

Transgenic Crops in Latin America: Expropriation, Negative Value and the State

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This paper introduces a symposium on transgenic crops and neoliberalism in Latin America. We address the question: What is the relationship between the neoliberal food regime and transgenic crops in Latin American agriculture? Our goals are, first, to provide the main conceptual definitions and analytical parameters to contextualize the case studies that follow; and, second, using the findings of our contributors as our empirical stepping stone, to briefly elaborate the concepts of expropriation, accumulation by dispossession and negative value as the primary consequences of the neoliberal food regime. We also offer a brief description of each of the papers in the symposium that follows, linking them to our theoretical proposal. We hope this symposium will help in further exploration of the connection between GM crops and the larger dynamics of capitalist development worldwide.

Keywords: neoliberalism, biotechnology, agriculture, food regime

INTRODUCTION

Transgenic or genetically modified (GM) crops were introduced in Latin America in 1996, when the Argentine government approved the commercialization of herbicide-resistant soybeans. From then on, the production of GM soybeans (and other transgenic crops such as corn and cotton) expanded throughout the region. This expansion took off in the early 2000s, when transgenic soybeans were adopted in Uruguay, and GM seeds were smuggled from Argentina and illegally planted in Paraguay and southern Brazil in 1999 and legalized in 2004 and 2005, respectively (Hisano and Altoé 2008; Hetherington 2013). By 2011, GM crops were being sown across 66 million hectares in South America (James 2012), accounting for 40 per cent of the global GM crop area.

The use of transgenic seeds has been hotly debated and contested in Mexico and Central America, where GM crops are perceived to represent a threat to domestic food sovereignty and biodiversity and have triggered grassroots mobilizations, and campaigns and judiciaries have set up moratoria for their deployment (Klepek 2012; Otero 2014). In South America, however, GM crops have been widely adopted, in spite of strong opposition in Brazil. Argentina and Brazil have a long history of integration with global commodity markets. Their large landowners and capitalized farmers have an important weight in the agrarian political economy. Initially, Brazilian civil-society organizations have contested GM crops since 1996 and have achieved a moratorium until 2005. The role of peasant organizations such as the Landless Movement (*Movimento dos Trabalhadores Rurais Sem Terra*,

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or MST) was crucial. The MST has been one of the largest grassroots peasant organizations in the world (Motta 2016). Still, landowners and Monsanto's lobbying won out in legalizing transgenic soybeans.

Mesoamerica is the main centre of biodiversity of maize, where it originated about 10,000 years ago (Kloppenburg 2004). Maize – at least, the white variety – is used primarily as a food crop for human consumption. Hence the strong opposition to GM corn, even if the latter is the yellow variety, used mostly as a feed crop for livestock: it could easily 'contaminate' or compromise maize's biodiversity (Fitting 2011; Klepek 2012). Soybeans, in contrast, have been produced primarily as a feed crop for livestock and mostly for export markets. Still, soybean production displaces the use of land from food to feed crops, threatening food security (Teubal 2008), inducing the eviction of peasants and indigenous peoples, deforesting native woods, and bringing about serious public health issues due to exposure to herbicides (Pengue 2005; Hetherington 2013; Lapegna 2013; Leguizamón 2014).

The purpose of our symposium on transgenics and neoliberalism in Latin America is to document some of the main social and ecological consequences of this technological and policy convergence. The biotechnology turn in Latin American agriculture is inserted in the global move towards 'meatification' of diets (Weis 2013). Increased production and consumption of meats (beef, chicken or pork), accessible mostly by middle and upper-income classes, is associated with greater food inequality (Otero et al. 2015). Meatification has also heightened a host of ecological (Weis 2013) and health issues (Lang 2010). This may be why the United Nations designated 2016 as the year of the pulses or legumes, such as dried beans, peas and chickpeas and lentils. Considering that 75 per cent of pulses are consumed in developing countries as the main source of protein (Hui 2016), replacing them could be the frontier targeted by soybeans and ultimately meat producers. But the production of 1 kilogram of legumes equals 0.5 kilograms in CO₂ equivalent, compared with 9.5 kilograms of CO₂ for 1 kilogram of beef. The consequences of further meatification could thus be dire for climate change.

In this introductory paper, we address the question: What is the relationship between the neoliberal food regime and transgenic crops in Latin American agriculture? Our goals are, first, to provide the main conceptual definitions and analytical parameters to contextualize the case studies that follow; and, second, using the findings of our contributors as our empirical stepping stone, to briefly elaborate the concepts of expropriation, accumulation by dispossession and negative value as the primary consequences of the neoliberal food regime. We hope that this elaboration will help in further exploration of the connection between GM crops and larger dynamics of capitalist development worldwide.

THE NEOLIBERAL FOOD REGIME

Food has had a central place in the accumulation of capital since the start of capitalism, both as a sphere for profit-making in its own right and, centrally, as one of the most basic ingredients in the reproduction of labour power in general. Given that capitalism is predicated on the commodification of labour power, and that food is one of the main components of its exchange value (expressed in the wage), it has always been important to keep food prices low. The lower food prices are, the less pressure capitalists face from workers to increase wages, and the more surplus value is left to enlarge profits. Therefore, capitalism became almost tantamount with the production of cheap food (Moore 2015a), much of which has been produced under non-capitalist conditions. Food has thus been flowing from varied modes of production to feed wage workers and also across nations in the world economy. How food has been produced and traded has depended in large part on which nation has dominated the world economy.

The food regime framework has been very useful in analysing the relations between agriculture and capital accumulation on a global scale. As conceptualized by Harriet Friedmann and Philip McMichael (Friedman and McMichael 1989; McMichael 2009, 2013), a food regime refers to temporally specific dynamics embedded in the global political economy of food. It is characterized by interactions and relationships that shape and are shaped by institutional structures and written and unwritten rules around agriculture and food that, in spite of their global aspirations, are geographically and historically specific.

These dynamics combine to create a qualitatively distinct 'regime' of capital-accumulation trends in agriculture and food, which finds its durability in the international linking of agri-food production and consumption relations in accordance with global capital accumulation trends more broadly. Each food regime is thus grounded in relatively stable (albeit typically unequal) international trade relations. Three food regimes have been identified since the turn of the nineteenth century: the extensive-settler regime, dominated by the British empire up to the First World War; the intensive-surplus regime that emerged after a transition period following the Second World War, dominated by the United States (US), and a neoliberal food regime starting in the 1980s, with continued domination by the US (Otero et al. 2013).

The neoliberal food regime has as its counterpart what has been called the neoliberal diet (Otero et al. 2015). This diet is made up of class-differentiated diets. On one hand, we have a predominance of processed, energy-dense foods, which were originally developed in the US for its working classes. It has been called the 'industrial diet' (Winson 2013) and also the 'Western diet' (Pollan 2008). The neoliberal diet in our usage consists of the globalization of the US industrial diet. Energy-dense foods are accessible to most people but predominantly to lower- and middle-income classes. At the higher end of the cost and price spectrum of the neoliberal diet, however, lie the luxury foods: various meats (Lang 2010; Weis 2013), fruits, vegetables and other value-added products such as wine. Access to these foods is restricted mostly to middle-to-upper and upper-income classes.

Much of the neoliberal diet can ultimately be traced to transgenic crops, the products of genetic engineering (Kloppenborg 2004), such as corn and soybeans – the most-subsidized US crops (Pollan 2008, 117). Ironically, most of these crops are not even produced for direct human consumption. Rather, they are used for the production of livestock or processed food, including vegetable oils and high-fructose corn syrup. In the case of soybeans, for instance, only 6 per cent of world production is consumed in the form of whole beans, tofu or other whole-soy and fermented foods. The other 94 per cent is processed into soybean meal and oil for yet further processing (Oliveira and Schneider 2016, 168).

The state has been far from marginal in shaping food and agricultural production. Our concept of 'neoregulation' captures the changed nature of state intervention in the neoliberal food regime (Otero 2012; Otero et al. 2013). This state conception is more nuanced than fashionable accounts of the state around the concept of 'deregulation', which minimize its role. Only with an adequate conception of the role of the state can we hope to contribute to reshaping state intervention in a more sustainable direction. Each of our contributors below highlights the specific role played by the state in their case studies, establishing the relevance of neoregulation.

We have proposed that three main differences between the second and third food regimes are as follows: (1) the move of agriculture from a national to a global focus via trade; (2) biotechnology becoming the main technical driver of production and continuator of the Green Revolution as the modernizer of agriculture, to complete what Raj Patel (2013) has called 'the long Green Revolution'; and (3) the state changing the nature of its intervention from supporter of national agriculture to promoter of agribusiness multinational corporations (ABMs) as the primary economic agents. At its core, the neoliberal model is predicated on global economic integration facilitated by governments through neoregulation. The extent of integration has been uneven and combined due largely

to the differential levels of development of different nations and, centrally, to varying state policies pursued by different states.

'Deregulation' of markets and firms implies a decreasing importance of the state. Neoregulation as a concept, in contrast, allows for both an appreciation of new forms of state intervention that promote the neoliberal development project and also the possibility of contestation at the level of the nation state. Central state policies have included both domestic and international regulations. These have been geared to, among other things, the homogenization of intellectual property rights across many states. Neoliberal policies have been transmitted first through supra-state organizations such as the Uruguay Round of the General Agreement on Tariffs and Trade (GATT), which in 1995 folded into the World Trade Organization (WTO); and then, incrementally, through regional trade agreements such as the North American Free Trade Agreement (NAFTA) and, imminently, the Transatlantic Trade and Investment Partnership (TTIP, encompassing 12 nations that account for about 40% of global GDP). One of the TTIP's central features is to homogenize intellectual property rights (IPRs), which happen to be a central competitive advantage of ABMs. Such free-trade agreements will thus allow further freedom of movement to private capital, namely the ABMs.

While the world-system perspective inspired the food regime framework, we argue for overcoming the straitjacket of the world system both as the prime unit of analysis for scale and as the privileged level of abstraction at which analysis should occur (see, e.g., Arrighi and Moore 2001). This level of abstraction confines us to looking at 'capital' as a whole, in general, without properly disaggregating different fractions of capital, including possible contradictions between them. The world system is no doubt a useful point of departure or arrival, but other mediations are needed if we are to properly understand how social collective agency works at the level of the nation state and at the subnational scale (the two levels at which many social movement and civil-society organizations deploy their actions). Without such understanding, it is virtually impossible to detach from a top-down view in which capital in general is the demiurge of all social processes. Even the state becomes little more than an epiphenomenon of capital, which acts on its behalf. In fact, we need a much more nuanced understanding of the state as traversed by class struggle at different scales, from the national to the subnational. The state may not only be relatively autonomous from the various fractions of capital (Poulantzas 1973; Jessop 2007); it can even act in favour of popular-democratic forces with sufficient pressure from below. What we need, therefore, is an analytical framework that is sensitive to several levels of abstraction and practices, and various scales in the analysis from the locality to the region, the nation and the world economy. Gerardo Otero (2004) proposed the name 'bottom-up linkages approach', or BULA, for this type of analysis.

BULA is both methodological and political. It is methodological because it prescribes grounding the analysis in the actual lives of people engaged in relations of exploitation and oppression and their struggles to become constituted as organized groups and classes fighting for their interests. Even if they need and require broader alliances and international solidarity, the focus is from the bottom up: from the specific ways in which people articulate their interests from their specific micro-ecologies and relations. Politically, BULA prescribes that higher-level organizations be strictly accountable to those at the bottom, or as the Zapatista dictum puts it: 'to govern by obeying'. BULA has the world system as its ultimate target of transformation but it is realistic as to which levels may be feasibly changed in the short to medium term, even if piecemeal change could be seen as merely reformist, while working itself out in emerging interstices of state and society working in a popular-democratic emancipatory project.

The state, however, can also contribute to expansion of capitalist relationships, exploitation and dispossession even when seeking to incorporate popular demands, as is exemplified in the case of Argentina. We must, then, be aware of the imminent and ever-present danger of co-optation of subordinate groups and classes. The question in this regard is: To what extent are their organizations

extracting concessions from the state without compromising their autonomy and long-term prospects for continued struggle for their strategic interests? We will not address this question in this introductory paper or in those that follow. But it is important to keep it in mind as a key agenda item in the bottom-up linkages approach.

ACCUMULATION BY DISPOSSESSION AND NEGATIVE VALUE

We first establish the conceptual relation between primitive accumulation and accumulation by dispossession. Negative value is then presented as a new concept that may also enhance the analysis of transgenic crops and neoliberalism in Latin America.

Expropriation, wrote Karl Marx in *Capital*, 'is written in the annals of mankind in letters of blood and fire' (1977, 875). With these painfully poetic words, Marx was referring to the process that set up the conditions for the capitalist mode of production to arise in Europe: primitive accumulation and the creation of a workforce for hire in exchange for a wage. It is the process by which direct producers faced a 'double freedom': (1) from their means of livelihood, the soil, the means of production and feudal guarantees, on one hand; and (2) freedom from any and all dependency relations, such as serfdom and the guilds of the feudal system, on the other. With this double freedom, direct producers were left with nothing else but their labour power to sell for a wage. Marx dated primitive accumulation to the 'last third of the fifteenth century and the first few decades of the sixteenth' (1977, 878).

What does this ancient process that took place more than half a millennium ago have to do with Latin America in the twenty-first century? The fact is that there have been multiple processes of expropriation in Latin America, particularly since the start of European colonization in the sixteenth century. Since the 1980s, however, the neoliberal turn has renewed the impetus of what politicians call modernization: setting the conditions for the further penetration of capitalism in agriculture. Ironically, even governments elected in the 2000s, self-described as left of centre, and committed to 'post-neoliberal' policies, continue to be more or less firmly in the grip of agricultural modernization and the promotion of biotechnology.

In the European process, primitive accumulation had as a counterpart the early beginnings of industry and urbanization, so that many direct producers were able to find wage employment. A similar process took place centuries later in the US, where masses of family farmers were displaced by capitalist farming, or were subordinated to modern agriculture by input producers, on one hand, and agricultural processors and distributors on the other. One of the perennial dilemmas in Latin America, however, is that agricultural modernization has not had as a counterpart a vigorous process of industrialization that has absorbed people made redundant in the countryside (Kay 2008). Many of those who were hired in the import-substitution industrialization process of the 1930s to 1960s were eventually 'downsized' after the neoliberal turn of the 1980s (Portes and Hoffman 2003). In short, in Latin America there has been no such thing as a virtuous circle between expropriation in agriculture and gainful employment in cities.

Modern agriculture, nevertheless, has taken on a new impetus in Latin America since the start of the biotechnology revolution of the 1990s. One question is whether this process represents simply a renewed form of expropriation or if there is some counterpart that mitigates the double freedom faced by direct producers in primitive accumulation or, as David Harvey (2003) has called it, accumulation by dispossession. Another central question regards the ecological impacts of the biotechnology revolution for people, communities and biodiversity.

Negative value is a new concept proposed by Jason W. Moore (2015a, 2015b) to signify that the ecological catastrophe caused by capitalism is now making a dent in the very process of capitalization. It refers to the ferocious combination of rising costs of production and climate change. Negative

value thus becomes an internal and potentially devastating contradiction in capitalism (2015a, 5). None of our contributors directly addresses this phenomenon explicitly, but we believe it is highly relevant to the agricultural modernization process in Latin America as shown below. Let us first explain negative value.

Since its beginning, capital accumulation has always consisted of two processes, both of which involve the appropriation of free labour: one is *capitalization*, which involves the appropriation of surplus value, but also the payment of wages to cover the reproduction costs of labour power; this is the realm of the labour–capital conflict. The other movement or process is what Moore calls *appropriation*. Also from the beginning of capital, its owners have appropriated existing natural resources and even portions of what corresponds to the cost of reproduction of labour power; for instance, when subsistence peasant production subsidizes the wage labour performed by some members of the peasant household. Another example is the case of migrants into a new work destination: this locale has paid nothing for the production and reproduction of this labour power, and yet its capitalists are able to exploit it.

In the case of natural resources, since the 1970s environmental critics of capitalism have talked about ‘externalities’ that are unpaid by polluting capitalist firms. This is clearly true but, as the name indicates, pollution and other forms of environmental degradation that are ‘external’ to capital accumulation do not necessarily make any dent on profit-making or its capitalization; rather, they enable it. Negative value, in contrast, arises when externalities are no longer merely external to capital accumulation.

Negative value, says Moore, can be understood as the ‘accumulation of biophysical limits to capital ... that are now fettering the restoration of the Four Cheaps: food, labour power, energy, and raw materials’ (2015a, 22). The first limit is that modernized capitalist agriculture has become increasingly inefficient in energy terms. While it took about 2.5 calories to produce 1 calorie of food in the 1930s, the ratio has moved upwards ever since: to 7.5:1 in the 1950s and to 10:1 in the 1970s. ‘By the twenty-first century 15–20 calories were needed to deliver one calorie of food from farm to table, and considerably more than this for globally sourced fresh fruit’ (Moore 2015a, 19). The second limit is that agriculture has become the leading edge of toxification, ahead of industry. Worse still, ‘more and more herbicides and fertilizers are necessary to produce each increment of (decreasing) productivity growth’ (Moore 2015a, 24). Most of our contributors to this symposium will document the toxification aspect of modern agriculture in Latin America – and also bottom-up resistance.

TRANSGENIC CROPS IN LATIN AMERICA

Our symposium provides an overview of the actually existent situation of agricultural biotechnology in Latin America. It analyses the impacts of GM soybeans and corn that, together with cotton and canola, represent the four GM crops that are overwhelmingly grown across the world. Our analysis is based on three propositions on the neoliberalism – agricultural biotechnology link, as follows. First, we seek to avoid the pitfalls of (bio)technological determinism. In other words, we assume that it is not possible to disentangle transgenic crops from their broader social context, in which large ABMs are the dominant developers and promoters, often on the basis of publicly funded research institutions such as universities. We thus eschew decontextualized views of agricultural biotechnology: from the idea that biotechnology is an unstoppable ‘development of productive forces’, to the essentialist view of GM crops as a tinkering with ‘mother Nature’, to the simplistic conception of agricultural biotechnology as a disembedded tool, a ‘silver bullet against world hunger’ (as it is often imagined in the neo-Malthusian conceptions so prevalent among agribusinesses, international organizations and philanthropic organizations).

Second, we argue that the relationship between neoliberalism and agricultural biotechnology may not be linear, but that there is still a series of elective affinities between the two. In particular, neoregulation involves strengthening intellectual property legislation, which is key for ABMs. Because GM crops are patented and promoted by biotech ABMs and were released and adopted during the heyday of neoliberalism in Latin America, they represent the sharpest technological expression of the neoliberal food regime (Otero 2012).

Third, we also seek to go beyond the idea of neoliberalism as a straightforward ideology of dominant sectors. To do so, we explore its protean possibilities by looking at how neoliberalism mobilizes subjectivities (e.g. middle-class sectors and middle farmers) and how its main actors also thrive during the current period of so-called 'post-neoliberalism' in several Latin American countries. This is illustrated in the analysis of enthusiastic adopters of GM crops, which intersects with specific agrarian histories: in countries such as Argentina, inputs for GM crops (seeds and agrochemicals) are sold by ABMs but they are grown by Argentine agribusiness companies and medium-to-large farmers. Our symposium zooms in on these three points.

Most of our authors use David Harvey's concept of 'accumulation by dispossession' to describe the expropriation processes taking place in their case studies. For Harvey (2003), this process is ongoing in the twenty-first century, particularly in so-called developing countries: capitalism advances at any place where profit-making possibilities exist. The peculiarity of agricultural modernization, as ever, is that it not only expropriates direct producers but it also despoils the land as one more extractive activity: it uses up land fertility, while aiding it with agrochemicals that have polluting effects. But the main beneficiaries of this development model must give it a positive spin to make it palatable.

Carla Gras and Valeria Hernández analyse how biotechnologies were legitimized in Argentina and the role played by national capitalist classes in that process. They offer an in-depth analysis of how technology has not functioned merely as a production tool, but also as an ideology promoted to legitimize a specific understanding of agrarian development, consistent with the maintenance of the economic and ideological leadership of the agrarian local bourgeoisie. Technology was presented as *the* solution to agricultural stagnation, taking out the political component; that is, the social function and distribution of land. Using Antonio Gramsci's concept of 'passive revolution', Gras and Hernández discuss the widespread idea that biotechnologies in Argentina have led to an agricultural revolution. On the contrary, linked to neoliberalism and the agribusiness paradigm, biotechnologies have ensured the economic and ideological extension of the Green Revolution. The adoption of biotechnologies by a multiplicity of farmers has meant accepting the leadership of the local agrarian bourgeoisie.

Amalia Leguizamón documents how transgenic agriculture fits into the renewed impetus of extractivism of the 2000s, in which governments promote modernization by placing it in the hands of large ABMs. The counterpart of this drive towards accumulation by dispossession, of course, has been referred to as struggles against dispossession (see also Cáceres 2015). Leguizamón focuses on the struggles of the peasant-indigenous movement and the movements against agrochemical spraying in Argentina.

Marla Torrado takes us into an analysis of how even progressive governments such as those of the Kirchners in Argentina (2003–15) have supported agricultural modernization via transgenics, while purportedly pursuing 'post-neoliberalism'. Rather than a break with neoliberalism, Torrado shows state policy continuities in regard to agriculture through an exploration of planning documents. The large transnational economic actors driving this modernization have also promoted a type of governance and technological content not seen before. The post-neoliberal agenda thus promotes the production of GM crops over ecological and even human health concerns, in spite of increased social programmes.

Arturo Ezquerro-Cañete shows how the neoliberal soy regime has been extended from the initial powerhouses of Argentina and Brazil to one of South America's smallest countries: Paraguay. With some of the highest poverty rates, Paraguay has been tremendously impacted by what Ezquerro-Cañete aptly calls 'accumulation by fumigation and dispossession'. The modernization of agriculture has resulted in dire consequences for rural livelihoods. Because of the expulsion by fumigation of a majority of peasants from their communities, many of their properties have been surrendered to the needs of capital accumulation, leaving them without any means of livelihood. It is thus urgent to find an appropriate, sustainable and ethical model of agriculture to gainfully absorb this population.

The mighty force of accumulation by dispossession has not gone uncontested in Latin America. In fact, given how deeply it affects the material basis for social reproduction of subordinate groups and classes, some vigorous movements have emerged from the bottom up to defend society at various scales – subnational, national and transnational – as shown by three papers below.

Laura María Gutiérrez Escobar and Elizabeth Fitting offer an ethnographic account of the *Red de Semillas Libres en Colombia* (RSL, or the Network of Free Seeds in Colombia), which coalesces activists and grassroots organizations. Through seed-sovereignty projects, civil disobedience and lawsuits, the RSL is making inroads with its struggle to reject transgenics and protect traditional plant varieties and the connected knowledges and practices around seed. The RSL challenges key aspects of the neoliberal food regime in Colombia, particularly the new intellectual property rights and seed regulations adopted as part of the US–Colombia free trade agreement. Drawing on the concept of biohegemony, Gutierrez and Fitting argue that the RSL contests assumptions found in official discourse and policy about traditional seed varieties as raw material and a resource to be 'discovered', 'invented' and commodified by industry and Western-based science.

Renata C. Motta explores the political dynamics around transgenics in Brazil, highlighting the role of neoregulation. She shows that strategic politics around GM crops focus on the nation state, both for dominant groups promoting GMs and for subordinate groups challenging them. In fact, the nation state remains central to both the implementation of a food regime based on biotechnology and to any struggles against it. Following Saturnino Borrás Jr, Motta argues against mainstream scholarship that depoliticizes research and policy practice behind concepts such as 'governance' or by equating politics to negative phenomena such as corruption or failed states. Such scholarship legitimizes the demise of state-led development in favour of market-focused policies. Motta's plea is to take politics seriously and engage the actual state–society relations in the dynamics of agrarian change. She illustrates this point by looking at how subordinate actors resist GMs in Brazil by influencing official politics at the level of the nation state.

Finally, Irma Gómez González offers a novel exploration of how the authorization of transgenic soybeans in the Yucatán Peninsula, Mexico, had disastrous ecological effects in the surrounding forests, deeply impacting the Mayan beekeepers' economy. Beekeeping happens to be the main source of sustenance for the majority of Mayan peasants in the state of Campeche. GM soybeans represented a mortal threat to this economy after their authorization by the federal and state governments in 2011. At the same time, the European Union announced its new requirement for labelling honey containing transgenics. Honey importers thus imposed a label indicating whether the honey was 'transgenic-free'. Gómez González's paper documents the grassroots struggle, representing a broad alliance of Maya communities, beekeepers, civil-society organizations, universities and honey-exporting entrepreneurs. This alliance used astute media strategies and ultimately succeeded in pushing the judiciary power in Mexico to invalidate the authorization of transgenic soy production. This case illustrates how negative value challenged capitalization in certain sectors of the capitalist economy. The convergence of national and extra-national policies presented specific opportunities for mobilization that led to successful policy change at the level of the nation state.

In sum, this symposium presents concrete and historical analyses of how capital accumulation in agriculture has proceeded in the age of neoliberalism, its dynamic forces, its consequences and possible ways out through bottom-up mobilization. We initially suggested the possibility that the various cases of South America may represent the greatest advancement of modern agriculture, with ABMs and powerful local agrarian bourgeoisies at the helm of the process. To what extent might this become the region's dominant pattern? Is concentration becoming consolidated by the juggernaut of neoliberal policies and transgenic technology combined, or is it being sufficiently challenged from the bottom up to modify its course in a popular-democratic direction? These are questions that we suggest for future research, which must be answered according to historical specificity. Using a BULA methodology, 'capital' in general would be seen as little more than an abstraction that must be studied in its concrete manifestations, not only to understand it but also to resist and challenge it with a bottom-up linkages approach. Globalist cosmopolitanism is not shunned, as long as it responds and is accountable to lower-level organizations. Because the state continues to play a prominent role in the neoliberal food regime, it must also be an object of struggle for subordinate groups and classes. Livelihoods and the very survival of local ecologies are at stake, so novel alliances by multiple actors in unsuspected interstices of civil society are emerging. Emancipatory social transformation depends on popular-democratic forces tapping such emerging interstices.

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