

## The Amazon as a Frontier of Capital Accumulation: Looking Beyond the Trees

*Sérgio Rivero and Paul Cooney Seisdedos*

### Introduction

There are few geographical references across the globe as universally recognized as the Amazon Rainforest. Despite this fact, neither much of its history nor its present is well known or understood. Thus, the image of the Amazon ranges from a pristine paradise with the greatest biodiversity on the planet to an area under attack by ruthless lumber companies burning and clearing vast expanses of forests, contributing to global warming, which threatens the survival of the planet. In this paper we present a brief history of the Amazon<sup>1</sup> and how recent developments have turned it into a capitalist frontier in the current era of globalization. Whether one considers the Portuguese colonization and extraction of spices, the famous rubber boom and bust around the turn of the 20<sup>th</sup> century, or major development projects related to mining, cattle, and lumber, which began during the Brazilian military dictatorship in the 1960s, there is a general sense that the Amazon is an “underpopulated” region available for the exploitation of its natural resources.

The reality of the Amazon does not fit into a simple categorization but is made up and determined by a range and complexity of both natural landscapes and socio-economic formations. The Amazon currently constitutes a frontier for capital accumulation, reflecting the confluence of processes both internal to the region and those imposed. These include the roles of national development projects and institutions as well as new social actors, such as NGOs, social movements, and especially transnational corporations (TNCs), which dominate an ever more globalized world economy. In the last two decades, the economic expansion in the Amazon has been increasingly integrated with world markets, primarily for soy, cattle, lumber, and minerals.

Globalization is not new to the Amazon, which experienced Portuguese conquest back in the 16<sup>th</sup> century followed by colonization and Portugal’s extraction of spices<sup>2</sup> and animal oils for the European markets.<sup>3</sup> The most well-known expansion in the Amazon was the rubber boom and bust from 1870-1910, at which point Malaysia came to overwhelmingly dominate the world market and undermine the Amazon’s rubber production. Such historical processes involved an insertion into the world economy that had substantial impacts on local societies; however, they did not constitute the basis for a lasting transformation of the Amazon in the sense of establishing the foundation for a full-fledged capitalist economy. Despite advances of capitalist relations, it seems clear that the industrial capitalist mentality, as reflected by the British entrepreneurs operating and achieving success in Malaysia, was either unable to take root or lacked the necessary elements to establish capitalist relations of production to dominate and expand in the Amazon at the turn of the 20<sup>th</sup> century.<sup>4</sup>

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<sup>1</sup> Despite the importance of analyzing the Amazon as a whole, which includes six different countries, this paper is restricted to the analysis of the Brazilian Amazon. The legal category “Amazonia Legal” is implied, unless noted otherwise.

<sup>2</sup> These spices are referred to in Portuguese as *drogas de sertão*, where the *sertão* corresponds to the hinterlands of Brazil.

<sup>3</sup> See Stephen G. Bunker, “Modes of Extraction, Unequal Exchange, and the Progressive Underdevelopment of an Extreme Periphery: The Brazilian Amazon, 1600-1980,” *The American Journal of Sociology*, Vol. 89, No. 5, March 1984, pp. 1017-1064.

<sup>4</sup> *Ibid.*, pp. 1033-1036.

Imperialist or colonial powers and national elites in the south/southeast of Brazil often promote the myth of a depopulated Amazon. As one soy developer recently claimed: “there are only trees here,”<sup>5</sup> a statement reflecting a perspective geared toward merely extracting basic resources and raw materials without considering local populations. This perspective was particularly evident in the development plans launched during the military dictatorship, which aimed to integrate the Amazon with the rest of Brazil<sup>6</sup> and establish cattle, mining, and agricultural production. The expansion of infrastructure projects and colonization combined with major government programs that provided fiscal incentives for agricultural production during the 1960s and 1970s laid the foundation for a future frontier of capitalist accumulation in the Amazon. In contrast to previous insertions within the world economy, the present phase of accumulation in the Amazon, has involved significant levels of investment, the use of advanced cutting-edge technology, and the presence of global actors to an extent not seen previously.

### **Original (Primitive) Accumulation and Beyond<sup>7</sup>**

The different attempts to exploit both the natural resources and local populations defined the historical transformations in the Amazon. The main examples are (1) the Portuguese colonization primarily in pursuit of spices (*drogas de sertão*) during the 16<sup>th</sup> and 17<sup>th</sup> centuries, (2) the rubber boom and bust from the end of the 19<sup>th</sup> century through to the early 20<sup>th</sup> century, (3) the military government’s drive to integrate the Amazon with the rest of Brazil in the 1960s and 1970s, and (4) the current phase of integration with the world market. Marx’s concept of original (primitive) accumulation and Harvey’s concept of accumulation by dispossession are useful in analyzing the advances and setbacks for the region; the impact on local, national, and foreign elites; and more importantly, how these transformations impacted the general population and environment.

### *Marx’s Analysis of Original (Primitive) Accumulation*

Marx argued that capitalist accumulation assumes the existence of both the production of surplus value and a class of wage-laborers, among other requirements such as a division of labor, markets, the rule of law, etc. Yet, for society to reach this point of accumulation, there is a need for both an “original,” or previous, accumulation<sup>8</sup> to have taken place and the existence of a class of “free” wage laborers available for capitalist accumulation. This is the basis of Marx’s discussion, “The Secret of Primitive Accumulation,” in Chapter 26 of Volume 1 of *Capital*. Consider the following description by Marx:

...original accumulation, the “previous accumulation” of Adam Smith (Bk. II, Introduction) which precedes capitalist accumulation; an accumulation which is not the result of the capitalist mode of production but its point of departure.<sup>9</sup>

In the above definition there is no reference to forced expropriation of workers unlike the following quote from the same chapter:

So-called original accumulation, therefore, is nothing else than the historical process of divorcing the

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<sup>5</sup> Cited in C. Steward, “From Colonization to ‘Environmental Soy’: A Case Study of Environmental and Socio-economic Valuation in the Amazon Soy Frontier,” *Agriculture and Human Values*, 24, 2007, pp. 107-122.

<sup>6</sup> The slogan adopted by the military government during the 1960s to promote migration to the Amazon from Brazil’s northeast was “the land without people for people without land” (*a terra sem homems para homems sem terra*).

<sup>7</sup> The English translation of the German term *ursprungliche akumulation*, was “primitive accumulation.” However, in our view and others, the term “original accumulation” seems more adequate, since Marx is attempting to analyze the accumulation that preceded full-fledged capitalist accumulation. Therefore, throughout this paper where the term original accumulation is used, one should understand it to be referring to the traditional term, primitive accumulation.

<sup>8</sup> See Marx’s reference to Adam Smith’s term “previous accumulation,” *Capital* (New York: Vintage Books, 1977), Ch. 26, p. 874.

<sup>9</sup> *Ibid.*, p. 873.

producer from the means of production. It appears as “original” because it forms the pre-history of capital, and of the mode of production corresponding to capital.<sup>10</sup>

Marx is arguing that in order for full-fledged capitalist production and accumulation to come into existence, there had to be both a previous accumulation of wealth under non-capitalist conditions and the transformation of laborers or freeholders into wage laborers. In this latter sense, there must be wage laborers who do not own the means of production, which they need if they are to produce for themselves. These wage-laborers are “free,” then, in a twofold sense: they are free, unlike serfs or slaves, who are tied to the land or to a master, and they are also “free” of the means of production necessary to produce their own subsistence, which means they must sell their labor power in order to survive.

In Chapter 27, “The Expropriation of the Agricultural Population from the Land,” and Chapter 28, “Bloody Legislation against the Expropriated since the End of the 15<sup>th</sup> Century,”<sup>11</sup> Marx elaborates on the use of legislation, illegal schemes, fraud, and violent means—often outright pillaging—employed in the historical transition toward capitalism. He presents the classic example of England and the Enclosure movement, considering the period from the end of the 15<sup>th</sup> century through the 18<sup>th</sup> century—a massive expropriation of peasants from their lands, which forced them to become wage laborers. He elaborates on the range of means the state used to achieve this violent transformation.

The original (primitive) accumulation that precedes capitalism, as referred to in the first citation of Marx above, is not applicable to subsequent expropriation of populations once capitalist relations are established in a given region. Therefore, we refer to this interpretation as original accumulation in the *strict* economic sense; the interpretation that emphasizes the historical expropriation of populations constitutes original accumulation in the *broad* political economy sense.

Many of the analyses of transitions to capitalism or expansion of capitalism into areas not dominated by modern industrial capitalism have often used the category of original (primitive) accumulation to characterize the types of major historical transformations that Marx describes. Yet, if one were to interpret the concept of original accumulation as only that accumulation of wealth required prior to the existence of capitalist relations of production, many historical examples would not be original accumulation in the *strict* economic sense.

### *Luxemburg’s Contribution*

In her classic work, *The Accumulation of Capital*,<sup>12</sup> Rosa Luxemburg presented an insightful analysis of the interaction between established imperial powers and the pursuit of economic and political control of the periphery, which was at the time often still dominated by non-capitalist relations of production. She argued that because of the problem of underconsumption, capitalism has a tendency toward stagnation and therefore needs to seek markets for labor and goods in the non-capitalist regions of the globe, “outside” of capitalism proper.<sup>13</sup> She argued that the relations between capitalism and non-capitalist modes of production often involve the use of “force, fraud, oppression and looting,” and in contrast to a *strict* economic interpretation of Marx’s concept, the category of original accumulation is not only relevant for

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<sup>10</sup> *Ibid.*, pp. 874-875.

<sup>11</sup> *Ibid.*

<sup>12</sup> Rosa Luxemburg, *The Accumulation of Capital* (New York: Monthly Review Press, 1968).

<sup>13</sup> There has been substantial debate regarding Luxemburg’s argument that capitalist accumulation requires the exploitation of areas outside of capitalism to survive. The general critique of this position is that investment anticipating future production provides the additional demand, and therefore capitalism does not have an inherent tendency toward stagnation and underconsumption. For further discussion, see Michael Bleaney, *Underconsumption Theories* (London: Methuen, 1976).

an earlier period of pre-capitalist history but essential in understanding the functioning of modern capitalism.

Some say this may have been relevant for the period Luxemburg was writing, but since there are no longer countries dominated by non-capitalist relations, it is no longer useful in analyzing historical processes today. However, the issue is not simply one of the presence or domination of capitalist relations of production, but rather the strategies and tactics pursued by both capital and supporting states in achieving the conditions that most favor capitalist accumulation. In this regard, the parallels remain valid for our understanding of transformative historical processes that involve the expropriation of populations.

### *The Concept of Accumulation by Dispossession in Harvey*

In his recent work, *The New Imperialism*,<sup>14</sup> David Harvey considers the category of original accumulation. He cites Luxemburg and Arendt, who both argued that this concept is relevant in analyzing historical transformations involving major dislocations of populations and the privatizing of the commons, and thus it is crucial for our understanding of accumulation in modern capitalism. For example, he refers to the following interpretation by Arendt:

The processes that Marx, following Adam Smith, referred to as “primitive” or “original” accumulation constitute, in Arendt’s view, an important and continuing force in the historical geography of capital accumulation through imperialism.... If those assets, such as empty land or new raw material sources, do not lie to hand, then capitalism must somehow produce them.<sup>15</sup>

As Harvey points out, the transformative processes involving fraud, pillage, and violent uprooting of thousands of freeholders, as in pre-capitalist England, continued to exist well beyond the establishment of capitalism in many parts of the globe and through to the present day. Harvey further argues for the need to analyze those historical processes that do not fit into a strict economic interpretation of capitalism’s functioning “under conditions of peace, property and equality.” He points to the limitation of Marx’s analysis in *Capital*, where the assumptions made correspond to classical political economy, namely, the establishment of capitalist markets, rule of law, etc. In light of this limitation, Harvey introduces the new concept of accumulation by dispossession:

The disadvantage of these assumptions (classical political economy) is that they relegate accumulation based upon predation, fraud, and violence to an “*original stage*” that is considered no longer relevant or, as with Luxemburg, as being somehow “outside of” capitalism as a closed system. A general re-evaluation of the continuous role and persistence of the predatory practices of “primitive” or “original” accumulation within the long historical geography of capital accumulation is, therefore, very much in order, as several commentators have recently observed. Since it seems peculiar to call an ongoing process “primitive” or “original,” I shall in what follows substitute these terms by the concept of “*accumulation by dispossession*.”<sup>16</sup> (emphasis added by authors.)

Harvey argues that Marx’s analysis of primitive accumulation includes a “wide range of processes,” in particular, “the commodification and privatization of land, and the forceful expulsion of peasant populations... suppression of rights to the commons.” Following Marx, Harvey emphasizes the key role of the state in transforming property rights, often at the expense of traditional or indigenous societies. He argues that the state, which uses violence and also dictates laws and whether or not to enforce them, was crucial for the establishment of capitalist relations and continues to be so for the continued expansion of

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<sup>14</sup> David Harvey, *The New Imperialism* (New York: Oxford University Press, 2003).

<sup>15</sup> *Ibid.*, p. 143.

<sup>16</sup> *Ibid.*, p. 144.

capital across the globe. In the Amazon, as previously noted, the state's role in development strategies was crucial in producing the transformations from the 19<sup>th</sup> through till the 21<sup>st</sup> century.

### *Relevance for the Amazon*

Given the fact that non-capitalist socio-economic formations have existed in the Amazon for centuries (and arguably still do, though to a much lesser degree), as one considers the transformation of non-capitalist into capitalist production relations, an argument for employing the category of original accumulation could be and has been made.<sup>17</sup>

Periods of capitalist expansion in the Amazon require both workers—whether they be peasants, *caboclos*, *colonos*, or *seringueiros*<sup>18</sup>—and the ability of capitalists to obtain access to land occupied by either peasants, indigenous groups, or traditional communities. They need this land in order to acquire property rights and insure full control of production on the land, which serves as a key input, whether for rubber tapping, lumber, agricultural and cattle production, or mining.

The historical process of driving people off their land in the Amazon is consistent with Harvey's concept of "accumulation by dispossession." However, if the primary aim of the capitalists or *latifundiários* is to obtain access to the land rather than the formation of wage laborers, Marx's category of original accumulation even in the *broad* sense does not apply. And in the case of capitalists who have been accumulating land for decades in São Paulo, Goiás, or the South of Brazil, and who are simply expanding geographically, the *strict* sense of original accumulation clearly does not apply.

In any event, many of these changes through to the present day unfortunately involve the use of force and violence. As Marx pointed out, "In actual history, it is a notorious fact that conquest, enslavement, robbery, murder, in short, force, play the greatest part [in enforcing property rights]." In other places and periods, existing property rights are often not enforced but ignored, and new rights are established in favor of the dominant classes, be they feudal lords, slave owners, or Amazonian *fazendeiros* (large plantation owners).

The current processes of expansion in the Amazon do not correspond to original accumulation in the strict economic sense that Marx wrote about in describing pre-capitalist England. They do, however, clearly fit with Harvey's concept of accumulation by dispossession, because the historical processes involving expropriations of populations through violence and fraud<sup>20</sup> continue to occur in response to the needs of capitalist accumulation. This is true whether the capitalists need wage laborers for agricultural production or simply want control of the land for production purposes and/or speculation. The transformation taking place in terms of dominant social relations of production in the Amazon is forcing large numbers of peasants or riverine people to move to the city and become informal laborers. The upshot for them is a transformation of the relations that had previously dominated their and their families'

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<sup>17</sup> For example, see João Antônio de Paula, "Amazônia: a Fronteira e Acumulação de Capital," in Sérgio Rivero and Frederico G. Jayme, Jr. (eds.), *As Amazônia do Século XXI* (Pará: Editora Universitária UFPA, 2008).

<sup>18</sup> In this paper we use the word *caboclo* to refer to the traditional non-Indian populations of the Amazon. The term *seringueiro* refers to the population involved with rubber extraction, and the word *colono* refers to the population of smallholders that migrated from 1970 and after to the Amazon. These definitions are somewhat schematic and will be used in this paper with only this specific meaning. A discussion about the meanings and anthropological weight of these denotations can be found in E.S. Brondizio, "Agricultural Intensification, Economic Identity and Shared Invisibility in Amazonian Peasantry: *Caboclos* and Colonists in Comparative Perspective," *Culture & Agriculture*, 26, 2004, pp. 1-24.

<sup>19</sup> *Ibid.*, p. 874.

<sup>20</sup> See Ariovaldo U. De Oliveira, "BR-163 Cuiabá-Santarém: Geopolítica, grilagem, violência e mundialização," in *Amazônia Revelada: Os descaminhos ao longo da BR-163* (Brasília: CNPq, 2005) for a discussion of violence associated with expropriations during the dictatorship, especially regarding the issue of genocide in the state of Mato Grosso.

lives.

## Historical Processes of Accumulation and Frontiers in the Amazon

According to the Webster dictionary, the definition of frontier is “that part of a country which fronts or faces another country or an unsettled region or the border of the settled and cultivated part of a country.” Frontier in this regard is the border that divides the known or organized space from another space that is unknown or slated to be conquered. More than just a theoretical concept, the frontier is a powerful metaphor that establishes the space of transformation, change, and conquest.

Frederick Jackson Turner, writing in 1921, provides a compelling use of the frontier metaphor.<sup>21</sup> According to Turner, the presence of open areas in the U.S. West was the most important factor in explaining the development of the United States. In fact, Turner claimed that the frontier, with its “*free lands*,”<sup>22</sup> is the fundamental source of American democracy. These areas were often settled by immigrants and, Turner claimed, thus contributed to avoiding social conflict and helped form the unique character of the American (U.S.) people. For Turner, these *free lands* generated opportunities of social improvement for the part of the population that chose to migrate to the West in a way that could not happen in Europe.

In Latin America this phenomenon was much less the case.<sup>23</sup> In fact, beyond Portuguese colonization, the occupation of the Brazilian native lands was achieved through various waves of migration that were mainly determined by economic cycles associated with the exploitation of natural resources, such as spices (*drogas do sertão*), gold, rubber, sugar cane, coffee, cotton, and more recently, cattle ranching and soy production. Thus, Latin America did not have *one* frontier but a succession of processes involving economic occupation of lands, which resulted in a sparse distribution of the population in the areas that were considered *frontier lands*. In the middle of the 19<sup>th</sup> century, a new frontier in the Amazon connected to the global economy developed: rubber. The growing need for both bicycles and then cars made rubber an important commodity, and subsequently its extraction and production grew exponentially. By around 1870, rubber production and associated economic activities were going strong.

### *Rubber: Boom and Bust*

In the Amazon Basin, a major occupation pattern occurred along the rivers, where *seringueiro* populations used the available land to collect rubber or Brazil nuts.<sup>24</sup> These populations migrated to the Amazon Basin in two successive waves connected to rubber production. The biggest economic boom for the Amazon began at the end of the 19<sup>th</sup> century and lasted till 1910. The second wave was prompted by a mini rubber boom from 1942-1945. The migrants who came from the Northeast were referred to as the “soldiers of rubber,” because these *seringueiros* were called upon by the government to go to the Amazon to make their contribution to the war effort against Nazism in the “battle for rubber.” Once Malaysia had been taken over by the Japanese, the supply of rubber to the Allied powers was jeopardized. The U.S. attempted to make up for the lost supply by promoting and financing rubber production in the Amazon.<sup>25</sup>

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<sup>21</sup> Frederick Jackson Turner, *The Frontier in American History* (New York: Henry Holt & Company, 1921).

<sup>22</sup> The existence of *free lands* in the U.S.A. or in Latin America is obviously a myth constructed to justify the expropriation of Native American populations.

<sup>23</sup> L.O. da Silva, “Fronteira e Identidade Nacional,” in Hugo Cerqueira (ed.), *Anais do V Congresso Brasileiro de História Econômica e 6ª Conferência Internacional de História de Empresas* (Caxambu, MG: Cedeplar-UFMG, 2003).

<sup>24</sup> See Euclides da Cunha, *Canudos e Outros Temas* (Brasília: Senado Federal Brasileiro, [1910], 2003), Chapter: O Povoamento e a Navegabilidade do Rio Purus, pp. 169-188. *Serengalistas* were considered landowners but actually just controlled the land owned by the government through the use of force to insure the extraction of rubber.

<sup>25</sup> See de Paula, “Amazônia: a Fronteira e Acumulação de Capital,” 2008, p. 31.

From 1870 to 1910, rubber production in the Amazon drew an estimated 300,000 to 500,000 migrants from Brazil's northeast,<sup>26</sup> primarily to the states of Pará, Amazonas, and Acre. They migrated partly because of the ongoing problems of drought in the northeast, especially during the droughts of 1877-1879 and 1899-1900.

The rubber production system at that time was based on a form of indentured servitude (semi-slavery) using debts that were forced upon the *seringueiros* (rubber-tappers) by the *seringalistas* in the “*aviamento*” system. Under the *aviamento* system, commercial capitalists would barter with the *seringalistas*, exchanging goods that included both foodstuffs and basic necessities as well as production inputs. The *seringalistas* would trade these basic goods for the rubber extracted by the *seringueiros*. The monetary compensation *seringueiros* received for the rubber they collected was so low that this arrangement was basically a form of indentured servitude that often kept *seringueiros* in debt for years. Under this system of credit, the *seringueiro* owed the *seringalistas*, who in turn owed the merchant house (*aviadora*), which owed the foreign merchants.<sup>27</sup> When the rubber boom cycle ended, the *caboclo-seringueiros* were left to their own fate. After two successive rubber extraction cycles, the *caboclo* population settled in these riverine areas, eking out their livings by combining extractive activities with small-scale agriculture. This *caboclo*-peasant<sup>28</sup> population has existed in the Brazilian Amazon Basin since the second half of the 19<sup>th</sup> century.

Thus, much of the *caboclo*-peasant population were northeastern migrants who came to collect rubber or were part of the unemployed urban population in the Amazon after the end of the first rubber cycle. These people produced and used the land, but unlike the Americans that settled in the U.S. frontier, they didn't have property rights. The social relations that persisted in the Amazon riverine area strongly reflected the land property rights and social norms and institutions produced by these relations. This situation is in very clear contrast to the patterns of white settler colonies, which also involved the undermining or genocide of non-white traditional societies.

In fact, the formal control of the land is the key issue that defines the occupation patterns in the Amazon region. The concession of large areas to local political leaders was necessary to establish land property rights in favor of the *latifundiários*. In contrast to the U.S., disposable land in the Brazilian Amazon at the end of the 19<sup>th</sup> century was under formal control by the merchant class or the State, which explains the subsequent accumulation processes there. In the Brazilian Amazon, four forces competed over the use of the land: a) the native indigenous population, which was the weakest of these forces; b) the *caboclo*-peasant population that settled mainly in the riverine areas or near the cities; c) the formal landowners, who partly abandoned the production systems once the rubber cycle came to an end (the collapse from 1910-1912); and d) the government, which used the *public lands* as political capital in order to negotiate support with the elites. These four competing forces disputed the space in the region, while the control of the production process varied depending on the demand for Amazonian products (mainly rubber, at the end of the 19<sup>th</sup> century). After the bust of the rubber boom in 1912, the main economic basis for the Amazon region became the *caboclo*-peasant production system, which persisted up until the 1960s.

### ***The Military Government and Policies of Expropriation and Capitalist Expansion***

After the coup of 1964, the military government implemented several policies and initiated major projects aimed at transforming the Amazon in order to lay the groundwork for an enormous expansion of

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<sup>26</sup> Fiorelo Picoli, *O Capital e a Devastação da Amazônia* (São Paulo: Editora Expressão Popular, 2006), p. 28.

<sup>27</sup> See Barbara Weinstein, *A borracha na Amazônia: expansão e decadência (1850-1920)*, trans. Lólio Lourenço Oliveira (São Paulo: Hucitec-Edusp, 1993), p. 38, referred to in Picoli, *O Capital e a Devastação da Amazônia*, 2006, p. 27.

<sup>28</sup> Francisco de Assis Costa, *Formação Agropecuária da Amazônia: os desafios do desenvolvimento sustentável* (Belém: NAEA, 2000).

agriculture, cattle production, and mining.<sup>29</sup> This involved the shifting of alliances, creating new institutions or transforming existing ones, facilitating major migrations, and expropriating the land and resources of local populations through both legal and illegal means. In 1966, the military government began its “Operation Amazonia” (*Operação Amazônia*) by implementing a new set of laws and establishing new institutions.

The Brazilian government set up SUDAM (the Development Authority for the Amazon),<sup>30</sup> which provided major fiscal incentives to landowners and capitalists from other parts of Brazil, mainly from the states of Goiás and São Paulo. The precursor to SUDAM was SPVEA (the Authority for the Valorization Plan for the Amazon),<sup>31</sup> which was seen by many as having failed to achieve the changes desired by the federal government. A major difference between the two institutions was the shifts in the alliances established with local elites. The military government came to have greater influence in the region with SUDAM, while the local elites lost ground in terms of their influence, which had been greater under SPVEA.

Another key institutional change, also in 1966, was the conversion of the Credit Bank of the Amazon (*Banco de Crédito da Amazônia*) into BASA (*Banco da Amazônia*), which had very strong ties to SUDAM.<sup>32</sup> Operation Amazonia’s main achievement was to turn national and international capitalists<sup>33</sup> into major landowners (*latifundiários*) for the agricultural and livestock production projects in the Amazon. Some have argued that SUDAM’s policy of fiscal incentives effectively resulted in a counter agrarian reform. Costa, for example, says that despite the military’s rhetoric of promoting agrarian reform, its policies led to the opposite, an increase in land concentration for the wealthy. He notes that “as a result of the modernization of *latifúndios*, the migration ... led to new structures for peasants.... in the Amazon.”<sup>34</sup> As further elaborated below, the military government encouraged the migration of peasants from the Northeast states and the south/southeast, in part to ameliorate serious land conflicts, which had been taking place from the end of the 1950s. These migrations, combined with shifts of local Amazonian populations, led to a new structure for the peasant populations, namely that of family agriculture.

During the 1970s, as a result of the programs and laws that had been implemented combined with major efforts to improve infrastructure in the region—primarily highways, such as the Transamazon Highway (BR-230) and BR-163—huge areas became available for speculation.<sup>35</sup> The fiscal incentives and profits resulting from increases in land prices generated extra profits for landowners, which initiated new patterns of land use, mainly low-productivity ranching. The logic of such investments was to open the forest to create pastures not simply for cattle production itself, but to appropriate the land as well, and therefore obtain the rents and gains associated with incentives, subsidies, and land prices. Thus, the key issue was not cattle production, but *land* as a commodity, if not in fact, as *capital*. Though the newly created pasture could only support low occupation rates (much less than 1 head/hectare), prices for occupied land rose rapidly, producing speculative gains for the landowners, which permitted the expansion of more capitalized agricultural production in the ensuing decades.

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<sup>29</sup> In addition to agriculture, livestock, and mining, there was also the development of a Free Trade Zone in Manaus (Zona Franca de Manaus) as one of the three main projects for the development of the Amazon.

<sup>30</sup> SUDAM, *Superintendência do Desenvolvimento da Amazônia*.

<sup>31</sup> SPVEA, *Superintendência do Plano de Valorização da Amazônia* (1953-1966).

<sup>32</sup> *Banco de Crédito da Borracha* was created at the time of the rubber boom. It was changed to the *Banco de Crédito da Amazônia* in 1942 and then later became BASA in 1966.

<sup>33</sup> There were many international firms buying up land in the Amazon at that time, e.g., Volkswagen, Coca Cola, and Pirelli.

<sup>34</sup> *Ibid.*, p. 80.

<sup>35</sup> Susanna B. Hecht, “Environment, Development and Politics: Capital Accumulation and the Livestock Sector in Eastern Amazonia,” *World Development*, Vol. 13, No. 6, 1985, pp. 663-684.



As mentioned above, from the end of the 1960s throughout the 1970s, a large number of capitalists and landowners took advantage of the incentives SUDAM offered and moved from the states of São Paulo and Goiás to the Amazon, mainly to Mato Grosso, Pará, and Rondônia. This migration along with a migration of landless peasants had a significant impact on the region. For example, in 1991 Mato Grosso had the sixth largest migrant population in Brazil, Pará had the eighth largest, and Rondônia the ninth largest. In 1991, over 62 percent of the population of Rondônia had been born in another state; for Mato Grosso this proportion was roughly 46 percent, and for Pará, 18.43 percent.<sup>36</sup>

One of the main mechanisms SUDAM used in its fiscal incentives was *grilagem*, the usurpation of lands by generating land titles, which trumped any legal claim by those who had occupied and worked the land previously. Thus expropriation came about through the migration of capitalists and landowners from the south, who were given a title through corruption of the land title authorities (*cartórios*) or by INCRA (the Institute for Colonization and Agrarian Reform),<sup>37</sup> which was allegedly “regulating” land titles. Many of these large landowners and capitalists—often recent migrants to the Amazon—claimed that no one before them had a title for a specific piece of land, and therefore it was now theirs, even if a family had been living on the land for generations. This “legal” usurpation also gave them the right to forcibly remove the occupants (*posseiros*) or indigenous groups who had been occupying the land. This necessarily involved a significant amount of violence and was often done by *jagunços*, henchmen hired by the private landowners. In several regions, such as Mato Grosso, the violence was characterized as genocide of indigenous groups.<sup>38</sup> The government also at times employed the army for the expropriation of peasants and indigenous populations.<sup>39</sup>

Lands were also being distributed to smallholders or farmers (*colonos*), particularly in areas near the Transamazon Highway (BR-230) and in the southwestern part of the Amazon region. These new farming regions were set up as a direct result of the military’s colonization projects and initially comprised properties of 100 hectares. Most of the colonists that came to the Transamazon region were from Brazil’s northeast. The small farmers that came to the southwestern Amazon were from the southern states of Brazil. The government promoted this colonist frontier, which became the foundation of the country’s agrarian policy and in turn spurred rapid modernization in the south and southeast of Brazil.

The workers who migrated to the Amazon were principally from two regions: the northeast states, mainly Maranhão and Ceará, and the south/southeast, e.g., the states of São Paulo, Paraná, and Rio Grande do Sul). Those from the south tended to be small landowners who had lost their lands due to modernization, because they couldn’t afford to spend money on expensive machinery and as a result couldn’t compete. Those from the northeast often migrated because of difficult economic conditions such as prolonged drought. The military government enticed migrants to “populate” the Amazon with the slogan “*homems sem terra para a terra sem homems*” (people without land for the land without people). Encouraging mass migration to the Amazon from the northeast and south of Brazil was also an attempt to reduce increasing social conflicts over land that were occurring in those regions during the 1970s.

The mass migrations to the two frontiers quickly began the process of clearing land to create pastures for cattle, an activity that became the main land use in the region for both large and small landowners. Hecht lays out several factors that explain the prevalence of cattle ranching in the Amazon, a particularly ecologically destructive practice in that region.<sup>40</sup> Given the fact that pasture now accounts for

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<sup>36</sup> IBGE, 1991, online at: <http://www.sidra.ibge.gov.br>.

<sup>37</sup> Instituto de Colonização e Reforma Agrária.

<sup>38</sup> See Oliveira, “BR-163 Cuiabá-Santarém: Geopolítica, grilagem, violência e mundialização,” 2005, p. 84.

<sup>39</sup> Consider the example of GETAT in the early 1980s in Pará.

<sup>40</sup> Susanna B. Hecht, “The Logic of Livestock and Deforestation in Amazonia,” *BioScience*, Vol. 43, No. 10, 1993, pp. 687-695.

approximately 70 percent of land use, ranching is the main deforestation driver in the Amazon. Aside from the general act of clearing so much forest, the specific creation of grazing pasture from Amazon forestland results in soil lixiviation, or the separation of nutrients from the base soil. For this reason, cattle ranching is particularly destructive in the Amazon.

Cattle ranching provides three additional sources of income for ranchers: increases in the price of land due to speculation, government incentives and subsidies, and income obtained from selling timber. The Brazilian government's subsidies and incentives for cattle ranching gifted the new landowners with huge profits. Cattle ranching has also been attractive for small farmers, who saw cattle as a low-risk asset. Aside from being quite flexible and easily adapted to different types of terrains, cattle are a relatively liquid asset with low maintenance costs.

At the end of the 1980s, the production patterns of the region started to change, with a rapid growth in capital-intensive agriculture, particularly soy plantations. From 1990-2007, the gross value of soybean production in the Amazon region grew by 21 percent per year, while cattle herds were growing at rates of 7 percent per year. The combination of the expansion of ranching and soy is a qualitative advance compared to the previous frontiers of colonization and land speculation. Both cattle and soy are strongly integrated with global markets and are far more capitalized than the other activities that dominated the region up through the 1970s and 1980s. In summary, this process of accumulation by dispossession fomented by the military government laid the groundwork for a qualitatively new phase of capital accumulation that is analogous to original accumulation insofar as what followed constituted the establishment of full-fledged capitalist production for the first time in the Amazon.

### **New Phase of Capitalist Accumulation in the Amazon**

In addition to the establishment of new types of production activities employing advanced technology, the expansion that has taken place in the Amazon reflects a new export-driven engagement in the global economy, with transnational corporations (TNCs) playing a significant role.

#### *The Role of Livestock Farming in the Amazon*

From 1990 to 2006, cattle herds in the Amazon grew at an annual rate of 6.74 percent compared to an average annual growth rate of just 0.57 percent for the rest of Brazil. Most of the growth in Brazilian cattle—an increase of more than 180 percent in 16 years<sup>41</sup>—occurred in the Amazonian states of Mato Grosso, Pará, and Rondônia, where deforestation is greatest. Though expansion has accompanied the growth in both the domestic and foreign demand for beef, it is also influenced by other factors, such as the continual reduction in transportation costs, increases in productivity, and the relatively low price of land in the Amazon.

In addition to fiscal incentives, primarily in the form of tax breaks and also government subsidies with low-interest loans from SUDAM and BASA, a significant part of the occupation process was financed by the extraction of timber, since landowners (either smallholders or *fazendeiros*) were able to sell their stocks of timber to the lumber companies. The money generated from timber sales was used to build roads and bridges, and it also provided the capital to pay for converting forest land into pasture. Thus, the lumber industry benefitted from the disposable stocks of timber it got as a result of the occupation of new lands, while it provided the necessary financial resources for opening up new areas to occupation.

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<sup>41</sup> The number of cattle in Brazil increased from 26 million head in 1990 to 73.7 million head in 2006. See the Municipal Livestock Survey, IBGE, 2008, online at: <http://www.sidra.ibge.gov.br>.

## *Underlying Causes of the Expansion of Livestock Farming in the Amazon*

Beef production has increased throughout Brazil, but it has been expanding at significantly greater rates in the Amazonian states, where the proportion of cattle there in relation to the rest of the country grew from 17.85 percent in 1990 to 36.01 percent in 2005. According to the National Livestock Council,<sup>42</sup> the consumption of beef in Brazil has increased by roughly 3 percent a year, while exports have grown even faster, at an annual rate of 17 percent. However, meat exports still only account for approximately 32 percent of the beef Brazilians eat. In 2006, the domestic demand was nearly 7 million equivalent tons of beef, while exports totaled less than 2.5 million tons.<sup>43</sup>

Between 2004 and 2007, the states of the Amazon have seen a consistent growth in cattle slaughtered accompanied by the expansion of meatpacking facilities, especially in the southern and western regions of the Brazilian Amazon. Locating meatpacking facilities there serve a twofold purpose: capitalist firms are able to reduce the acquisition costs of raw materials as well as position themselves in an expanding market.

Brazilian meat exports traditionally came from the southeastern region of the country. This suggests that the increase in beef production in the Amazon has contributed to the supply of beef for domestic consumption. However, more specific information on where cattle are being slaughtered is needed to determine how much Amazonian beef is being exported.

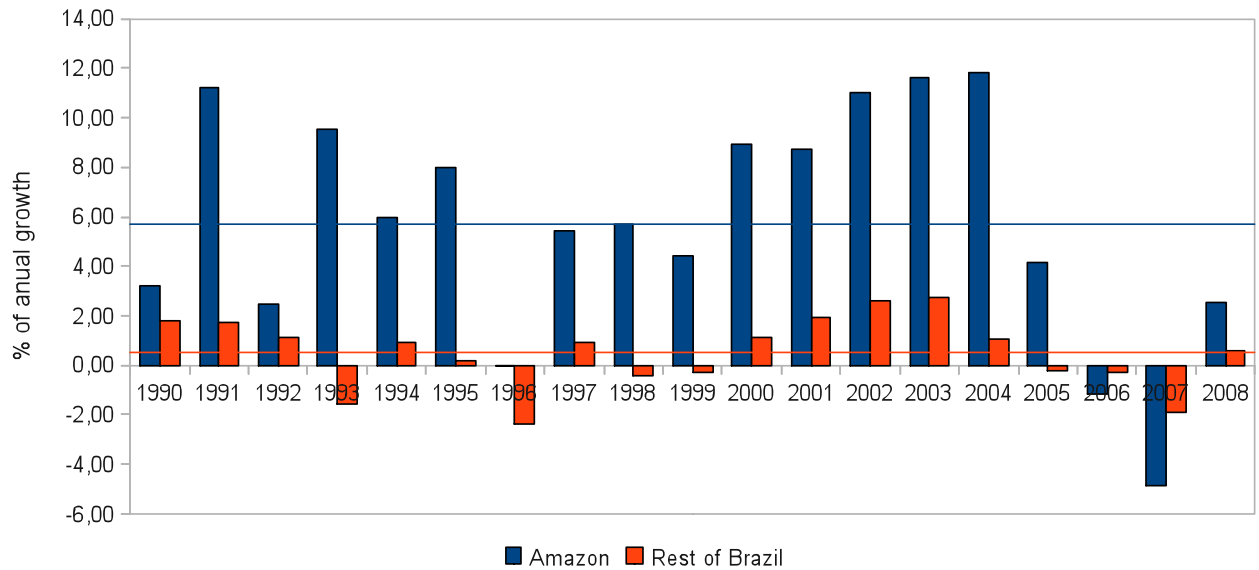
The existence of Foot and Mouth Disease (also known as hoof and mouth disease) in the region has hampered cattle exports, but vaccinations for the disease are now available. As a result, cattle from the Amazonian states of Rondônia, Mato Grosso, Acre, Amazonas, and the southern part of Pará are now designated on the OIE (the World Organization for Animal Health) list as coming from zones free of Foot and Mouth Disease, which lifts a significant barrier to cattle exports.

The considerable expansion of cattle ranching in the Amazon is expected to persist, particularly if the global demand for beef continues to rise and the institutions trying to halt deforestation remain weak. As livestock farming in the Amazon becomes more profitable, pressure to expand this activity increases, reinforced by the entrance of new players, particularly Brazilian transnational corporations (TNCs). New biofuel crops also constitute a further threat of deforestation in the Amazon.

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<sup>42</sup> ABIEC, *Associação Brasileira das Indústrias Exportadoras de Carne*, 2007, online at: <http://www.aiec.org.br>.

<sup>43</sup> *Ibid.*



**Figure 1: Brazil and the Amazon: Annual Cattle Herd Growth Rates**

Source: IBGE—Municipal Livestock Production (<http://www.sidra.ibge.gov.br>)

Currently, two distinct types of cattle ranching coexist in the Amazon. The first type is low cost and low tech and constitutes a fast, easy, and cheap way to stake and sustain claims over property rights for large producers. This kind of cattle ranching requires less total capital than soybeans and allows a producer for relatively little cost to use disposable land as speculative capital—characteristics that explain the expansion of low-productivity cattle production and consequent deforestation at the frontier of the Amazon. As this activity illustrates, often, it is the value of the land itself more than the profits derived from cattle production that drives the appropriation of the livelihoods of indigenous people and peasants at the frontier.

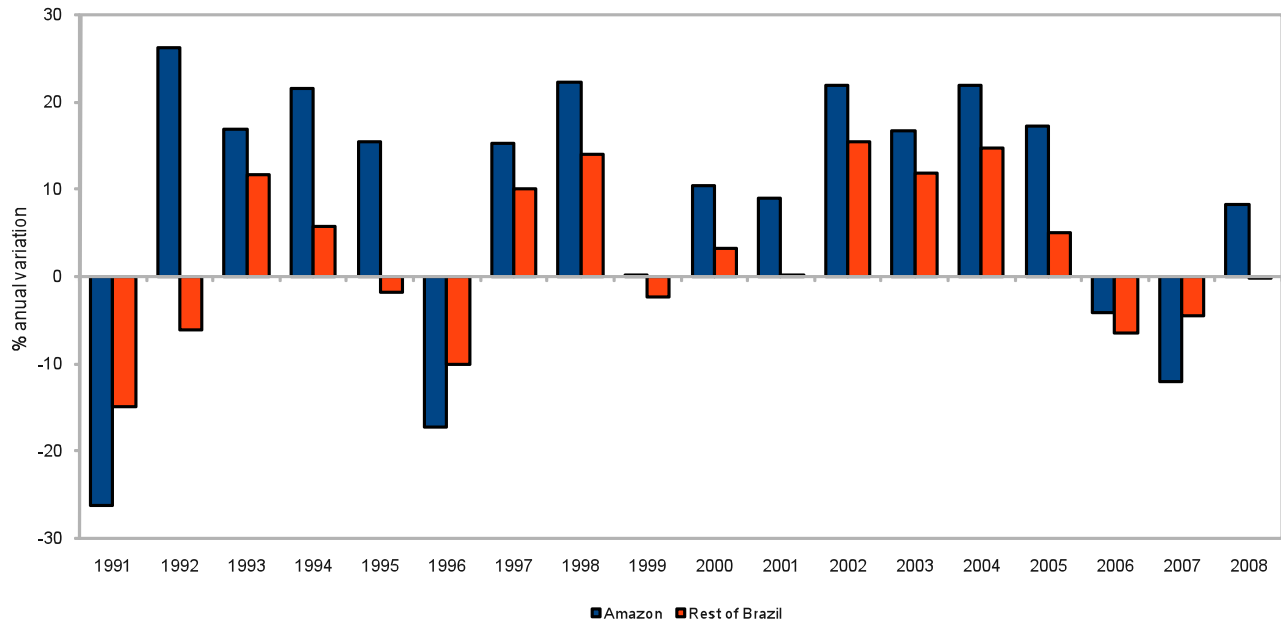
The second type of cattle ranching is integrated with the multinationalization of the Brazilian meatpacking industry and is more similar to the accumulation pattern present in soybean production. Increasingly prevalent in the southeastern areas of the Amazon region, it involves a highly intensive use of fixed capital that incorporates more machinery and technology in production. Such highly capitalized agriculture and cattle production in the outer regions of the Amazon accelerate capitalist expansion by converting expropriated land into capital.

### *Soybean Plantations*

The highly capitalized soybean plantations represent a new pattern of production that is very different from the traditional agriculture practiced by small producers (*colonos*). The area of soybean plantations accounted for roughly 30 percent of the total area of annual crops in 1990. Between that time and 2004, it expanded to cover half of the total acreage in annual crops and remained so till 2007. The participation of the Amazon in total production of soybeans in Brazil grew from 16 percent to 30 percent between 1990 and 2007. Of this total area, 25 percent was in the state of Mato Grosso, where soybean production grew from 1.5 million hectares in 1990 to 5.1 million hectares in 2007, making it the most significant area of soybean production in Brazil.

Prior to the establishment of the soybean plantations, these areas were most likely occupied by cattle ranchers. The increasing dominance of soy appears to have shifted cattle production to other regions

of the Amazon. As with cattle ranching in the Amazon between 2000 and 2007, the land used for soybean plantations grew by an average annual rate of 9 percent, whereas the average annual growth of plantations for the rest of Brazil was roughly 3 percent (see Figure 2). The expansion of intensively capitalized agriculture occurred mainly in Mato Grosso, the Brazilian state with some of the best transportation infrastructure, which was initially promoted by the military government.



**Figure 2: Annual growth of soybean production area (source: IBGE, 2009).**

### *The Role of TNCs and the Global Food Industry*

Over recent decades, there have been substantial changes in the global food industry in both production and consumption patterns. Wilkinson points out that “[a] profound shift occurred in the 1980s and 1990s in the patterns and extent of the transnational corporate penetration of the agrifood systems of developing countries.”<sup>44</sup> Of note is the strong expansion of food companies in Brazil, Argentina, and Thailand. Wilkinson confirms the particular role of Brazil in this process:

In fact, Brazil is emerging as the global supply source for a range of strategic agrifood commodities. As of 2007, it was the world’s leading exporter of red meat, poultry, sugar, coffee, and orange juice; the second largest exporter of soy beans, soy meal, and soy oil; the third largest exporter of corn; and the fourth largest exporter of pigs and cotton. Its total cultivable area amounts to 340 million hectares, of which 63 million are currently under crops and 200 million are dedicated to pasture.<sup>45</sup>

Although these statistics are for Brazil overall, this is consonant with the accelerated expansion in the Amazon.

The deregulatory climate of the 1990s saw an increasing presence of transnationals and consolidations throughout Brazil’s food industry, primarily in the food retail sector and the poultry, beef, and soy processing industries, with beef and soy having particular significance for the Amazon. Wilkinson

<sup>44</sup> John Wilkinson, “Globalization of Agribusiness and Developing World Food Systems,” *Monthly Review*, Vol. 61, No. 4, 2009, p. 238.

<sup>45</sup> *Ibid.*, p. 42.

observes the major role that TNCs have played in the increased centralization of the soy processing industry: for example, global agribusiness giant Bunge purchased Ceval, which since 1986 has been Brazil's largest soybean processor,<sup>46</sup> while U.S.-based Archer Daniels Midland (ADM) took over the soy processing operations of Perdigão and Sadia, two Brazilian meat processing companies that merged in 2009 to create Brazil Foods, a TNC in its own right that is said to rival major U.S. multinational agribusiness firms.<sup>47</sup> As a result, Wilkinson notes that the majority of the country's soy crushing and trade is now in the hands of the four leading global players: Bunge, Cargill, ADM, and Dreyfus.<sup>48</sup> TNCs—particularly Monsanto, Syngenta, and Dupont—are also increasingly active in Brazil's seed industry, a fact that is quite pertinent for the soy industry, where genetically modified seeds now account for approximately 67 percent of production.<sup>49</sup>

### *Brazilian Transnationals*

At the same time that the role of foreign TNCs has increased, this new phase of capitalist expansion has also witnessed the growth and consolidation of Brazilian transnationals in the poultry, beef, and soy industries. Though many Brazilian firms have become increasingly integrated with the global trade of agricultural commodities,<sup>50</sup> some have become global players in the commodities markets themselves. Two emblematic cases are the AMAGGI group in soybean trading and the JBS/Friboi Corporation in the meat processing industry; their rise reflects a new constellation of forces both globally and locally. The JBS group was a local beef producer, which made its first public stock offering in Brazil in 2005. After acquiring food processing companies in Brazil and around the world, JBS became the largest meat producer group in the world.<sup>51</sup> The AMAGGI<sup>52</sup> group, based in Mato Grosso, is now one of the world's largest soybean producers. AMAGGI recently formed a joint venture with Louis Dreyfus Commodities to trade and handle the logistics of soybean distribution for the north and northeastern regions of Brazil.<sup>53</sup>

These two cases illustrate capitalist centralization in the commodities and food industry in Brazil. Along with this concentration of capital is the expansion of these companies to new production areas in the Amazon and Brazil's northeastern region. These new occupation patterns would not be possible without highly concentrated land ownership in the region. According to census data from 1970 to 2006,<sup>54</sup> between 1970 and 2006, the total occupied land in the Amazon region grew by more than 64 million hectares, and more than half of that area (37 million hectares) are properties larger than 1,000 hectares, reflecting the increasing dominance of large-scale production.

### **Deforestation as a Consequence of Accumulation**

As new spaces for capital accumulation become available in the Amazon rainforest through the occupation of new lands (or reoccupation of land used for extensive cattle production), the clearly undesirable “collateral damage” is the clearing of major swathes of the Amazon. Such environmentally irresponsible behavior may only be curbed through increased pressure by social movements, serious

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<sup>46</sup> See: <http://www.referenceforbusiness.com/history/Ci-Da/Cia-Hering.html>.

<sup>47</sup> See Kenneth Rapoza and Rogerio Jelmayer, “With Merger, Brazil Sadia, Perdigao Rival U.S. Food Majors,” *Dow Jones Newswires*, 2009, online at: <http://www.nasdaq.com/aspx/company-news-story.aspx?storyid=200905191557dowjonesdjonline000622>.

<sup>48</sup> Wilkinson, “Globalization of Agribusiness and Developing World Food Systems,” p. 43.

<sup>49</sup> See article in *Folha Online*: <http://www1.folha.uol.com.br/folha/dinheiro/ult91u669934.shtml>.

<sup>50</sup> The term commodities here does not refer to the general case but to the subset of agricultural commodities traded on the Chicago and New York Mercantile Exchanges, CME and NYMEX, respectively.

<sup>51</sup> See the JBS website, <http://www.jbs.com.br/Historia.aspx>.

<sup>52</sup> See: <http://www.grupomaggi.com.br/pt-br/index.jsp>.

<sup>53</sup> See: <http://www.agrocim.com.br/noticia/Louis-Dreyfus-e-Amaggi-se-unem-no-norte-e-no-nordeste.html>.

<sup>54</sup> IBGE—Agricultural Census 1970, 1975, 1980, 1985, 1996, and 2006, online at: <http://www.sidra.ibge.gov.br>.



enforcement by the Brazilian government, or, perhaps more importantly as global public awareness spreads, the threat of not being able to sell their products on the global marketplace. Free-market forces are proving wholly inadequate to achieve a solid and lasting reduction in deforestation in this ecologically crucial region.

Deforestation rates in the Brazilian Amazon averaged 22,091 square kilometers per year from 2000 to 2004, although this rate was reduced to an annual average of 12,692 square kilometers from 2005 to 2009. Though deforestation rates may have slowed recently, significant deforestation is still continuing, as the circumstances that brought it about have by no means disappeared from the region. The cause of deforestation cannot be merely reduced to the greed of ranchers; rather, it is a consequence of the social nature of capitalist accumulation combined with new global competitive conditions driving it forward—a force that has thus far overcome efforts to control deforestation either by NGOs or the Brazilian government.

### *Frontiers and Capital Accumulation in the Amazon*

Deforestation in the Amazon is not an isolated consequence of individual investment decisions, but a result of historical transformations brought about by active policies of the Brazilian state and both foreign and domestic capital. In order to understand these processes, we employed the concepts of *frontier* and *accumulation by dispossession*, since these two categories link the development of capitalism in the region with the processes of commodification and privatization of communal lands and the expropriation of their occupants, which has been observed throughout the history of the Amazon since the end of the 19<sup>th</sup> century.

The expansion of rubber production to accommodate the zealous growth of the car industry at the beginning of the 20<sup>th</sup> century is an expression of the (re)creation of economic spaces in far off regions of the periphery of capitalism, in line with Luxemburg's analysis above. The new occupation processes induced in the 1970s and 1980s by the military dictatorship formed the basis for a new phase of accumulation. Government colonization programs, subsidies, and incentives along with investments in the transportation system allowed the penetration of capital into new lands to (re)create the frontier in the Amazon. Moreover, the very concentrated land tenure supported by the illegal but government-sanctioned land occupation process (*grilagem*) associated with regional *latifundiários* established the basis for the creation of a new market in land and new spatial occupational patterns in the region. The social structures that evolved over the history of occupation in the Amazon are the main determinants of land ownership. Therefore, historical practices of illegal land acquisition and violence used against small rural producers and even slavery continued to play an important role in the process of occupation of the Amazon Frontier.

The main object of accumulation was no longer the trees but land itself, and in order to achieve this new phase of accumulation, the forest had to be cleared. Deforestation should not be seen as simply a consequence of occupation of new lands, but rather as a result of the forces of accumulation. Previously, rubber trees were the basis for capitalist expansion in the Amazon; this new phase requires eliminating trees, not simply tapping them.

To a large degree, *land as capital* constituted the basis for this new phase of accumulation. This newly produced capital became one of the sources for a highly productive agricultural and beef industry, creating new potential productive capacity and transforming this capacity into capital *stricto sensu*, incorporating these new lands in the “stock” of disposable productive capacity to be used by an ever more global agribusiness.

Therefore, the *frontier* in the Amazon is not merely a *geographical locus*, but a *process* that transforms

lands previously occupied by other populations or natural unoccupied areas (occupied by trees) into new capital, initially through speculation and subsequently through production completely integrated with the circuit of globalized capital accumulation. The process to incorporate new lands as capital is not new, nor does it constitute a single frontier. Historically, the frontier was (re)created as new phases of capitalist accumulation took place. This newest phase of expansion of soybeans and cattle production in the Amazon should be understood as a case of accumulation by dispossession, and also as a frontier for global capital expansion.

## Conclusions

The Amazon cannot be conceived of as a single frontier, but rather as a result of various waves of occupation with a range of characteristics that reflect the diversity of the region and its complexities. The first significant migration to the Amazon came as a result of the rubber boom, which took place from 1870-1912. Despite the fact that it was a significant transformation, the rubber boom did not create the consolidation of full-fledged capitalist relations of production, and the ensuing bust in 1912 resulted in economic decline for several decades. The second major historical transformation in the Amazon took place during the period of the military government, which was in power from 1964 through 1985. During this time, major expropriations and migrations were pushed forward through initiatives and policies designed to lay the groundwork for a new advanced phase of capitalist accumulation in the primary sectors of agriculture, ranching, and mining. This transitional period involved significant levels of violence and fraud and thus is a clear example of accumulation by dispossession.

The current phase of expansion emphasizing cattle and soy production is a result of both previous accumulation processes, which established an extremely concentrated distribution of land through expropriation and fraud, and an unprecedented insertion of the Amazon into the global economy as a result of globalization. The introduction of cutting-edge capital-intensive technology, the advanced level of integration of the beef and soy sectors with the global market, and the significant role played by TNCs constitute a new phase of accumulation for the Amazon. This expansion is very much connected with the global expansion of the food industry and agribusiness. As a result, there are new major actors involved in the process of trading agricultural and food commodities in Brazil and the novelty that several of the TNCs involved are actually Brazilian firms. At least for the present, Brazil no longer appears to be the passive colony that Portuguese invaders or TNCs completely controlled.

This new phase of accumulation is directly linked to the increased deforestation taking place in the Brazilian Amazon. Given the economic importance of production geared toward global commodity markets and the conflicting interests of the government in promoting them, many government efforts or policies to limit deforestation are ineffective. This new phase of accumulation reinforces the process of speculation in the frontier. Continued minimal enforcement of property regulations for indigenous communities and other longtime inhabitants along with the use of *grilagem*<sup>55</sup> (though to a lesser extent than previous decades) is key in maintaining the conditions for continued accumulation that is driving deforestation.

The importance of this new frontier goes beyond the issue of deforestation, as the impact of the current strategy of development for the local populations, including criteria such as employment, salaries, and quality of life, and not just profitability of firms, also needs evaluation. The viability of the currently dominant accumulation processes, which employ capital-intensive technology, accommodate the interests of transnational capital, and yet generate few jobs and significant deforestation, must be questioned.

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<sup>55</sup> The total land registered by official land titles constitutes three times the actual size of the Brazilian Amazon. This is due to the practice known as *grilagem*, which is the generation of false land deeds, as described above.



Additional environmental issues, such as increasing climate swings in the Amazon as global warming escalates, must also be considered.

In summary, we have attempted to show how the tactics and strategies of capital and the state, which has employed fraud and violence and forced the expropriation of populations in the Amazon, is not only a hallmark of an early phase of pre-capitalism, as analyzed by Marx, but, as Harvey has argued, continue to be employed throughout modern capitalism, including a major role in the Amazon in recent decades through to the present. The interests of capitalist accumulation continue to dominate in spite of their deleterious consequences, be it for local populations or for the environment. Therefore, there is a growing urgency for a new set of visions and mobilizations in order to move towards a true sustainability, as opposed to a final frontier constituting the end of the Amazon Rainforest forever.