Journal of
Agrarian Change

Journal of Agrarian Change, Vol. •• No. ••, •• 2016, pp. ••–••.

Hegemony, Technological Innovation and Corporate Identities: 50 Years of Agricultural Revolutions in Argentina

CARLA GRAS AND VALERIA HERNÁNDEZ

The technological changes that have occurred since the mid-1960s in Argentine agriculture – first the Green Revolution and then the Agribusiness Paradigm – have been conceptualized as revolutionary not only with regard to their productivity improvements but also because they brought with them a change of mentality. Based on two different business conceptions, during each period an agrarian elite led the 'revolutionary' process, offering a technological response as the means of guaranteeing agriculture's 'survival' after various crises. For each period, we can identify a correspondence between the status given to technology, the conception of business and the type of government regulation. This paper analyses how the proposition of a 'technological revolution' corresponds to the construction of the ideological leadership through which the agrarian bourgeoisie managed to orientate agrarian development.

Keywords: biotechnologies, agrarian bourgeoisie, soy complex, Argentina

INTRODUCTION

Unlike other Latin American countries, technological changes in Argentine agriculture have resulted in the legitimization of agrarian capitalist classes, which has helped to obfuscate the interdependence between different technological paradigms and the underlying dynamics of agrarian change. In fact, the questioning of the financial character of the large properties and the demand for agrarian reform, which lasted for several decades in Argentina, was settled by the agrarian capitalist class itself in the 1960s. Supported by technology from the Green Revolution, an agrarian elite promoted the technological change, presenting it as 'revolutionary'. This elite managed to present technology as the one true answer to the problems of growth in Argentine agriculture, while leaving out other responses that demanded changes in the social relations of production. A second 'revolution' has taken place in the expansion of the Agribusiness Paradigm since the 1990s. In this case, a new elite has been able to consolidate and legitimate a dominant position through its appeal to biotechnology as a vector of progress and development.

In this work, we analyse how relations nested in and knotted together by technology become effective, and we examine the role of agrarian elites in that process. We explore the 'revolutionary' character that those elites attached to technological change. In each historical period, we identify a correspondence between the status given to technology (public good or private good), the

Carla Gras, National Council of Scientific and Technological Research (CONICET) and Universidad Nacional de San Martín (UNSAM), Av. 25 de Mayo 1021, San Martín, Provincia de Buenos Aires, 1650, Argentina. E-mail: carlagras@arnet.com.ar, Valeria Hernández, Institut pour le Recherche et le Développement and 8 rue Albert Einstein, Paris, Diderot Cedex 13, France. E-mail: valeria.hernandez@ird.fr

The authors are grateful to Gerardo Otero and Pablo Lapegna for their thorough reading and helpful comments on the manuscript. They also wish to acknowledge the comments of the anonymous reviewers, which helped to improve the final version.

 doi: 10.1111/joac.12162

conception of business (an economic and moral gear for national development or a minimum social unit within the global system) and the type of government regulation (welfare state or neoliberal state).

The first two sections analyse how the proposition of a 'technological revolution' corresponds with the construction of the ideological leadership through which the rural bourgeoisie managed to guide the agrarian development model. As Habermas (1973) shows, technology's dual use – as a factor of production and as ideology – allowed for the promotion of a certain 'technological change' as *the* appropriate answer to confront 'stagnation problems', thus marginalizing the political dimensions of such discussions. In the third section, we will argue that technological revolution is a form of passive revolution (Gramsci 2004) because it allows the bourgeoisie to have an answer for subordinated classes, avoiding structural change and securing their dominant position. In order to maintain their ideological leadership during the 1960s and 1970s, the rural bourgeoisie organized around the Argentine Association of Regional Consortiums for Agricultural Experimentation (AACREA), and in the 1990s they created the Argentine No Till Farmers Association (AAPRESID). While in other countries, such as Mexico and Guatemala, biotechnology did not become hegemonic (Poitras et al. 2014; Klepek 2014), in Argentina the dominant classes managed to consolidate biotechnology as a socially desirable technology (Hernández 2007). As a result, technological change overshadowed the political discussion led by the subordinate classes regarding land redistribution, farm income and, recently, food sovereignty.

TECHNOLOGY AS A PUBLIC GOOD AND ENTREPRENEURSHIP AS A MORAL VOCATION

After the production boom at the end of the nineteenth century and the beginning of the twentieth century, Argentine agriculture faced a long period of stagnation (1930–1960). In the midst of the debates regarding the causes of underdevelopment, big landowners were signalled as development's main obstacles: they were seen as resistant to risk taking and technological investments (Sábato 1987). Aiming to overcome agricultural stagnation, a group from the rural bourgeoisie created a technical organization, AACREA, whose *leitmotiv* was to 'professionalize' farming activities, promoting a new business approach to agriculture. In their view, technology was the key factor to achieve both goals. Assuming the role of a technological vanguard, AACREA defined an innovative concept of farm business: instead of relying on land rent, AACREA first promoted the adoption of productive rationalization practices, based on low capital investments, then followed by professional organization. In the framework of the Green Revolution, corn, sorghum and sunflower hybrid seeds were placed on the market, as well as short-cycle wheat varieties. This led to changes in land use, the intensification of production (as a consequence of introducing two crops per year) and the expansion of agricultural frontiers. These 'technological solutions' were offered by a wide range of national companies and some foreign firms that developed highly competitive commercial varieties, as a result of plant breeding conducted by public science institutes (Jacobs and Gutiérrez 1986).

According to the vision of AACREA's leaders, the agronomic and economic know-how they had developed, as well as the tools needed to put them into practice, had led to a hitherto unknown 'productive leap'. Thus, scientific rationality was constituted as a value that helped one of the most conservative social classes to present itself as spearheading the Argentine economy. Fomenting an *ideology of progress*, AACREA put forward technology as *the* answer to 'stagnation'. The rural bourgeoisie was thus confronting subordinate classes for whom land concentration was the key obstacle to progress and development. At the same time, AACREA's leaders backed a Christian-rooted morality that claimed that by enabling farmers to obtain the land's best fruits, technology contributed to achieving the common good. According to Balsa (2011), this morality gave an 'ethical' dimension to

the social order promoted by AACREA. In this view, large-scale ownership would not hinder society's development if capitalist businessmen were committed to technical rationality in the exploitation of land. In short, by insisting on the need for technological adoption, this leadership not only posed a productive issue but, linked to it, also involved the building of a political direction. Here, we are interested in emphasizing the ideological dimension that technology assumes in contemporary capitalism. This ideological dimension allows technology to play a role in the process of a passive revolution (Gramsci 2004), by posing agricultural development as a question of science, denying its social and political nature.

As globalization spread, the leading role of the agrarian bourgeoisie, based on the technological model of the GR, weakened. Understood as a public good, technology had legitimated its leadership, but the commoditization of technology that followed the neoliberal policies launched in Argentina since mid-1970's would undermine it. Genetically modified organisms, along with agrochemical inputs, were controlled by transnational corporations (TNCs) that began to play a bigger role in the orientation and pace of technological change. These changes showed the limits of AACREA's business model, which relied on a nationally organized dynamic of capital accumulation to compete in international markets. Neoliberal globalization, on the contrary, reinforced the power of transnational actors to organize agriculture as a corporate global project (McMichael 2000). With the launch of new technologies, production intensified, leading to a debate about a major principle of AACREA's technological vision: soil conservation. Confrontation between those who held a 'conservationist' viewpoint and those who favoured 'intensification' highlighted the challenges posed by technological change to capitalist firms: was technology a tool at their service – as they had conceptualized it – or were they expected to adapt to the needs of the TNC that controlled it?

As pointed out by Pechlaner and Otero (2008), a third food regime, the neoliberal regime, emerged in the 1980s. These authors focus on the exclusive role of TNCs in the globalization of agriculture, although they emphasize the tensions resulting from the action of counter-movements. While McMichael (2009) considers the level of the world system, Pechlaner and Otero (2010) introduce some nuance at the national level of analysis. But none of them mentions the role played by the national allies of TNCS. We consider this a key factor for understanding changes in Argentine agriculture.

Following this argument, we contend that the characteristics of the bourgeoisie gathered in AACREA were ill suited to the needs of the corporate global project, informed by a new understanding of agriculture as defined by Davis and Goldberg (1957). Here, the key principles for agricultural development are not found in farming activities exclusively, but in firms' ability to take up different business opportunities inside and outside of farming. A new 'capitalist spirit' (Boltanski and Chiapello 2002) was needed in order to fit into an agricultural world where technologies controlled by transnational companies defined what and how to produce – and, of course, where zero-cost technologies such as those fostered by AACREA were sidelined.

This new spirit, and the firm model that would successfully embody it, emerged and was consolidated in another technical organization, the Argentine No Till Farmers Association (AAPRESID), founded in the late 1980s. This association gathers large- and middle-scale farms and transnational agribusiness corporations. Such a composition shows the benchmark of what AAPRESID has called the 'end of the century's agricultural paradigm'. Shaping a new capitalist spirit has required building transectorial partnerships, renewing economic practices, and individual and collective identities.

KNOWLEDGE AS A COMMODITY AND AGRICULTURE AS A BUSINESS

The expansion of the agribusiness model opened up new spaces of social interaction not only at a national and regional level, but also on a global scale (Katz and Bárcena 2004), redefining previous interdependencies, asymmetries and alliances among actors. Transnational actors situate their horizon

of action beyond nation states, even when these continue to be the stage on which disputes with subordinate actors crystallize. Thanks to neoregulatory policies that have promoted the marriage between science and market (Otero 2012), TNCs have benefited from new legal frameworks that protect their intellectual property rights. This has encouraged them to explore new businesses and to value intangible assets such as knowledge, which has become fully subject to commoditization (Serfati 2001; Chesnais and Sauviat 2003). TNCs have developed the capacity to guide national processes and intervene with a dominant role at the supranational level (such as at the WTO, the FAO, the OECD and the IMF). They interact with nation states as another issue that they must manage in addition to financial markets, territories or technological innovations. Under the third food regime, interactions among actors take place in the dialectic of national and transnational dynamics (see Motta 2016).

In Argentina, a small number of companies consolidated their control of the supply and commercialization of seeds and agrochemicals during the 1990s (Hernández 2012). By the new millennium, Argentina showed a new production map, linked to the evolution of genetically modified soybean monoculture and the subsuming of land and labour to the logic of financial capital. Here two issues must be underlined: on the one hand, soybean production does not have high labour requirements but demands increasingly high investments in capital; and on the other hand, agricultural markets opening up to financial capital encouraged the arrival of speculators, thus favouring the financialization of production. This led to deep changes in the agrarian structure: besides the displacement of farms, mainly those under 200 hectares,[1] those that persisted had to rebuild their productive and organizational structures. According to the agricultural census, although large-scale units did not decrease, we will see how, from a more qualitative perspective, they did have to adjust their business strategies.

The agribusiness model (AM) was consolidated in Argentina towards the end of the 1990s and the beginning of the twentieth century under the framework of neoliberalism, and on the basis of what we have identified elsewhere as its fundamental 'pillars': financialization, technology, management and production (Gras and Hernández 2013, 2014). Its economic and symbolic efficiency seem to be beyond question: at present, over 60 per cent of the country's sown surface corresponds to soy oilseeds and 77 per cent of tax revenues from grain production result from soybean exports (López 2014). Out of around 73,000 soy farmers, 6 per cent are responsible for 54 per cent of the total soybean production (Gras and Hernández 2014). Among the latter, a few have expanded their businesses beyond national boundaries. Beneath them, there are medium and small firms, which represent 94 per cent of soy farms. Apart from farmers and traders, other less frequent actors in the rural world can be found among soy producers: financial consultants, biotechnology and biochemical companies. Ironically, even though the concentration of production is a predominant feature of Argentine agriculture, the mass media has shown agribusiness actors as revolutionaries who have 'democratized' land distribution. As a well-known agribusiness man once put it: 'The most relevant resource in production is no longer land. Anybody with a good idea and a good management can sow' (Bercovich 2004). Also, they are remembered as those who provided genuine monetary resources (through export taxes) when Argentina defaulted on its debt in 2001, and as those who have contributed heavily to the national budget, allowing for the distribution of welfare programmes for the poor.

The AM stands on a set of practices, relations and representations in which 'innovation' plays a key role. Innovation represents both a means of improving profitability and a subjective disposition that makes 'agro-innovators', as they are called by AAPRESID, an example to be followed. As the

[1] According to national agricultural census data, between 1988 and 2002, the number of farms was reduced by 21 per cent.

productive and ideological functions of technology converge, AAPRESID's leaders renew their power to orient agricultural development. They aim to be advocates of the conservation of natural resources, by insisting on no-till farming benefits for soil; preachers of the 'society of knowledge'; and 'morally responsible' leaders, since they develop corporate social responsibility programmes. The 'paradigmatic revolution' or the 'change of mentality' that AAPRESID's leaders do not tire of repeating is not presented in terms of a political debate. Instead, they seek to guide other producers in adopting the new paradigm. From their standpoint, their authority to do so results from their economic success, which they claim is due to their commitment to knowledge instead of their condition as big landowners, since most large-scale farmers and corporations rent the bulk of the land they cultivate.

AAPRESID has counted on the mass media and the academic world as key allies to spread its message, explaining the importance of 'innovative attitudes', the logic of the 'society of knowledge' and the role played by transectorial networks.[2] AAPRESID has achieved an increasingly important public presence in both the public and the private sphere. They have been particularly privileged in the field of biotechnology, where they have established relationships with multinational firms, multilateral institutions, biotech associations, and international and national research centres. They have even developed biotechnology companies, such as Bioceres and INDEAR.

AAPRESID's narrative emphasizes that agribusiness can develop value chains through an interdependent set of activities and a network of firms located throughout the country. This narrative also highlights the role of biotechnologies in promoting innovation and technological progress all along the value chain. 'Successful' examples are frequently presented in the media to underline the competitive advantages for companies that develop backward and/or forward linkages. Unsurprisingly, those examples usually focus on mega-companies.

This is the case for CRESUD, MSU, Adecoagro, Calyx Agro, Los Grobo Agropecuaria and El Tejar, among other mega-companies. While some have entered agriculture recently, the majority have a long history in this activity.[3] These companies are the largest producers of soybean, corn and wheat, besides holding relevant positions in livestock production, rice and cotton. In the early 2000s, they extended their economic activities to Uruguay, Paraguay, Brazil and Bolivia, a process that is referred to as 'translatinization' (Borras et al. 2012). Such an expansion across frontiers has allowed them to become regional supply platforms of flex-crop production[4] (such as soy, maize and sugar cane).

'Translatinization' has not only focused on agriculture; for the great majority of mega-companies, it has allowed them to move forward in controlling value chains, according to the opportunities offered by each national context. Such is the case with Los Grobos' sale of shares to a Brazilian fund in 2008, which helped them obtain loans from the Brazilian National Bank of Development. It is also the case with El Tejar, which moved its headquarters to Brazil in 2010 when 50 per cent of its shares were acquired by an English private-equity fund, buying in Brazil large amounts of land, where prices are cheaper than in Argentina, and reducing the area they controlled in the latter.

In many cases, partnerships with global financial institutions or with other large-scale firms have led to land grabs in Argentina and in other countries (Murmis and Murmis 2012; Gras and Sosa 2013). Cresud, for example, acquired part of BrazilAgro in 2006, obtaining control over 150,000

[2] These concepts are thoroughly explained in *White Book*: *A Common Road*, published by AAPRESID in 2004.

[3] Nevertheless, it should be underlined that none of these mega-companies is related to the traditional large landowners who dominated the so-called agro-export model between the end of the nineteenth century and the beginning of the twentieth century.

[4] As defined by Borras et al., flex-crops 'have multiple uses (food, feed, fuel, fibre, industrial material, etc.) that can be flexibly interchanged while some consequent supply gaps can be filled by other flex crops' (2015, 2).

hectares in that country, and almost 100,000 hectares in Bolivia between 2007 and 2008. This is also the case with Adecoagro, a company founded in 2002 where, among other investors, the Soros Investment Fund and a Qatari SFW participate. According to data from 2010, Adecoagro controlled around 270,000 hectares in Argentina, Brazil and Uruguay, most of them under the form of ownership. Finally, MSU acquired around 100,000 hectares in 2009, when a Dutch investment fund acquired part of its share capital. None of these dynamics can be understood outside the global phenomenon of land grabbing (Borras et al. 2011, 2012; Borras and Franco 2012; White et al. 2012).

Mega-companies' investment in the various activities of a value chain does not follow the classic logic of agro-industrialization (where one firm controls agricultural production and food processing, for example). Instead, they exploit profitable opportunities for the valorization of capital, whether in commodity production, trading or land appreciation, developing investment patterns that give them a high degree of flexibility to address global market demand and price volatility. Let us mention some examples. In 2008, Adecoagro bought a dairy company, La Lacteo, in association with the Canadian Agropur, one of the world leaders in the business. Adecoagro aimed at asserting itself in the global dairy market. Only 5 years later, in 2013, and following Agropur, Adecoagro sold its share of La Lacteo. In the meantime, Adecoagro continues to maintain its rice mills and grain production in Argentina, and to develop ethanol production in Brazil.

As a second example, CRESUD partnered with Uranga, a family-owned company, which owns 8,300 hectares in Argentina and has specialized in the production of specialities (lentils, peas and popcorn). In this way, CRESUD has been able to develop products for a small market where meaningful price differentials can be obtained. In 2004, CRESUD associated with Cactus, a US company, aiming at intensive livestock production (feedlots), and some years later, together with Tyson Foods, acquired a cold storage plant. CRESUD also landed in Paraguay in the mid-2000s, first technically assisting Carlos Casado, a traditional Paraguayan large-scale firm, and then creating a joint venture together, which acquired 21,000 hectares.

The organization of these networks has been a key factor for the hegemonic position that the AM has acquired in Argentine agriculture. As mentioned previously, this model mainly produces agricultural commodities based on biotechnological products. The development of biotechnologies follows the logic of commoditization: knowledge is a private asset that is put into circulation under intellectual property rights. Global actors have played a key role in the adoption of biotechnologies in Argentina through financial and technical assistance to farmers. They have developed commercialization strategies that have disciplined consumption practices through exclusivity contracts and closed distribution networks (Hernández 2012). Thus, the initial innovative scenario – genetically modified seeds – successfully has interacted and intersected with global dynamics of transfrontier expansion (translatinization) and agricultural financialization.

From an ideological standpoint, the faith of agribusiness in technoscience (Balsa 2008) envisages that present problems will be solved thanks to future technological innovations. Even if the use of biotechnologies has already caused problems for agribusiness supporters (for example, the proliferation of weeds resistant to glyphosate), the idea that science is the source of solutions remains intact. Indeed, despite the increasing social resistance to the use of agrochemicals, the area sown with GM soy has continued to increase in Argentina, while technological and agribusiness associations persist in supporting the narrative of a (near-) future national development enabled by the AM.

In the imaginary community that the agrarian bourgeoisie shares with TNCs, technology is considered a key factor for development. The market is believed to efficiently regulate the economy, and state intervention is seen as prejudicial for business. Indeed, the dominant positions achieved by TNCs and their local partners since the 1990s has been enabled by their power to subordinate public policies to their corporate interests under the framework of structural reforms promoted by the neo-regulatory state (Otero 2012).

PRODUCTION AND IDEOLOGY: THE DUAL ROLE OF KNOWLEDGE IN THE NEOLIBERAL FOOD REGIME

How can we characterize the nature of technological revolutions led by the Argentine agrarian bourgeoisie in the 50 years from the Green Revolution to the Agribusiness Paradigm? The idea of 'revolution' features two distinct but intertwined dimensions: changes in technological patterns and in attitudes. More precisely, both the technological revolution led by AACREA in the 1960s and the move towards the Agribusiness Paradigm in the 1990s led by AAPRESID can be characterized, following Gramsci (2004), as a form of 'passive revolution'. Defining technology as a revolutionary pathway, and thus placing a 'technological issue' at the centre of agrarian debates, both institutions have become hegemonic. They have managed, therefore, to impose their agenda on other groups who have denounced land concentration, such as the communist and Peronist parties during the 1950s or peasant organizations in the 1990s and 2000s. The society that AACREA and AAPRESID have promoted in their revolutionary calls doubly hinders its political dimension: at a subjective level, by raising a religious morality first (AACREA) and an entrepreneurship narrative later (AAPRESID); and, at a social level, by promoting the benefits of technoscientific advances.

The passive revolution led by these bourgeoisies has led to improvements in agricultural performance; that is, a larger cultivated area, and increased crop yields and exports. After the long stagnation period of 1930–1960, the agrarian bourgeoisie has promoted a model of agricultural development that has integrated medium- and small-sized farms. This rapprochement among historically antagonistic social groups took place while the bases of their antagonism were weakening as a result of the land policies launched by the Peronist government. In this context, the agrarian bourgeoisie gathered in AACREA was able to put forward technology as an autonomous sphere of social articulation and therefore establish shared interests across different social classes. Going back to Gramsci (2004), in the revolution–restoration dialectic engaged in a passive revolution, restoration prevailed: the dominant classes remained untouched, while their interests as landowners, their ideological leadership in agriculture and their central role in economy were all safeguarded.

The process of change led by APPRESID is ideologically in line with that conducted by AACREA, as it promotes technology as the path to development. AAPRESID has reissued the ideological dimension of technology, attaching it to the notion of innovation and to a new conception of business in agriculture. Agro-innovators seek to multiply the products and services offered for the market.

Beyond these different understandings, technology has continued to play its function as a factor of production and has remained a normative reference for problem-solving (technocratic rationality), thus leaving aside any debate around land tenancy and use. In this way, by preserving the fundamental capitalist structure, the new leaders were able to free the remaining enclosures in Argentina in the 1990s (see Torrado 2016). If the first revolution led by AACREA was a passive revolution, the second revolution led by AAPRESID introduced the necessary changes to preserve the leading role of the bourgeoisie. Hence, we argue that this was a 'conservative' revolution.

CONCLUSION

The hegemony achieved by the agribusiness model in Argentina in the 2000s shows the end of a long process of changes in agriculture that had begun in the 1960s. The adoption of technologies allowed for the intensification of land and labour exploitation. It also reproduced and deepened the economic concentration that had characterized agrarian structure since the late nineteenth century.

Unlike the Green Revolution, the modernization cycle initiated in the 1990s was not led by the local agrarian bourgeoisie. The main actor was global: agribusiness TNCs that dominated the development and production of biotechnology products. Their strategies took into consideration

the existing regulations in national markets, the characteristics of their populations, and their science and technology systems. By considering all of these factors, we have observed how agribusiness TNCs managed to establish partnerships with fractions of the local bourgeoisie in order to develop strategies to subordinate subaltern groups and orient state regulations to their own advantage. Even though the integration of national actors was not free from tensions or conflict, these have adopted the 'innovation' spirit promoted by agribusiness. This constitutes an indicator of the process that we would like to point out here: the construction of hegemony through a series of mechanisms that legitimate the AM as a socially desired order. To sum up, even though agribusiness corporations are globally oriented, the national level continues to play a critical role in setting up the conditions under which they enter and dominate local markets. The analysis of the specific way in which this transnational–national dialectic takes place puts us in a better position to understand the roles played by different actors and factors.

REFERENCES

Balsa, J., 2008. 'La ideología de los productores rurales pampeanos'. *Realidad Económica*, 237: 55–79.

Balsa, J., 2011. 'Aspectos discursivos de la construcción de hegemonía'. *Identidades*, 1: 70–90.

Bercovich, A., 2004. 'Yo soy un sin tierra', http://www.pagina12.com.ar/diario/suplementos/cash/17-1282-2004-04-25.html (accessed 31 July 2009).

Boltanski, L. and E. Chiapello, 2002. *El nuevo espíritu del capitalismo*. Madrid: Akal.

Borras, S., Jr. and J. Franco, 2012. 'Global Land Grabbing and Trajectories of Agrarian Change: A Preliminary Analysis'. *Journal of Agrarian Change*, 12 (1): 34–59.

Borras, S., Jr., C. Kay, S. Gómez and J. Wilkinson, 2012. 'Land Grabbing and Global Capitalist Accumulation: Key Features in Latin America'. *Canadian Journal of Development Studies*, 33 (4): 402–16.

Borras, S., Jr., J. Franco, S. Ryan Isakson, L. Levidow and P. Vervest, 2015. 'The Rise of Flex Crops and Commodities: Implications for Research'. *The Journal of Peasant Studies*, 43 (1): 93–115.

Borras, S., Jr., R. Hall, I. Scoones, B. White and W. Wolford, 2011. 'Towards a Better Understanding of Global Land Grabbing: An Editorial Introduction'. *The Journal of Peasant Studies*, 38 (2): 209–16.

Chesnais, F. and C. Sauviat, 2003. 'The financing of innovation-related investment in the contemporary global finance-dominated accumulation regime'. In *Systems of Innovation and Development*, eds J. Cassiolato, H. Lastres and M. Maciel, 61–118. Rio de Janeiro: IE/UFRJ.

Davis, J. and R. Goldberg, 1957. *A Concept in Agribusiness*. Cambridge, MA: Graduate School of Business Administration, Harvard University.

Gramsci, A., 2004. *Antología*. México: Siglo XXI.

Gras, C. and V. Hernández, 2013. 'Los pilares del modelo agribusiness y sus estilos empresariales'. In *El agro como negocio: producción, sociedad y territorios en la globalización*, eds C. Gras and V. Hernández, 17–46. Buenos Aires: Ed. Biblos.

Gras, C. and V. Hernández, 2014. 'Agribusiness and Large-Scale Farming: Capitalist Globalization in Argentine Agriculture'. *Canadian Journal of Development Studies*, 35 (3): 339–57.

Gras, C. and A. Sosa, 2013. 'El modelo de negocios de las principales megaempresas agropecuarias'. In *El agro como negocio: producción, sociedad y territorios en la globalización*, eds C. Gras and V. Hernández, 215–36. Buenos Aires: Ed. Biblos.

Habermas, J., 1973. *La technique et la science comme 'idéologie'*. Paris: Gallimard.

Hernández, V., 2007. 'El fenómeno económico y cultural del boom de la soja y el empresariado innovador'. *Desarrollo Económico*, 47 (187): 331–65.

Hernández, V., 2012. 'Techniques de consummation – consommation des techniques. L'objet biotechnologique dans la filière agricole''. In *A quoi et comment dépenser son argent? Les mutations de la consommation*, eds M. Selim and I. Guérin, 163–92. Paris: L'Harmattan.

Jacobs, E. and M. Gutiérrez, 1986. La industria se semillas en la Argentina. Documentos del CISEA/85.

Katz, J. and A. Bárcena, 2004. 'El advenimiento de un nuevo paradigma tecnológico. El caso de los productos transgénicos'. In *Los transgénicos en América Latina y el Caribe*, eds A. Bárcena, J. Katz, C. Morales and M. Schaper, 19–32. Chile: CEPAL.

Klepek, J., 2014. 'A contracorriente: alianzas de conocimiento y resistencia contra los cultivos transgénicos en Guatemala'. In *La dieta neoliberal*, ed G. Otero, 297–322. México, DF: MAPorrúa.

López, G., 2014. 'Argentina – Volver a Crecer. Pérdida de Competitividad del Complejo Granario Argentino', http://producirconservando.org.ar//intercambio/docs/PerdidadeCompetitividadFinal.pdf (accessed 17 August 2015).

McMichael, P., 2000. 'The Power of Food'. *Agriculture and Human Values*, 17: 21–33.

McMichael, P., 2009. 'A Food Regime Genealogy'. *The Journal of Peasant Studies*, 36 (1): 139–69.

Motta, R.C., 2016. 'Global Capitalism and the Nation State in the Struggles over GM Crops in Brazil'. *Journal of Agrarian Change*, doi: 10.1111/joac.12165.

Murmis, M. and M.R. Murmis, 2012. 'Land Concentration and Foreign Land Ownership in Argentina in the Context of Global Land Grabbing'. *Canadian Journal of Development Studies*, 33 (4): 409–508.

Otero, G., 2012. 'The Neoliberal Food Regime in Latin America: State, Agribusiness Transnational Corporations and Biotechnology'. *Canadian Journal of Development Studies*, 33 (3): 282–94.

Pechlaner, G. and G. Otero, 2008. 'The Third Food Regime: Neoliberal Globalismand Agricultural Biotechnology in North America'. *Sociologia Ruralis*, 48 (4): 351–71.

Pechlaner, G. and G. Otero, 2010. 'The Neoliberal Food Regime: Neoregulation and the New Division of Labour in North America'. *Rural Sociology*, 75 (2): 179–208.

Poitras, M., G. Otero and G. Aboites, 2014. 'Movimientos sociales y tecnodemocracia: ¿hacia el rescate de los recursos fitogenéticos comunes?' In *La dieta neoliberal*, ed G. Otero, 257–78. México, DF: MAPorrúa.

Sábato, H., 1987. 'La cuestión agraria pampeana. Un debate inconcluso'. *Desarrollo Económico*, 27: 291–301.

Serfati, C., 2001. 'El papel activo de los grupos predominantemente industriales en la financiarización de la economía'. In *La mundialización financier: génesis, costo y desafios*, ed F. Chesnais. Buenos Aires: Losada.

Torrado, M., 2016. 'Food Regime Analysis in a Post-Neoliberal Era: Argentina and the Expansion of Transgenic Soybeans'. *Journal of Agrarian Change*, doi: 10.1111/joac.12158.

White, B., S. Borras Jr., R. Hall, I. Scoones and W. Wolford, 2012. 'The New Enclosures: Critical Perspectives on Corporate Land Deals'. *The Journal of Peasant Studies*, 39 (3–4): 619–47.