the Jari region, political forces have become split among three separate groups or alliances: (1) the Jari Project; (2) the urban migrants/residents of Laranjal and Vitória do Jari; (3) and an alliance between the local *caboclo* extractivists and environmentalists. This triangular situation has provided for a complicated set of conflicts in which two groups may

ally themselves against the third in one set of struggles, while allying themselves with their former antagonists against the former allies in another.

In 1991, during the debates over the construction of a new road that would cut through the territories of the Jari Project, the Cajari Extractive Reserve, and the Maracá Extractive Settlement Projects, a tacit alliance was formed by the Jari Project, extractivists and the environmentalists against inhabitants of the urban centers of the area. The first group opposed the road's construction because of the high potential for the invasion of their territories by migrants and the environmental damage that would result from it. The second group sought quicker and more direct access to Macapá, the capital of Amapá, and saw the road as promoting the economic development of the wider region.

In a different conflict over territorial claims in Amapá, the extractivists of the Cajari Extractive Reserve were pitted directly against the Jari Project in a dispute over legal control of a large overlapping tract of land. In this battle, which is still in the Brazilian courts, the urban migrants tended to side with the Jari Project since they felt that access to the land, which was in their interests, would be easier under Jari Project control than if it were formally sectioned off as a federal protected area.

CONCLUSIONS

The quantity, magnitude and duration of territorial disputes in Amazonia makes this biome a highly revealing site for the study of human territoriality. In this study, the phenomena of perennial frontiers, with its incessant opening, closing and reopening of frontiers, finds ample empirical evidence in the history of the Aguarico and Jari regions. The continual superimposition of cosmographies and territorialities with the arrival of new social groups, each with their own economic and geographical interests and differential quotas of power, has led to a complex, still unresolved territorial dynamic in these two regions.

The comparative perspective employed here has allowed for the detection of key diachronic similarities concerning the emergence of pan-Amazonian cosmographies during the same historical epochs. This can be seen through the parallels exist between the Aguarico and Jari regions, two areas separated by over four thousand kilometers of tropical rainforest. During the Colonial epoch, mission and mercantile cosmographies were superimposed on indigenous ones, generating distinctive cases of ethnogenesis. During the Republican (Ecuador) and Imperial (Brazil) epoch of the nineteenth century, the superimposition of national and new mercantile (rubber) cosmographies in these regions added further complexity to their territorial dynamics. In the latter half of the twentieth century, first development and then environmental cosmographies were superimposed on these regions, provoking a new round of frontier disputes that are still active today. The installation of these many cosmographies in these two regions also produced structural similarities with regards to the types of territories as can be seen in the autochthonous homelands and enclave, migrant, preservationist, and sustainable use territories of each region.

A broad ethnographic approach has shown how social agents have been involved in the actual establishment of these territories and have made the two regional histories

unique. The parallel processes of ethnogenesis, for example, produced strikingly different results. In the Aguarico region, an *indigenous* Quichua-speaking ethnic group emerged out of the cauldron of ethnocide and came to dominate the area up until the arrival of development cosmographies. In the Jari region, a *caboclo* Portuguese-speaking ethnic group emerged from the long process of ethnocide but was generally subordinated by Brazilian imperial and republican governments.

The way social agency played itself out a national level was also distinct in the two regions. Ecuador lost large amounts of Amazonian territory to neighboring Peru and Colombia, while Brazil experiences territorial expansions with regards to all of its Amazonian neighbors. The different ways that alliances and conflicts in the two regions developed in contemporary territorial disputes are also worth noting. A two-way split occurred in the Aguarico region between developmentalist social actors (oil industry and rural migrants) on one side, and the environmentalist and indigenous actors on the other, alliances maintained only tenuously due to the significant internal divisions within each one. In the Jari region, a three-way split occurred between the Jari Project, the urban migrants of Laranjal and Vitória do Jari, and a tactical alliance between extractivists and environmentalists.

The way these territorial disputes are played out does not only depend on the political relations that exist amongst political actors within the region under discussion, but also the relationships that each of these social groups maintains with social actors and political forces located outside the region. In order to analyze these relationships, the factor of social scale must be introduced. My use of scale here borrows conceptual elements from the mathematical notion of fractals.

Fractal analysis was first developed in the work of mathematician Benoit Mandelbrot (1977), who created a novel type of geometry based on non-linear means of examining irregular shapes that sought to move beyond the centuries-old Euclidean geometry of regular shapes. The term fractal was derived from Latin *fractua* (irregular) but was also invoked by Mandelbrot to suggest ‘fractured,’ ‘fragmented,’ and ‘fractional’ (Briggs 1992: 22). The introduction of fractals into social theory is a hazardous exercise since one runs the risk of inappropriately transposing a mathematical concept to explain social realities that operate according to social, and not mathematical, criteria. At the same time, the refusal to employ a powerful concept (both in its functions as metaphor and theoretical construct) that could be useful in the analysis of new types of time-space interrelations simply because it comes from a different realm of knowledge would be foolish.

Fractal scaling in ethnography is concerned with delimiting and describing scales of view and then tracing the links between levels while simultaneously highlighting the ways that irregularities, random influences, unintended consequences have intervened between these levels. The technologies of time-space compression allow social actors tied to territories that exist at different levels to be in immediate contact with each other (Harvey 1989). Within each cosmography, social actors can construct human territories that *simultaneously exist at many different levels of social scale*. The degree of fractalness of territories (i.e. the number of levels at which they exist) is dependent upon the use of technologies that allow for their contact across levels (i.e. an increasing non-locality).

This fractal nature of the human territories installed in the two regions studied here introduces a different power dynamic in the use of claims to resolve territorial disputes. The

social actors of fractal territories at smaller levels of social scale use the social, political, economic, and discursive links they maintain with territories and social actors at larger levels as a power base that transcends their particular level. The magnitude of this power is dependent upon the amount of power wielded by social actors at larger levels and the access (or influence) that local actors have to those sources of power. Fractal power, then, emanates from the conjunctures of local autonomy and global interdependence. The exercise of fractal power relations not only requires that different levels of social scale be identified by social actors but also that they be strategically employed in daily struggles through the effective use of the fractal potential of interdependence.

The sources of power of environmental social actors, for example, stem from the growing social and discursive force of the worldwide environmental movement that has presented a compelling claim for the conservation of the Amazonian biome. Without these fractal power connections, the environmental cosmography would not have been able to challenge the development cosmography with the force that it did in both the regions studied here.

Most territories produced by the development cosmography are also of this mold, most notably the large-scale development endeavors such as the Petroecuador oil company and the Jari Project, both of which were created as fractal parts of larger industrial, technological, and financial entities. These fractal ties (and the accumulation of power they imply) catapulted them into a position of hegemony within their respective regions almost immediately upon their installation there. The rural and migrant territories are also fractal, though to a lesser degree than large-scale projects, since they rarely have direct global connections. Nonetheless, their migrant territories are founded in demographic movements within a nation-state giving them power connections as citizens within municipal, state/provincial, and national administrative units.

Territories tied to autochthonous cosmographies are the most local of all, and hence, the least fractal. However, as indigenous and *caboclo* groups become incorporated into larger political structures such as the nation-state and develop contacts with social actors tied to worldwide organizations they gain powerful links that strengthen their historical claims to territory. The formation of confederations and political organizations spanning national boundaries has placed these peoples into the international political arena where they have gained further support from their ties to organizations of international civil society, particularly environmental and human rights groups.

In summary, the dual perspective of superimposed cosmographies and fractal power offers insights into the broader issue of human territoriality. The identification of the differing cosmographies represents a crucial first step in delineating the human dimension of territories. Once this is done, further steps include a description of the specific social groups that maintain and defend these territories, an analysis of their fractal ties across the globe, determining the degree of hegemony that each territorial type has achieved, and the classification of these territories into different typologies.

One can also ask the historical question of whether all currently established territories were the result of disputes with other groups. The constant movement of peoples over past millennium seems to indicate that all regions of the world, at one point or another in their history, experienced frontier processes and hence, the territorial disputes that emerge from them. Thus, even those territories that appear to have an inalterable spatiality that is eternally fixed in time, probably, if one digs deep enough into their history, were

installed through conflict, incorporation, interpenetration, and/or accommodation with previously existing territories in some type of superimposition. This seems to suggest that territoriality, far from being a closed subject in human history, will remain open to new changes, such that the neatly colored maps that hang on our walls will need to change as well.

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