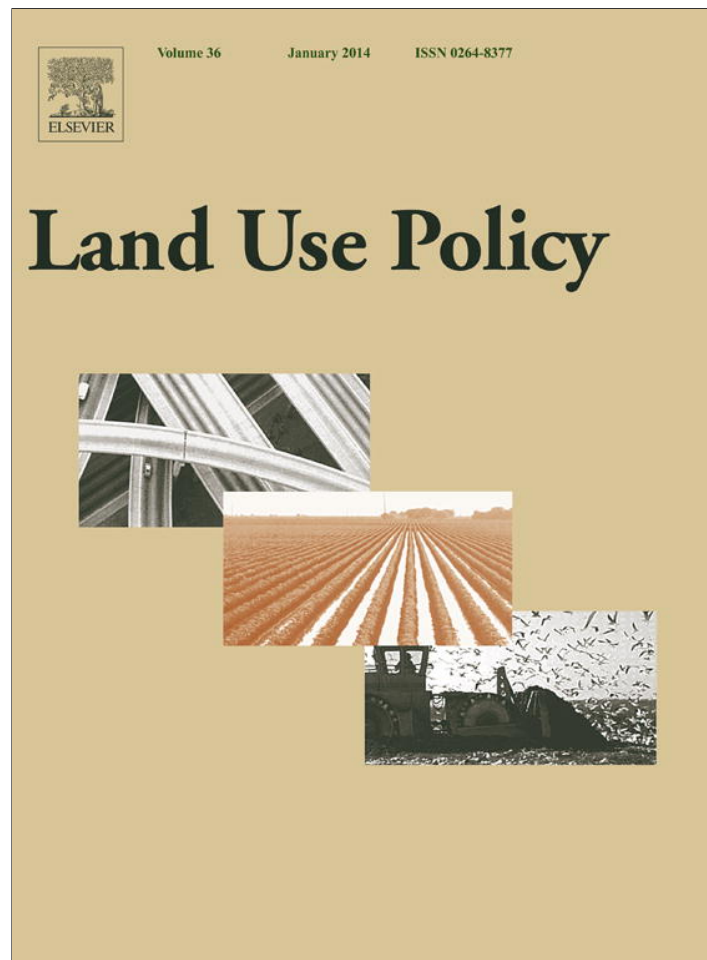


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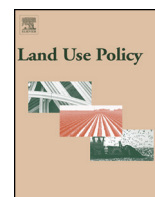
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The agricultural, environmental and socio-political repercussions of Brazil's land governance system[☆]

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ABSTRACT

Although many contemporary studies of agriculture associate larger properties with higher relative productivity, this assumption has limited relevancy for the analysis of situations in which property owners profit more from large-scale property accumulation itself rather than any superiority in exploitation opportunities offered by increased size. In Brazil, the efficiency-of-scale paradigm has been used to criticize peasant agriculture as unproductive and hide contradictions deriving from land concentration. As this paper argues, however, small-scale agriculture is actually responsible for most of Brazil's food production, rural employment and agricultural income. The paper utilizes a land governance perspective to analyze the implementation of structural reforms aimed at turning back the land monopolization tide as well as efforts to weaken long-standing legal principles that socially condition individual property "rights" in Brazil.

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Introduction

Perhaps the scale of worldwide urbanization has created too great a physical distance and psychological separation between life in the city and life in the countryside for most people to comprehend the realities of agriculture and know much about the production of the food that sustains them. In any event, debates over land use policies almost always take the form of secondary matter. Moreover, the pre-eminence of cities contributes toward reinforcing territorial hierarchy in favor of a correlation between demographic density and political power that reproduces this sense of territorial order within society. Thus, town and country are commonly perceived to be distinct and dissociated based on a quantitative population hierarchy.

Such a dichotomy is unjustified given the origin and destiny of the resources involved and consequent interdependency of these spaces. In both urban and rural spaces, the logic of capitalist accumulation produces concentration and dispersion, whose intensity and asymmetry are explained by the nature of a given country's internal power relations. The objective of this essay is to demonstrate how this is made manifest in Brazil, a eminently urbanized

country, but one profoundly marked by the hegemony of an oligarchy rooted in landed property (Martins, 1994). It argues that the very density of urban settings, a density that favors the generation of value, is sustained by goods originating in the countryside, which are then converted into merchandize in the city through work. This is nothing more than what Marx (1996) long ago observed when noting that all wealth has its origins in land and labor.

The focus of our analysis is on the land part of this equation. Of particular interest are the mechanisms and implications of the private appropriation of land, an irreproducible good that determines the dynamics of wealth formation in society, which is why criteria for access to land and its division are of fundamental importance. Brazil cannot but be taken as an example of this process. Despite elevated rates of urbanization and the relative weight of its urban-industrial economy, Brazil takes its place on the world stage as one of the world's leading producers and exporters of agricultural goods and, simultaneously, as holder of the largest tropical patrimony on earth. This biologically diverse environment also contributes enormously to the renovation of global water and air supplies and the regulation of the earth's climate. These two factors make it impossible to separate the environmental and agrarian questions, especially given the fact that these precious resources are managed more to satisfy the whims of private property owners than to serve the common good (Oliveira, 2010).

These coordinates orient this study's approach to the conflict of interests that infuse the question of land governance in Brazil. When a person or firm privately appropriates land, especially large tracts of environmentally sensitive land like that in Brazil, the proprietor's will comes into conflict with "goodwill" as production

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demands compete with preservation needs and the owner's right disputes with society's right to clean water, clean air, genetic diversity, and so many other common goods linked to land. A bourgeois institution, property generates benefits that its owner expects to enjoy in return for the labor thereupon expended (Locke, 2007). This fundamental relationship between land and labor is the seed that gives rise to the question of property's social function, a point receiving special attention hereafter, given both its prominent place in Brazilian law and the state's neglect of it. Convinced that land concentration represents a class alliance that works to weaken this basic principle of the bourgeois order and is therefore capable of resurrecting the concept of absolute right, our critique presumes that a state governed by the rule of law must, in the name of the social contract, take seriously at all times the land's social function. The better established the contract, the more vigorous a country's laws will be in regards to land use and environmental concerns, lessening the chances proprietors have to freely exploit and abuse essential human and natural resources, thereby preventing them from jeopardizing the commonwealth.

As such restrictions occur in particular political contexts, however, their effectiveness tends to be controlled more by hegemony than the righteousness of an individual complaint. For this reason, the article investigates the way in which the territorial composition of a given place both reflects and perpetuates hegemonies that reproduce and expand a grossly unequal land tenure system.

The contradictions of this geography are many. In Brazil, the contemporary struggle for land highlights these contradictions. It is a struggle protagonized by peasants and fought essentially in rural spaces (Welch, 2004), where their resistance to accumulation by dispossession (Harvey, 2003) is historic. In the meantime, the landlords, without ignoring an opportunity for aggression in the countryside, generally focus their activities on spaces they have long dominated, those of the state apparatus. In the realm of public policy, Brazilian peasant organization have tried increasingly to influence the political sphere while landlords have used their lobbies to manipulate the executive, legislative and judiciary branches to attack the peasantry and block the implementation of legal restrictions on the autonomy of agribusiness/*latifundia*. The *ruralistas* have worked within the state to defend landlords against the few initiatives that have arisen as a consequence of peasant mobilization, as well as those stemming from past struggles that suffered from disuse due to the rural oligarchy's interventions. Interpreting these disputes as expressions of territorial conflict, the essay also highlights the achievements of peasants as manifest in the creation of agrarian reform settlements. Between 1985 and 2002, the period that coincides with the cycle of conservative civilian governments, 581,657 families were settled (NERA, 2011).

While these peasant territorial advances fall far short of constituting an agrarian transformation, they point to another paradoxical feature of Brazil's agrarian question: the unparalleled productive efficiency of peasant agriculture. As shown below, despite numerous obstacles and little land, Brazilian peasants have been very productive. In fact, when compared to the largest estates, where intensive commodity crops as well as cattle grazing predominate, small family farms are far more efficient in their use of the land. The celebrated vitality that has secured for Brazil a prominent position in global commodity markets needs to be confronted not only from the perspective of its environmental and social impacts (Oliveira, 2003), but also from the perspective of productivity.

Thus, this article deconstructs at least one of the principal narratives used in the public presentation of Brazilian agribusiness – the assumption that greater size automatically means greater efficiency. Our investigation of the productivity of large estates finds answers not in the celebrated use of technology or supposedly advanced management, but in privileges wrested from the state, such as access to cheap credit and abundant fertile land, both

placed at the disposal of landlords by a governmental apparatus these same beneficiaries either control or greatly influence. The consequent expansion of the Brazil's agricultural frontier, which continues advancing on biomes without even minimal environmental oversight, depletes further Brazil's natural patrimony. Consequently, the article also confronts the agribusiness narrative that deforestation is a small price to pay for producing the foodstuffs that will benefit all of society.

Understanding how all this works is not easy. For example, it requires a spatiotemporal correlation between the increase of agricultural exports and deforestation to determine if creating new farmland is really what attracts investors to the "agricultural frontier." While this goal may play a role, what seems to drive these acquisitions is a combination of factors, including lower taxes on capital and opportunities to profit from the extraction and sale of hardwoods and the deployment of herds of cattle. Beef requires lower investments than crops, while assuring profits if developed on large tracts. On a national scale, the average yield in value per unit area is 22 times smaller than that of crops (IBGE, 2009). The results of this strategy of capital accumulation are found in the low economic dynamism of Amazonia, where four decades of development have destroyed 71.9 million hectares of forest of which only 3.5 million hectares were converted to crops. The vast majority of the area was destined for grazing at these absurdly low rates of productivity (EMBRAPA-INPE, 2011).

A consequence of this hoarding of vast areas of idle land is a shortage of land for most farmers. According to the 2006 agricultural census, which surveyed both declared and undeclared areas, 95.1 percent of farmers divided among themselves only 11.1 percent of arable territory (IBGE, 2009). Ironically, this fragment of soil is that which generate the highest rates of production efficiency of Brazilian agriculture. Hoping to avoid the banalities that such data might provoke, our approach is one that seeks to show the mechanisms used to rob Brazil and its peasantry of the land and resources needed to produce and thus to underscore the relevance of agrarian reform.

The inseparable relationship between land struggle and the environment

In Brazil, we can set aside the influence of colonial development and see how the clash of classes in recent history is central to the formation of the modern state. Even though the results of these clashes have been positive for landlords, the peasantry has not been apathetic (Carvalho et al., 2008–2009). While anthropologist Eric Wolf did not include Brazil in his comparative study of 20th Century peasant wars (1969), the peasantry's historical experience in Brazil relates more to the contemporary revolutions he examines than to the so-called 'pre-political' immobilization expressed by such critics as Kautsky (1988).

In view of these clashes, the blossoming of democracy in 1985 can be said to have expressed a reduction of the landlords' area of maneuver. The democratic promise of greater equality did not last, however. Especially during the past ten years, the *ruralistas* strengthened their hegemony over the superstructure, starting with the consolidation of their influence in the legislature (Ribeiro, 2009). Paradoxically, this process coincided with the unprecedented rise of an opposition party that has lead the country since 2003. Ironically, it was precisely in this political context that important laws were changed, as exemplified by the Brazilian Forestry Code (Lei 12651/2012).

The *ruralistas* discursive strategy conditioning the expansion of arable land to deforestation proved decisive. They made a further connection between expansion and the imperative of maintaining Brazil's prominent position in the commodities market. The

country had only recently become number one in exports of various commodities and in 2008 agribusiness leaders could brag that Brazilian production accounted for 5.2 percent of the world agricultural exports (FAO, 2010). They did not attribute this placement to the aptly defined plunder-model that geographer Harvey (2006) has identified as crucial to the globalization boom. The *ruralista* way has been marked by attacking already vulnerable traditional communities, environmental destruction and land market distortions that have worsened the already precarious position of many small producers.

In proportional terms, land concentration in Brazil is worse than that of any other country in the world given the fact of the incomparable dimensions of Brazil's land mass. While Brazil's 0.85 Gini index ranks it sixth worse in terms of land concentration, the top ranking Czech Republic, with an index of 0.92, has only 0.9 percent of the area that Brazil retains (World Bank, 2010). In fact, there was at least one landlord in Brazil, Cecílio do Rego Almeida, that claimed title to a single estate in the Amazon region, the Fazenda Curuá, that at 47,000 km² was well more than half the size of the entire 79,000 km² Czech Republic.

However, the Fazenda Curuá was only one of many properties Almeida claimed to own when he died in 2008. The total area claimed came to 70,000 km², which falls within just about 9000 km² of being identical to the size of the entire Czech nation (Câmara, 2001). Even by Brazilian standards, Almeida's status as a super-latifundiário attracted suspicion and in the fight over his estate, the legality of his titles was challenged. In 2011, his estate was stripped of its title to the Fazenda Curuá and his successors did not file a countersuit in time to challenge a judicial decision that canceled his property after proving in more than 1,500 pages of court proceedings that it was counterfeit (Pinto, 2011). This king of the land grabbers, whose immortality is guaranteed by the continued activity of the C. R. Almeida Construction company and the Eco-Rodovias toll roads, was only partly dethroned following his death.

While exceptional, the case of the Fazenda Curuá reflects a practice that is typical, that of forming private property through the theft of public lands. Through the falsification of documentation and the collaboration of corrupt officials, millions of hectares of state land have been illegally privatized. Amazonia, which corresponds to 49 percent of the Brazilian territory, is the target of a large share of this practice today. The alarming rate of *grilagem*, as the falsification process is called in Brazil, culminated in an investigation led by the federal legislature that documented various crimes (Câmara, 2001). Instead of penalizing the perpetrators, however, elected officials produced legislation to legalize the practice. Since 2009, with the enactment of the Law 11,952, millions of hectares of inappropriately occupied public land have been recognized as private property through a process of 'regularization', effectively annulling juridical traditions that had oriented the courts since the 19th Century. Based on this Law 11,952, the government abdicated its rights to 67 million hectares of public land in Amazonia. Peasants occupied only around an eighth of this area – some 8.3 million hectares. Their gain with 'regularization' allowed legislators and the state to spin a discourse of having advanced agrarian reform goals by legalizing the land claims of these smallholders, while transferring the vast majority of the land involved – the remaining 58.7 million hectares – to large land grabbers. This far more significant consequence of the law was hardly mentioned (Oliveira, 2010).

These and still more alarming and violent activities are the 'devilish details' that collaborate to place Brazil in the race to the top of the ranking in the Gini Index for land concentration. Amazon states like Pará, where the Fazenda Curuá was located until its dismemberment, are also a setting of contemporary rural 'slave labor', of forced land expulsions, murder and threats of murder against peasants and Indigenous peoples, all of it related to land. The clearing of forest to create pasture and particularly the selective cutting

of trees for lumber production promote forced labor analogous to slavery and these other forms of violence. From 1985 to 2010, 1,033 people have been murdered in land conflicts in Amazonia (CPT, 2011), including the spectacular, televised and as yet unresolved case of the massacre by police of 19 marching landless militants in Eldorado do Carajás in 1996 (Nepomuceno, 2007).

The violence of man-over-man unfolds side-by-side the violence of man-over-nature as the human takeover of tropical biomes unfolds in Brazil. This is where recent changes to the forest code fit in. For more than a century, with regular updating, the Brazilian Forest Code preserved its standing as one of the world's more environmentally advanced laws for balancing conservation interests with economic development pressures. The reactionary plot to revise the law started to be sketched-out as proponents discovered a hypocritical discourse in proposing changes in the name of eliminating legal impediments to the development of peasant farms. It was argued that the prosecution of environmental crimes specified in the law would damage peasant interests and thus revising the law was necessary to support popular public goals favoring smallholders. By modifying the law in the name of family farmers, the *ruralistas* protected themselves against prosecution for far more extensive crimes of rainforest destruction. The changes defended granted amnesty to all environmental crimes associated with deforestation practiced until 2008, absolving not just a few hundred peasants who had deforested a few thousand hectares but a few dozen landlords who had clear-cut millions of hectares. There was similar regression on environmental protection parameters, which open the way to increased rates of deforestation, not to mention the consequent erosion that is bound to damage water resources. Finally, the code revision eliminated the social concept of the environment, in which conservation is seen as beneficial to all, changing it into a matter of individual choice, by establishing rewards for those who preserve native vegetation. This means that from now on property owners who invest in preservation will be compensated under the Law, while those who ignore it will be able to buy credits to legitimize environmental destruction, turning conservation from a common good into a commodity (Paulino, 2012a; Sauer and França, 2012).

The 'flexibilization' or transformation of long-lived environmental principles can best be understood as the backlash of an essentially oligarchic state that has found, in the context of the neoliberal ideology driving globalization, a discourse for recuperating under cover of apparently modern legislation new ways of reestablishing mechanisms of social control. In the 1980s, with the rebirth of democracy, the context itself generated pressures in the opposite direction to consolidate democracy on the basis of social struggles that highlighted peasant and environmental concerns, giving visibility to the need to control deforestation and violence in the countryside. During the "lost decade" of the 1980s, international and domestic concern about the people and environment of Amazonia reached unprecedented heights (Revkin, 2004). Despite pressure on the state to generate and enforce pro-labor, pro-conservation legislation, little was accomplished that might be seen as threatening the oligarchic pact (Oliveira, 2010). With the 2012 alteration of the forest code defined as defending peasant interests, the landlords demonstrated their hegemony and eliminated legal impediments to perpetuate their social and environmental crimes.

Land concentration at the heart of class alliances

The distribution of political force in Brazil is not the product of a simple relation between population density and economic weight. We have noted the rural sector's success in influencing policy, for example. Note that only 15.6 percent of the population lives in the countryside (IBGE, 2011) and only 6.4 percent of the GDP originate in agricultural production (CEPEA, 2011). To the contrary, it

seems unequivocal that the more crucial set of relations in capitalist societies are to be found in the alliances sustained between rural landlords and urban entrepreneurs. The rural development specialist Cristóbal Kay identified this relationship in a 2009 article on rural poverty:

While there are some divergent interests between landlords and industrialists these are minor compared to the class conflicts between capitalists and workers. Landlords often invested in urban enterprises and urban capitalists acquired landed properties, generally for social prestige and political reasons, thereby facilitating the formation of alliances between them. [...] Through forging alliances and common interests landlords and urban capitalists resolved some of the contradictions between these different fractions of capital so as to maintain their dominance over the exploited classes in society (p.113).

In general terms, Kay describe the rural-urban ruling alliance and emphasizes its utility in resolving conflicts and contradictions between agricultural and industrial interests for the purposes of accumulation.

For Brazil, the theory of rentier capitalism elucidates the nuances of such alliances, as they arise from a seemingly contradictory relationship between an archaic agrarian system and technologically advanced sectors of the economy (Martins, 1994; Oliveira, 2003). This is exemplified by the case of the Fazenda Curuá, with its former owner Almeida having been simultaneously a land grabber and the owner of the sixth largest construction company in Brazil (Revista Exame, 2010).

It is not a coincidence that one encounters that same last names on lists of both large rural property owners and urban commercial, industrial and financial businessmen. This comes as little surprise when we recall that the dictatorship sought to industrialize the countryside as part of its strategy to weaken support for agrarian reform (Gonçalves Neto, 1997). The post-WWII historical context was such that policymakers came to believe that only industry could promote economic development and security. Debates revolved around how agriculture in general and the peasantry in particular could help the industrial sector (Kay, 2009). The perceived problem was that the agro-export economy, based as it was on large and inefficient estates – *latifúndios*, was not capable of ensuring the provision of adequate raw materials for industry and that the land-starved smallholdings of peasants, called *minifúndio*, were too small and inefficient to provide enough cheap food for urban workers. In this context, the contradictions of the domestic market were blamed on the land monopoly represented by *latifundiários*, then considered to be the biggest obstacles to the take-off of industrial capitalism (Solberg, 1987). Land reform appeared an unavoidable step in the right direction.

To avoid land reform, the *ruralistas* allied with the urban bourgeoisie in proposing public policies that rewarded urban entrepreneurs with tax write-offs if they became involved in government-financed rural mega-projects, such as dam and road building, electrification and other infra-structure improvements, as well as the construction and management of agro-industrial complexes, such as meatpacking plants, the mills and distilleries built since the 1970s to process sugarcane into sugar and ethanol or factories for transforming eucalyptus into cellulose (Garrido Filha, 1980; Martins, 1984; Oliveira, 1990; Gonçalves Neto, 1997). Conceived of as integral to the industrialization process, agricultural modernization justified the state transfer of vast tracts of public land to urban entrepreneurs as part and parcel of the development project. The arrangement closed a gap between capital and land by offering a new avenue for risk-free real estate investments. These investors tended to be a pseudo-bourgeois group that was different in many ways from the industrial bourgeoisie due to its historical connections to the agro-export economy, as the entrepreneurs

Table 1

Brazil–Distribution of agricultural establishments in 2006, by metric size and quantity (IBGE, 2009).

Establishment size range	Quantity	Total area occupied
Landless producers	255,024	0
Less than 10 ha	2,477,071	7,798,607
From 10 to less than 100 ha	1,971,577	62,893,091
From 100 to 1000 ha	424,906	112,696,477
Greater than 1000 ha	46,911	146,553,218
Subtotal	5,175,489	329,941,393
Undeclared area		308,509,731
Urban Area		2,073,700
Water-surface		11,455,300
Indigenous land		125,545,870
Public forest reserves		72,099,864
Total		849,625,858

tended to have accumulated their wealth through service sector professions, family or personal relationships to the rural economy. Nevertheless, their identity with the bourgeoisie was unmistakable. As part of the civil-military regime, they helped block land reform with this top-down form of 'conservative modernization' that deepened the dualistic model of development traditionally associated with the Brazilian political economy (Almeida, 2006). On the one hand, the economy grew at fantastic rates in the early 1970s, on the other, social inequality worsened as wage growth was suppressed. As one of the 20 largest economies of the world, Brazil ranks second in inequality and worst when measuring the share of national wealth held by the poorest 10 percent of the population. The majority of the bottom 10 percent lives in the countryside (OXFAM, 2012).

For the rural poor, insufficient or non-existent land often determined one's fate. According to the most recent agricultural census, based on 2006 data but published in 2009, the smallest producers (under 10 ha) have an average farm size smaller than 2.9 ha, while among the largest landholders the average sized estate is 3124 ha. For additional comparisons, see Table 1.¹

Although the census demonstrates that for each large estate there are 1092 small ones, observation suggests an even more asymmetric relationship exists between the number of large and small farms; the census confirmed this impression by documenting such a large quantity of undeclared land under-production. As Table 1 shows, claims to another 308.5 million hectares went unidentified during the census, which is why the census subtotal of arable land is actually 638.4 million rather than the 329.9 million hectares formally stated. To account for this huge undeclared area, the IBGE developed a special category: "areas with other land uses" (IBGE, 2009).

As current legislation prescribes, expropriation for agrarian reform purposes only affects large properties; it can be assumed that the majority of those who under-reported their holdings were landlords seeking to hide data that might have provoked an expropriation process.² Avoiding taxes and prosecution for *grilagem* are two other likely motives. For those with agricultural establishments up to 100 ha in size on public lands, legal mechanisms are available that promote the normalization of titling processes, such that these squatters might actually have been encouraged to report irregular holdings. This distinction in the law (see Lei 6383/1976) was meant to revert a traditionally contrary process of exploiting the work

¹ Although various synonyms are used throughout the text for "establishment," it is this term that is used in the census. It covers all forms of farm operation, from squatter smallholdings to large properties or estates.

² The third chapter of Brazil's 1988 Constitution is dedicated to the agrarian reform policies. Article 186, which is discussed below, establishes the violations of usage, environmental or labor laws that can trigger expropriation.

of peasant families by encouraging them to open farmland on the frontier only to expel them once the hard work was done without any form of compensation. But even this law, produced in the context of the dictatorship, stimulated rather than stalled the very process it was meant to correct. The incidence of violent conflicts is highest in Amazonia precisely due to a struggle to take possession from peasants and indigenous peoples of the region's vast public forestland by aggressive landlords and their henchmen (Sauer and Almeida, 2011).

Depending on the composition of political forces at a given moment, even this undeclared census data could unsettle local structures of power. The *grileiros* are vulnerable to the contradictory need to demonstrate productivity and to hide stolen land. This vulnerability is perceived by professional entities, which favor transparency for technical reasons when it comes to productivity (Oliveira, 2010). Meanwhile, peasant movements use the same concrete information to challenge the productivity of large estates. High productivity statistics can suggest hidden areas and the discovery of hidden areas can lower productivity ratios, making it possible to restore public lands and force expropriation litigation. Every case is unique, however, because technical innovations can also be the source of increased productivity. Since 1975, the average yield of the corn quadrupled, that of soybeans doubled and that of rice tripled (IBGE, 2009).

Brazil's productivity index needs to be up-dated to account for such innovation but until the present, the *ruralistas* in congress and the Ministry of Agriculture have blocked proposed changes. In 2006, the Agrarian Development Ministry (MDA, in its Brazilian acronym) studied the problem and proposed a 30 percent adjustment of indexes. Although such a change would have fallen short of accounting for the more dramatic real world increases in productivity mentioned above, it was seen as a compromise that might actually be implemented. However, the articulation of *ruralistas* concentrated in the agriculture ministry pressured against acceptance of the measure (Ramos, 2005; Arruda, 2009). In 2010, federal prosecutors filed suit to force a change in indexes but the case was still unresolved in 2012 (MPF, 2010). The opposition has used varied arguments to forestall change but the bottom-line allegedly relates to traditional fears of what the truth might bring should the rich and powerful have to detail their real landholdings. Hence, there is a need to see the agrarian question in Brazil in its integrity, not merely as a technical or economic issue, but as a political and social one.

Political reasons can be blamed for the government's failure to revise the law that regulates the country's privately owned real estate titling companies (see Lei 10267/2001). These small local firms are licensed to register and maintain documentation related to the legal situation of landed property in Brazil. With one or more of these firms located in nearly every municipality, the only precise information that exists about the titling of private and consequently public land is completely decentralized. Following Brazil's historical transition from a centralized monarchy to a federated republic in 1889, the provinces were assigned the duty of establishing this property registry system and its role in maintaining the power of the rural oligarchy has become notorious. According to this system, nearly all the information about land ownership is based on a supposedly honest owners' self-declaration and the result is an impossible level of data inconsistency and official inertia regarding territorial questions (Silva, 1996).

The space between institutional benevolence, misfeasance and inaction is a setting ripe for breaches in the assessment of rural property's social function. This scenario leaves deep marks on the territory. Large unproductive estates mean huge swaths of the country generate little local revenue and employment. The prevalence of absentee-owners means not even the rich landlord is on hand to support local economies. Thus, land concentration

contributes greatly to rural poverty rates. The poverty and lack of opportunity tear at the social fabric in regions where the industrial and services sector is not dynamic, because for most of the year economically active workforce, especially young people, is forced to abandon the rural communities (Paulino, 2012b). The economies of thousands of such towns depend on the small monthly pensions the government has paid retired rural workers and family farmers since the 1970s (França, 2004). Thus, total collapse is contained by compensatory social policies that, although essential in terms of immediate needs, do almost nothing to develop the wholesome independence – the protagonism, if you will – of rural communities.

This socially dysfunctional model is also environmentally dysfunctional, as observed above. Few dare estimate the monetary value of the long-term damages provoked. The owners or thieves of these extensive areas tend to extract the most of natural resources with minimal investment. Acting illegally on at least two levels – in acquiring the land and in exploiting it – the landlords generate profits based on predatory practices. It is this logic that explains the incompatible deforestation rates with the productive use of land, in which only 4.9 percent of the area deforested in Amazonia had been cropped until 2008 (EMBRAPA-INPE, 2011). Even when dealing with dedicated, properly titled land, the statistics are disappointing in terms of productivity and waste. According to Brazil's National Food Supply and Nutrition Corporation (CONAB, in its Brazilian acronym), a unit of the agriculture ministry, only an estimated that 47.5 million hectares had been cultivated in 2008, representing only 7.4 percent of Brazil's arable land (CONAB, 2009). The World Bank cites a slightly different percentage – 8.1 percent – because they include permanent crops areas in their calculations (World Bank, 2010). These signs of extreme idleness in the hegemonic segment of the agricultural sector stand in striking contrast to the arguments *ruralistas* made in the context of altering the forestry code to expand their right to destroy more and more natural resources in the name of scarce arable land. It also confirms the logic of the landless movement in supporting agrarian reform and in challenging the patriotism, efficiency and hegemony of the rural oligarchy.

The paradoxical productive superiority of peasant agriculture

In spite of chronic land insufficiencies, peasants have not been timid in terms of their productivity. Certainly inadequate land interferes in production patterns, but in relation to landlords, peasants have shown a remarkable resilience in overcoming this obstacle. Their secret has been more productive use of the soil rather than any technical or administrative superiority. Peasants also make the most of unfavorable natural conditions, such as disadvantages in fertility, topography, water resources, and climate, as well as locational variables that can undermine the income potential of a farm. These include factors like a peasant unit's distance from the market. Because it is cheaper to buy or less visible to squat on, peasants often work land negatively affected by such poor conditions.

Despite these observations, the relationship between establishment size and the viability of a holding are not entirely clear. It is possible to identify patterns from area-based clusters of agrarian classes. In Brazil, a size classification system is used to subdivide the country's rural establishments into small, medium and large categories according to the number of 'fiscal modules' they contain. Fiscal modules are essentially the land area needed for a farm operation to be economically viable for one family. They are defined according to the specific agricultural conditions in each municipality, and thus vary in size between 5 and 110 ha. Thus, a small classification is given to those establishments that have 4 modules

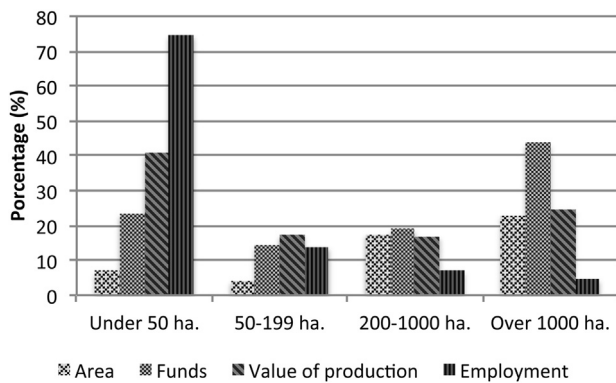


Fig. 1. Brazilian agricultural indicators according to establishment size (in hectares), defined as a percentage of all declared and undeclared arable land (IBGE, 2009).

or less, those up to 15 modules are considered medium-sized farms and those that surpass this level are defined as large units.

In order to reconcile the vast diversity made possible by this classification system with indicators drawn from the 2006 agricultural census, some different relationships between size and class were used here. Small is defined as an establishment with up to 50 ha and large properties are those with more than 1000 ha. The intermediate ranges are less precise, because depending on the region, values between 50 and 200 ha can cover both small and medium holdings, while the 200 to 1000 ha range can correspond to both the medium and large properties. For this reason, a comparative approach based on the two extremes of a three-class system was chosen to establish parameters for Brazil's total agricultural area, which is sum of both the declared and undeclared areas in Table 1. For purposes of comparison, some major agricultural indicators have been associated with the new size categories in the single graph in Fig. 1. It groups data on animal and vegetable production, subsidies and employment obtained in the field, as shown below.

Fig. 1 shows the inverse relationship between properties size and favorable economic indicators, such as employment generation and revenue production. Another interesting contradiction is shown in the contrast between performance and agricultural subsidies, with large establishments receiving significantly more subsidized (low-interest) credit than smallholdings, despite their much lower performance in terms of employment and revenue generation. The most outstanding success of smallholders is in job creation. With only 6.9 percent of arable land, small farms employ 74.6 percent of the countryside's economically active population, while large farms with more than 20 percent of the land employ only 5.8 percent of this population.

Regarding rural employment, it helps to consider qualitative aspects of rural work. The influx of green revolution technologies and of the more recent wave of genetic technologies has tended to both reduce the number of jobs available and increase the temporary nature of rural work. While mechanization is one of the leading changes affecting these trends, it has tended to improve the quality of work for few people. Using sugarcane as an example, cane-cutting machines do the work of 100–150 manual cutters at much faster rates and at much less cost in human drudgery. This is surely an achievement both capitalists and socialists can celebrate as a step forward toward the "kingdom of liberty" (Marx, 1996).

But it is neither the beginning, nor the end of this journey. In the first place, employers used the machines to displace cane cutters without any consideration for their lost work and income. For those fields as yet unprepared for machine production, manual cane cutting continued, now under pressure to compete with rates of production set by machines. Working conditions worsened dramatically as individual tonnage quotas jolted upward from three

to ten tons a day. A surplus of workers as well as deskilling made it possible to drop pay scales while intensifying an already exhausting labor regime. It happened that the principle of expanded accumulation, founded on surplus value extraction, not only concentrated benefits in the hands of owners, but promoted regression for human existence in the dimension Marx called the "kingdom of necessity," because the possibility of selling one's labor is inversely proportional to one's technical resources, an insight valid not only for the agricultural sector of the economy.

In terms of job creation, small farms offer an additional differential that Fig. 1 does not fully capture. One can infer the participation of family labor in the overall labor force engaged in agriculture. In fact, we know that 77.3 percent of rural employment is composed of the family members of those responsible for the production unit. This finding adds detail to the graph by demonstrating that most rural workers are actually relatives of small establishment operators, while family members are also provide a significant proportion of the labor on medium and large establishments, where family is involved with production and above all, business administration.

The relationship between small land size and elevated job-generation can be understood through Alexander Chayanov's consumption-labor-balance theory (1974). In the 1920s, the Russian agronomist sought to understand peasant resilience in the face of their disadvantaged place in the capitalist system. Chayanov developed a theory of "non-capitalist economic systems" to arrive at his conclusions. While in the capitalist mode of production, entrepreneurs determined their labor needs according to the availability of resources such as financing, land and machinery, for the peasantry, the "non-capitalist" theory demonstrated that reproductive needs determined labor demand. In this system, peasants adjusted their economic activity in accordance with the necessity of family preservation without regard to material resources. In other words, if for the capitalist mode the parameter is the productivity of the business, for the peasant mode it is the re-productivity of the family. This implies divergent set of directives. For the capitalist enterprise, maximizing profits through the labor theory of value puts a premium on suppressing labor costs by lowering wages and increasing the self-reliance of workers, forcing them to cover the costs of their reproduction. For the peasant enterprise, the ability to pay the costs of reproduction is the top priority, placing emphasis on the health and nutrition of family members. The dynamics of small farms are better understood through this "non-capitalist" theory, whereas medium and large farms are best explained by capitalist logic. Medium and large farms don't create many jobs because profitability is privileged. Small farms create more jobs because human needs are their first priority.

According to sociologist Ploeg (2008), the peasant tradition is founded on enhancing production efficiency though a process of establishing control over knowledge-oriented tools and techniques, contrary to the capitalist system's emphasis on increasing profits by standardizing goods for the market in homogenization processes. The efficiencies that result for peasants arise from the specific conditions of each unit of production, naturally reproducing this diversity. For Ploeg (2008), this tradition is at the root of the re-peasantization processes unfolding in Europe and other parts of the world. In Brazil, the peasant recreation process is riddled with contradictions (Oliveira, 2003; Shanin, 2008), chief among them a slight increase in the share of family farm labor, rising from 76.9 to 77.3 percent of total rural jobs between 1996 and 2006, accompanied by a dramatic decrease of nearly 1 million family occupations during the same period (Fernandes et al., 2012).

The disturbing decline in farm employment – like any increase in underemployment in a country already torn asunder by endemic underemployment – calls for immediate corrective measures. Declining rural jobs can be explained by the advance of modern technologies in conventional agriculture as well as land grabbing

because each of these trends reduces opportunities for the productive employment of labor by either monopolizing control over the land, preventing it from being used, or by overusing land and water resources in ways that negatively affect the regenerative mechanisms of nature, arguably agriculture's greatest ally. The best strategy for counteracting this situation would be agrarian reform, dividing the land into smaller establishments by implementing existing policies and creating new ones to ensure smallholder incomes. Such measures would be oriented by a long-range view of territorial development based on enhanced and expanded farm employment, improvement in land tenure arrangements, environmental sustainability, and a safer and more abundant supply of food.

Obviously, such a proposal represents a complete inversion of the perspective currently guiding agriculture policies in Brazil. But the logic of such a change in policies is irrefutable when one looks closely at the data reflected in Fig. 1. While large establishments received 43.6 percent of funds, mostly in the form of subsidized loans, they contributed only 24.8 percent of production value. In contrast, small farms received only 23.3 percent of these funds while producing 41 percent of agricultural value. In terms of area, the statistics reveal yet another striking productive efficiency of small farms. Controlling just 6.9 percent of agricultural land, establishments with up to 50 ha produced nearly double the amount generated by establishments with more than 1000 ha, even though these control more than three times the area. In terms of money, the 2006 agricultural census verified that the gross per hectare revenue obtained by smallholders was US\$ 625.60 compared to US\$ 114.12 earned by large establishments. Thus, the more vulnerable segment of the sector, the smallholders who receive only half the amount of subsidies and control less than one-third the quantity of land as compared to large holders, were five and a half times more efficient in terms of production value, which is the least subjective of various types of comparative statistics. Investing more in this segment could only improve Brazil's agricultural performance, not to mention its employment statistics and, consequently, nearly all socio-economic indicators.

Whether or not our argument is logical from a socioeconomic perspective, political complications need to be taken into consideration (Solberg, 1987). The rentier pact that favors *ruralistas* has led the Brazilian government to use a conceptual distinction consistent with the thesis of the economic infeasibility of smallholding. For the purpose of public policy, the government distinguishes between two general classifications of agricultural establishments: family farms and commercial farms. To determine an establishment's category, the government uses data relative to the size of its area and origin of its labor force, but not its productivity. In a separate process, largely determined by congress, budgets are established for each harvest year with credit subsidies determined for each classification. For the 2012/2013 year, US\$ 58 billion was set aside for the commercial class and US\$ 9 billion for the family category. Thus, without any reference to production, employment or efficiency, only 13.5 percent of the budget was destined to support the most populous and productive segment of Brazilian farms.

All small farms certainly are not efficient and all large establishments are neither inefficient nor unproductive. The poster children of agribusiness in Brazil are plantations growing soybeans or sugar cane, monocultures that together account for 42.3 percent of the cultivated area (IBGE, 2009). Efficient they may be, but most of them employ few people, poison the soil, pollute the water supply and stimulate erosion, causing springs to dry-up and rivers to choke-off. Centralized management, genetic engineering and artificial toxic ingredients may simplify operations and produce short-term efficiency, but the long-term environmental costs are much debated (Oliveira, 2003; Bombardi, 2011).

Territorial uses and abuses in the context of the rentier pact

Consistent with the logic of privatizing profits and socializing losses, the favoritism shown larger estates and monocultures represents a process of restoring the economic dominance of the primary sector. Far from being imposed geopolitically by the central powers or even the result of anonymous global forces, such as those emphasized by Hardt and Negri (2000), this return to plantation society in Brazil arises from structural changes promoted by the hegemonic group of agrarian elites within the dominant classes. The names and faces of these actors are recognizable to those who staff the state apparatus indispensable to the success of capitalist accumulation, even while its partisanship apparently promotes the weakening of the capitalist system.

Despite the potential to advance a development plan capable of reconciling economic, social and environmental demands in Brazil, the emphasis of public policy has been on unrestrained accumulation, to the point of strengthening both productive and unproductive rural estates. The productive *latifúndia* are called agribusinesses if they can be identified with "modern" production techniques. These compress the time of accumulation while almost always placing at risk social and environmental resources. These activities bear little relationship to agriculture, which is a concept as broad as culture, in which life is reproduced where diverse and plural territorial practices prevail (Gonçalves, 2006; Desmarais, 2007). It is in this fundamental distinction between agriculture as culture and agriculture as accumulation that we can find opportunities to expand practices that contribute to the consolidation of sovereignty in food production and technological innovation (Altieri and Toledo, 2011; Borrás and Franco, 2012; Wittman, 2011).

Although numerically superior to *latifúndia*, peasant establishments are not completely associated with the sustainability paradigm. There are two reasons main for this. First, the amount of land they control is too small to serve as the basis of an overarching paradigm shift. Second, the attraction of modern technological fixes is so hegemonic, that few farmers value agro-ecological approaches, preferring to adopt the latest genetic, chemical or mechanical innovation they can afford to adopt. The first item is documented in Table 1; the second is revealed in pesticide consumption statistics, which indicate that usage averages 3.7 kg of pesticides per hectare (Palma, 2011). This estimate easily places Brazil first in the world in pesticide usage, considering that the area under cultivation that year greatly overwhelmed the 165.6 million hectares harvested that year by the United States, which was in second-place using far fewer chemicals (World Bank, 2010). In the 2006 census, all large establishments reported using pesticides, whereas nearly half (48.2 percent) of small farms reported pesticide use (IBGE, 2009). This suggests that the majority of Brazilian peasants (51.8 percent) are putting into practice sustainable cultivation techniques advocated by organizations such as the Landless Workers Movement (MST, in its Brazilian acronym) to promote an alternative paradigm to that of agrarian capitalism (Fernandes et al., 2012).

Many researchers monitor the impacts of pesticides on Brazilian society (Stoppelli and Magalhães, 2005; Ibama, 2010; Bombardi, 2011). It has been observed that the problem manifests itself more severely in monoculture regions, such as the state of Mato Grosso, where soybean plantations predominate. A Federal University of Mato Grosso study involving 65 lactating mothers in the municipality of Lucas de Rio Verde – a major soybean producing center – showed that all of these women had pesticide residues in their breast milk, without having had direct contact with such substances. The same study revealed that in a single year, soybean farmers applied 136.4 l of pesticide per municipal inhabitant (Palma, 2011).

To sum up, what has been taken to be the modern agricultural model has shown itself to be unsustainable, not only by triggering immeasurable environmental damages – and contradictorily stimulating yet another market for investment, as in the controversial “cap-and-trade” emissions control exchanges – but also by promoting profound harm to human health, among other anti-social ills. Both the excessive use of poisons to intensify productivity and the extensive occupation of virgin land could not have prospered in Brazil without a powerful propaganda campaign designed, of course, to reveal benefits and conceal costs (Bruno, 2009). Coercion and cooptation were also exploited to implant the system, as in prosecuting some farmers for not paying royalties to corporations like Monsanto when genetically modified (GMO) seeds accidentally drifted onto their land, while providing government subsidies to others for willfully using such seed. From the ideological point of view, the strategy has been to represent large estates using the latest conventional technology as models of agricultural success. Therefore, images, expressions, speeches, and actions have emphasized their supposed attributes of economic efficiency and even sustainability as a way consolidating the hegemony of the agribusiness paradigm. The campaign has swayed public opinion to accept bourgeois repudiation of peasant struggle for land and has greatly weakened support for enforcing the constitution's agrarian reform articles.

In terms of political confrontations that could result in establishing some constraints on *ruralistas*, influencing their ability to profit from land, the points of debate are exaggerated: either development or preservation, food or forest, often ignoring the possibility of compatibility between diverse goals. The level of peasant productivity indicated above suggests that the rational use of the soil requires redistribution, hence an aggressive agrarian reform policy. They also suggest that such a measure would greatly increase the food supply. Environmental benefits and sustainability would result, in the first instance, from having less land under the plow, less forest destroyed—maybe none—to produce more food. In a second phase, the government could reduce its support for green and genetic revolution models and invest more in agroecology, bringing still more overall societal benefits. Many believe the agrarian capitalism model to be a purposefully incorrect interpretation of reality fitting of a country in which the “settling of scores” has yet to occur. Without access to a decent educational system that might open doors to transformative scientific knowledge about the world, the majority falls prey to a hegemonic order that impedes their growth. Ideological manipulation is fertile where citizenship is fragile. Such is Brazil's story.

In 1994, in the midst of Brazil's redemocratization process, sociologist José de Souza Martins elaborated on the concept of “slow history” to describe the persistence of the backward in Brazil's “country of the future” mindset. He laid the blame for this contradiction, this hopeful waiting for a progress that is always just over the horizon, on the durability of the alliance fused between landlords and capitalists, a double-edged sword wielded against workers by planters become urban entrepreneurs and industrialists become farmers. Instead of opposition between these segments of the ruling class, only the origins of their wealth distinguish them – land rents or production profits – while their thirst to accumulate is nearly identical. These are the distinct characteristics of rentier capitalism (Martins, 1994). There is a structural difference between rentier and industrial capitalism that has its origins in the bourgeoisie's victorious struggle against the landlord's monopoly control over land rents, as this practice is said to have interfered with rates of capital accumulation, tending to increase the cost of reproducing the workforce. In rentier capitalism, the burden of land rents tends to fade away, gradually replaced by the benefits of landownership, such as increased equity.

There are other benefits, as well. One comes from the patrimonial value of land that allows title-holders to obtain subsidized credit for loans related to agricultural activity. Another stems from the privileged tax status of agricultural land that makes it a good place to protect one's capital. The rentier orientation of tax policy keeps rates on idle land so low that there is little incentive to work it. The only tax on farm property is the Rural Territorial Tax (ITR, in its Brazilian acronym), previously discussed. It is so low that landowners pay less tax on rents than workers pay on their salaries. In 2012, property owners will pay a little more than US\$291.3 million in ITR. This is equivalent to about 0.2 percent of the total amount to be paid nationally on property values and rents. In the meantime, salaried employees will have to pay the equivalent of 8.7 percent of this value (CGU, 2012). In deference to the power of *ruralistas*, even urban property owners pay more and there are absolutely no mechanisms for progressively modifying these disparities. In 2012, for example, the value of the corresponding property tax to be paid only by urban land owners in the city of São Paulo is more than US \$2.6 billion, some nine times the amount to be paid by the rural landowners in the entire country (PMSP, 2012).

These facts turn the paragraphs of the Brazilian Constitution that discuss property's social function into a rhetorical masterpiece of romantic writing. According to article 184, “it falls within the competence of the federal government to expropriate for purposes of agrarian reform, rural properties that fail to fulfill their social function.” In article 186, a property's “social function” is only fulfilled when it is “rationally and adequately utilized,” “natural resources are adequately utilized and the environment preserved,” “labor relations laws are observed,” and its use “favors the well-being of owners and workers.” Practically speaking, the state should guarantee the “social function” of farmland through tax mechanisms, constantly regulating property rights, such that no one assumes they are “absolute.” This failure of the New Republic to stop the cycle of wealth concentration through the accumulation of private property maintains a tradition of natural resource underutilization that has characterized Brazil since the initial extractive cycle of the colonial era.

The fact that the land is an irreproducible good explains the valuation process. So long as society's demand for food increases, land prices would tend to increase in any private property regime. In situations of oligopoly, however, society is forced to pay more in order to induce landlords to put their land into production. The rate of profit from the land is what will determine the type of use owners opt to establish, whether they themselves cultivate it, transfer the right of use to others, or do nothing until the rate of return climbs again (Solberg, 1987).

Between 2000 and 2006, the average price of arable land in Brazil increased 161 percent, discounting for inflation. Although global phenomena such as heightened demand for agrofuels and commodity price appreciation contributed to this trend, the price inflation in Brazil was significantly higher than it was for arable land in the United States, which increased in value by 92.9 percent between 2000 and 2007 (Gasques et al., 2008). Some local cases are even more striking. In Paraná State, land prices rose 450 percent between 2000 and 2011. In 2011, the average hectare cost US\$8863.02 (SEAB, 2012), nearly 53 percent higher than the average price of a hectare in the United States as recorded that year by the USDA (US\$5,807.090).

Such high land prices make the reproduction of small production units increasingly difficult. As Chayanov (1974) related in the 1920s, the demographic dynamics of family farming make the expansion of cultivated area a necessity due to the formation of new families with the arrival of children at adulthood. Faced with the near impossibility of buying land at current prices, youth have few choices but to leave the countryside – a phenomenon that threatens the fragile balance between land and labor that is essential for

guaranteeing the supply of staples, crops which are rarely grown by medium to large establishments as they tend to be more perishable and less remunerative than the monocultures cited above.

Contrasting smallholder income with hourly wage rates is one additional parameter for calculating the challenges facing peasants when they consider land acquisitions. In Paraná state in 2011, the minimum hourly wage was US\$1.52. At this rate, a hectare of land in the state would require around 5830 h of work. In the U.S., where the minimum hourly wage was US\$7.25, the same amount of land at the lower U.S. average price would require 801 h of labor. While the intrinsic qualities of a fraction of Brazilian soil may influence price differentials, they interfere little in the country's dramatic land market trends; what explains these, before any other cause, are the twists and turns of maintaining the rentier pact. This is manifest in capitalized income; that is to say, in land price hikes that result from the rural real estate market.

Conclusion

The legal changes regarding “agricultural development” that the *ruralistas* have manipulated through congress, such as the revised forest code, collide violently with nearly all the evidence. The deforestation of Amazonia is a distinct example since the region became a target of expropriation by capitalists only in the 1970s, when the dictatorship began to implement policies to consolidate its “integration” into the national political economy. It is important to emphasize that the state-induced integration was to be a capitalist one, since over 180 different indigenous nations already lived in the region, having escaped genocide by moving inland ahead of the advancing European occupation of coastal zones since the colonial era. Thereafter, various peasant incursions affected the region as poor rural Brazilians sought opportunities to settle in the vast open territory. Although these spontaneous episodes of population growth obviously jeopardized Amazonia's original vegetation, the far more devastating occupation of the region by mining companies, agro-industrial complexes and agribusiness is a more recent phenomenon.

The prior history of the region is important to note as it underscores the fact that the area had experienced sustainable forms of development and that Amazonia was not a human void before the 1970s, in contradistinction to government propaganda. If there was a void, it was an accumulation void, because self-sustaining settlements dotted the region through a centuries-long process of occupation. Even earlier attempts to stimulate capitalist accumulation in the region, such as the so-called rubber boom at the turn of the 20th century, was far more agro-ecological than contemporary forms of exploitation. Workers obtained natural rubber by tapping *Hevea brasiliensis* sap; for almost half century, this native tree supplied industrial revolution demand for this new raw material. The boom turned bust with competition from Malaysian rubber tree plantations that were easier for capitalists to control than the complex Amazon forest routes tappers designed to collect rubber from trees cultivated in their native habitat. When demand slowed, those accustomed to life in the forest stayed on, developing other extractive activities that sustained communities without the need to generate a cash economy or land market (Revkin, 2004).

In contrasting the compatibility of these traditional activities with the incompatibility of the rentier model in the Amazon biome, the major expression of this model is deforestation. Negligible quantities of forest were destroyed until the 1970s. From then until 2008, capitalists eliminated 71.9 million hectares of forest, which is equivalent to 77.3 percent of the total area of the three countries – the Netherlands, Germany and France – that are, like the United States, individually ahead of Brazil in the value of agricultural exports (FAO, 2010). Adding to the sense of tragedy this

fact that, if one were to unite the territorial dimensions of these same three countries, the combined area would be equivalent to only 11 percent of Brazil's territory and yet, the combined value of their agricultural exports typically exceeds those of Brazil by nearly 400 percent (FAO, 2010).

Obviously, area is not the only factor that matters. In contrasting Brazil's place in the ranking of agro-export nations, it is also important to note climatic factors. The top four countries are all in the northern hemisphere where only a single annual cereals harvest is possible. Brazil is again privileged in this sense since conditions of sunshine, rainfall, temperature, altitude and topography allow the country to have two cereal harvests a year, mostly without irrigation or burdensome production techniques. Therefore, given all of Brazil's enormous geographical advantages, its fifth position in the commodities market expressed in exportation values represents more its failings than successes.

Another standard of comparison is the Gini index on land concentration. Despite a decrease of 0.03 percent compared to a benchmark value established in 1985, this index should also be analyzed for what it conceals as well as what it reveals. The reduction in the concentration of land should be considered in the context of the two largest programs of land “decentralization” in the country's history: the first and second national agrarian reform plans (PNRA, in their Brazilian acronym). The first, initiated in 1986 at the beginning of the re-democratization process, anticipated the settlement of a million families. The second, organized following the inauguration as president in 2003 of the former metalworkers leader Luis Inacio Lula da Silva, reaffirmed the necessity to keep the goal of settling a million families because only 6 percent of that goal had been achieved by the first plan.

However, the process of building alliances to both gain election and govern led Lula and the first popular government in Brazilian history to abandon the quantitative parameters and reposition itself in relation to the structural reform project that had seemingly brought the Workers Party (PT, in its Brazilian acronym) to power. Thus, the goal of the second PNRA was reduced to 400 thousand families. Upon reflection, achieving this much-reduced goal would have been a great advance for agrarian reform since, even by the end of Lula's second four year term of office, only 162,387 families had been settled (Oliveira, 2010). Official statements, however, claim higher numbers in order to support the argument that the PT administered the biggest land reform project in Brazilian history (INCRA, 2011). To support this claim, the government defends a change of nomenclatures as a land reform conquest. In other words, more than two-thirds of those settled according to official statistics essentially were those whose holdings were “regularized” through formal titling, as addressed above in discussing Law 11,952 of 2009. By calling land title normalization agrarian reform, the government tripled the number of families settled, even though the vast majority of these families were on land that effectively belonged to them already. This speaks to a struggle in Brazil over the definition of agrarian reform. For some, it is assistance of any form to small family farmers; for others, especially those linked to popular organizations like the MST, reform only occurs when private or public lands are redistributed to peasant families.

Moreover, from 2003 to 2010 the budget set-aside to purchase land for agrarian reform did not privilege the constitutional mechanism of expropriation, as had been the norm since the end of the 1980s. Some 40.4 million hectares were bought for agrarian reform purposes and yet part of this stockpiling has yet to be distributed to workers because the settlement creation process is practically paralyzed due to *ruralista* intransigence within the government (Paulino, 2012b). When analyzing the disbursement of land for agrarian reform purposes in the state of Sergipe, during the period from 2008 to 2010, a geographer identified that 92.6 percent of the resources were destined to land acquisition, leaving only

7.4 percent to spend on infrastructure, such as building roads, supplying drinking water, energy, housing and similar investments (Pereira, 2012).

While the federal government has justified land purchases as a way of streamlining the settlement creation process, arguing that it takes far too long to fight in the courts to take-back land illegally absconded from public areas, the fact is that the state lacks the political will needed to dismantle the land grabbing schemes that resulted in privatizing lands that should in fact be used for agrarian reform projects without any burden on public coffers. The gaps in accounting for the ownership of national territory that appeared in the census of 2006 are a good indicator of the government's fear to publicize the issue as a means to socially construct a solution. For this reason alone, the situation is bound to worsen, because the strategy of privileging purchase over expropriation, not only encumber public funds and reduce the budget share available to invest in the infrastructure needed to make settlements viable, it also makes the state appear to *grileiros* as a realtor of unparalleled magnitude. In a vicious cycle, stimulating the conversion of land into a profitable business, the state actually promotes illegal land grabbing and land concentration. This, in turn, adds to the *ruralistas* source of power to act behind the scenes in government corridors in order to perpetuate and enhance ministerial practice that favors the profitability of the land market. From this pressure comes this obscure yet dramatic shift in policy privileging land purchases in detriment to exercising the constitutional prerogative of expropriation for agrarian reform purposes (Castilho, 2012).

It is not only land governance policy that concerns large landowners, but those policies that favor the allocation of land to peasants, since agrarian reform effectively takes settlement land out of the flux and flow of the market, thereby affecting their profits. It is for no other reason that a supposedly temporary executive order signed by President Cardoso during his last years in office has remained on the books for more than a decade. According to the order numbered 2183-56, issued in 2001, expropriation processes on lands occupied by peasants organized to struggle for land are to be suspended automatically for two years even if the land in question has been illegally taken by its title holder or found in violation of the social function criteria of the constitution. The process suspension period can be extended indefinitely should new occupations occur. This is one reason for a significant decline in land occupations, this once tried and true method of speeding the implementation of land reform. It explains part of the reason for a decrease in the number of landless worker camps along the highways since 2005. Once an effective organizing strategy as well as a prominent public relations tool, now those who participate in occupations can be indefinitely excluded from being registered as possible beneficiaries of agrarian reform. They may also face criminal charges for participating in “criminal gangs,” as the MST is often characterized.

While the difficulties in achieving official agrarian reform goals could have been converted into political capital, the state chose not just to ignore but to deepen the criminalization of one of the largest social struggles of the contemporary era, one which simply sought to transform into reality the dreamed about ideal of the poor and marginalized to guarantee a life of productive labor on a humble parcel of Brazilian soil. Instead of turning a demand for basic conditions of survival of the underclasses into hope, the state helped turn the precarious condition of the majority into a weapon of coercion and fragmentation. Instead of land, the poor received the “Family Purse” (Bolsa Família), a program designed not to enhance independence and self-determination but dependence and control, not to mobilize the creative forces and human capacity of the Brazilian people, but just its opposite through a monthly payout of approximately US\$58 per family (CNSAN, 2010). The program may have positively influenced Brazil's poverty statistics by producing some

of the highest rates of reduction in poverty indices in the world, but it has done nothing to end chronic dependency.

In 2010, the last year of Lula's presidency, the government allocated US\$8.6 billion dollars to this program, equivalent to only 14.4 percent of the amount spent to subsidize commercial agriculture (CGU, 2012). The purpose of this comparison is not to belittle the importance of the Family Purse Program in the lives of the poor. Indeed, the program's importance to the under privileged can be measured in inverse proportion to the repudiation it has received from the bourgeoisie, not to mention certain segments of the middle class who hate it for making it more difficult to demean and exploit workers otherwise trapped in the informal circuits of the economy. The purpose of this example is to heighten attention to the policy changes that were implemented, while more profound and potentially transformative structural changes were swept out of sight by a political party that had long manifested support for redistributive agrarian reform. The growing ability of landlords to benefit from land governance policies and the growing dependence of the poor on welfare deepen the contradictions that serve as powerful obstacles to emancipation.

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References

- Altieri, M.A., Toledo, V.M., 2011. *The agroecological revolution in Latin America*. *Journal of Peasant Studies* 38 (3), 587–612.
- Almeida, R.A., 2006. *(Re)criação do campesinato, identidade e distinção*. UNESP, São Paulo.
- Arruda, R., 2009. Ministros divergem sobre índice de produtividade. O Estado de S. Paulo (3 Sept.), Available at <http://www.estadao.com.br/noticias/impresso,ministros-divergem-sobre-indice-de-produtividade,428920,0.htm> (last accessed 11.07.12.).
- Bombardi, L.M., 2011. *Intoxicação e morte por agrotóxicos no Brasil*. *Boletim Dataluta* 45, 1–21.
- Borras, S.M., Franco, J.C., 2012. Global land grabbing and trajectories of agrarian change. *Journal of Agrarian Change* 12 (1), 34–59.
- Bruno, R., 2009. *Um Brasil ambivalente: agronegócio, ruralismo e relações de poder*. Maud, Rio de Janeiro.
- 2001. Câmara dos Deputados, Available at <http://pt.scribd.com/doc/33421741/Relatorio-Final-CPI-Terras-Amazonas-grilagem> (last accessed 26.07.12.).
- Carvalho, H.M., et al. (Eds.), 2008–2009. *Varios Titles in 9 Volumes of the Coleção História Social do Campesinato no Brasil*. UNESP, São Paulo.
- Castilho, A.L., 2012. *Partido da terra: como os políticos conquistam o território brasileiro*. Contexto, São Paulo.
- CEPEA-Centro de Estudos Avançados em Economia Aplicada, 2011. PIB do agronegócio. Available at <http://www.cepea.esalq.usp.br/pib/> (last accessed 12.06.12.).
- 2010. CNSAN-Conselho Nacional de Segurança Alimentar e Nutricional, Available at <http://www4.planalto.gov.br/seguranca/documentos/transferencia-de-renda-programa-bolsa-familia-apresentacao-mds> (last accessed 18.07.12.).
- CONAB-Companhia Nacional de Abastecimento, 2009. Área plantada no Brasil, Available at <http://www.conab.gov.br/conabweb/download/safra/3graos.08.09.pdf> (last accessed 28.07.12.).
- CGU-Controladoria-Geral da União, 2012. Receitas do governo federal, Available at <http://www.portaldatransparencia.gov.br> (last accessed 10.06.12.).
- Chayanov, A.V., 1974. *La organización de la unidad económica campesina*. Nueva Visión, Buenos Aires.
- CPT-Missão Pastoral da Terra, 2011. *Conflitos no campo no Brasil 2010*. CPT, Goiânia.
- Desmarais, A.A., 2007. *La Vía Campesina: Globalization and the Power of Peasants*. Fernwood Publishing and Pluto Press, Halifax and London.
- EMBRAPA-INPE – Empresa Brasileira de Pesquisa Agropecuária-Instituto Nacional de Pesquisas Espaciais, 2011. Levantamento de informações de uso e

- cobertura da terra na Amazônia, Available at http://www.inpe.br/cra/projetos_pesquisas/sumario_executivo_terraclass_2008.pdf (last accessed 2.06.12.).
- FAO-United Nations Food and Agricultural Organization, 2010. FAO Statistical Yearbook on World Food and Agriculture, Available at <http://www.fao.org/docrep/015/am081m/am081m00.htm> (last accessed 14.06.12.).
- Fernandes, B.M., Welch, C.A., Gonçalves, E.C., 2012. *Land governance in Brazil*. International Land Coalition, Rome.
- França, A.S., 2004. Previdência social e a economia dos municípios, 5th ed. ANFIP, Brasília, Available at http://previdencia.gov.br/arquivos/office/3_081014-104850-324.pdf (last accessed 24.11.12.).
- Garrido Filha, I., 1980. *O Projeto Jari e os capitais estrangeiros na Amazônia*. Vozes, Petrópolis.
- Gasques, J.G., Bastos, E.T., Valdes, C., 2008. *Preços da terra no Brasil*, vol. 46. SOBER, Rio Branco.
- Gonçalves, C.W.P., 2006. *Globalização da natureza e a natureza da globalização*. Civilização Brasileira, Rio de Janeiro.
- Gonçalves Neto, W., 1997. *Estado e agricultura no Brasil*. Hucitec, São Paulo.
- Hardt, M., Negri, A., 2000. *Empire*. Harvard University Press, Cambridge.
- Harvey, D., 2003. *The new imperialism*. Oxford University Press, Oxford.
- Harvey, D., 2006. *Limits to capital*. Verso, London.
- IBAMA - Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis, 2010. *Produtos agrotóxicos e afins comercializados em 2009 no Brasil*, Available at http://www.ibama.gov.br/phocadownload/Qualidade_Ambiental/produtos_agrotoxicos_comercializados_brasil_2009.pdf (last accessed 15.06.12.).
- IBGE-Instituto Brasileiro de Geografia e Estatística, 2009. *Censo Agropecuário 2006*. IBGE, Rio de Janeiro.
- IBGE-Instituto Brasileiro de Geografia e Estatística, 2011. *Censo Demográfico 2010*. IBGE, Rio de Janeiro.
- INCRA-Instituto Nacional de Colonização e Reforma Agrária, 2011. *Volume de terras para reforma agrária cresce 129percent em oito anos*. Publicação Especial do INCRA 1 (2), 1–2.
- Kautsky, K., 1988. *The Agrarian Question*. Zwan, London.
- Kay, C., 2009. *Development strategies and rural development*. *Journal of Peasant Studies* 36 (1), 103–137.
- Locke, J., 2007. *The Second Treatise of Civil Government*. University of Adelaide, Australia.
- Martins, J.S., 1984. *A militarização da questão agrária no Brasil*. Vozes, Petrópolis.
- Martins, J.S., 1994. *O poder do atraso*. Hucitec, São Paulo.
- Marx, K., 1996. *Capital Volume III. The Process of Capitalist Production as a Whole*. International Publishers, New York.
- MPF-Ministério Público Federal, 2010. *Ação Civil Pública*, Available at http://www.prdf.mpf.gov.br/imprensa/arquivos_noticias/acp_indices_produtividade.pdf (last accessed 20.06.12.).
- Nepomuceno, E., 2007. *O massacre: Eldorado dos Carajás*. Planeta do Brasil, São Paulo.
- NERA-Núcleo de Estudos, Pesquisas e Projetos de Reforma Agrária, 2011. *Relatório Dataluta. Presidente Prudente*, UNESP.
- Oliveira, A.U., 1990. *Integrar para (não) entregar*. Contexto, São Paulo.
- Oliveira, A.U., 2003. *Barbárie e Modernidade*. Terra Livre 21, 113–156.
- Oliveira, A.U., 2010. *A questão da aquisição de terras por estrangeiros no Brasil*. *Agrária* 12, 3–113.
- OXFAM, 2012. *Left Behind by the G20?*, Available at: <http://www.oxfam.ca/sites/default/files/Leftpercent20behindpercent20bypercent20thepercent20G20percent20Oxfampercent20Report.pdf> (last accessed 07.08.12.).
- Palma, D.C.A., 2011. *Agrotóxico em leite humano de mães residentes em Lucas do Rio Verde - MT*. Universidade Federal de Mato Grosso (Brazil), Thesis (Ph. D.).
- Paulino, E.T., 2012a. *A mudança do Código Florestal Brasileiro*. *Campo Território* 7 (13), 40–64.
- Paulino, E.T., 2012b. *Por uma geografia dos camponeses*, 2nd ed. UNESP, São Paulo.
- Pereira, R.A., 2012. *Prolegômenos à reforma agrária em Sergipe*. In: Paper presented at the Encontro Nacional de Geografia Agrária, Uberlândia, Brazil.
- Pinto, L.F., 2011. *A maior propriedade rural do mundo deixou de existir legalmente*, Available at: <http://www.maranhaonews.com/meio-ambiente/meio-ambiente/37-meioambiente/2036-a-maior-propriedade-rural-do-mundo-deixou-de-existir-legalmente.html> (last accessed 02.08.12.).
- Ploeg, J.D.V.D., 2008. *The New Peasantries: Struggles for Autonomy and Sustainability in an Era of Empire and Globalization*. Earthscan, London.
- PMSP-Prefeitura Municipal de São Paulo, 2012. *Boletim de Receita em Janeiro*, Available at <http://ww2.prefeitura.sp.gov.br/arquivos/secretarias/financas/contas-publicas/Receita-Arrecadada-01-2012.pdf> (last accessed 28.07.12.).
- Ramos, P., 2005. *Índices de rendimento da agropecuária brasileira*. MDA, Brasília.
- Revista Exame, 2010. *Maiores empresas por liquidez geral em 2010*, Available at: <http://exame.abril.com.br/negocios/melhores-e-maiores/empresas/maiores/1/2010/liquidez-geral/-/industria-da-construcao/-/?> (last accessed 18.07.12.).
- Revkín, A., 2004. *The Burning Season: the Murder of Chico Mendes and the Fight for the Amazon Rain Forest*. Island Press, Washington.
- Ribeiro, R.M., 2009. *Questão agrária e territórios em disputa*. Universidade Federal de Uberlândia (Brazil), Thesis (Ph.D.).
- Sauer, S., Almeida, W., 2011. *Terras e territórios na Amazônia*. UNB, Brasília.
- Sauer, S., França, F.C., 2012. *Código Florestal, função socioambiental da terra e soberania alimentar*. Caderno CRH 25 (65), 299–321.
- SEAB-Secretaria da Agricultura e Abastecimento, 2012. *Preço das terras agrícolas*, Available at <http://www.agricultura.pr.gov.br/arquivos/File/deral/terras.pdf.publicacao.pdf> (Last accessed 15.07.12.).
- Shanin, T., 2008. *Questões camponesas*. In: Paulino, E.T., Fabrini, J.E. (Eds.), *Campesinato e territórios em disputa*. Expressão Popular, São Paulo, pp. 27–47.
- Silva, L.M.O., 1996. *Terras devolutas e latifúndio*. UNICAMP, Campinas.
- Solberg, C.E., 1987. *The Prairies and the Pampas: Agrarian Policy in Canada and Argentina, 1889–1930*. Stanford University Press, USA.
- Stoppelli, I.M.B.S., Magalhães, C.P., 2005. *Saúde e segurança alimentar*. *Ciência & Saúde Coletiva* 10, Available at <http://www.scielo.org/scielo.php?pid=S1413-81232007000100014&script=sci.arttext> (last accessed 12.09.12.).
- USDA-United States Department of Agriculture, 2011. *Land Values 2011*, Available at <http://usda01.library.cornell.edu/usda/current/AgriLandVa/AgriLandVa-08-04-2011.pdf> (last accessed 29.07.12.).
- Welch, C.A., 2004. *Rivalidade e unificação: mobilizando os trabalhadores rurais em São Paulo na véspera do golpe de 1964*. *Projeto História*, 29, t.2 (July–December), pp. 363–390.
- Wittman, H., 2011. *Food sovereignty: a new rights framework for food and nature?* *Environment and Society: Advances in Research* 2, 87–105.
- Wolf, E.R., 1969. *Peasant wars of the twentieth century*. Harper & Row, New York.
- World Bank, 2010. *Indicator: Agriculture and Rural Development*, Available at <http://data.worldbank.org/indicator> (last accessed 15.08.12.).

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