



Feeding the Planet or Feeding Us a Line? Agribusiness, 'Grainwashing' and Hunger in the World Food System

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Abstract. In this article I examine hunger in the world food system in light of agribusiness corporate environmental communications. Using data gleaned from advertisements and websites, I examine the messages of companies such as Archer Daniels Midland, Cargill, and Monsanto, among others, selling their contributions toward sustainability and alleviating hunger through biotechnology and globalization. In analysing these I contrast claims of corporate social responsibility with what I call 'grainwashing', which misleads the public. This analysis is important to an ever-evolving sociology of agriculture and food in which structural challenges, conflict, power, and inequality determine hunger in a system in which people lack food sovereignty or food justice. It connects the study of agribusiness and hunger to environmental sociology and theoretical considerations such as treadmill of production and ecological modernization ideas explaining corporate environmental communication and practices.

Introduction

Food is central to human well-being yet people are often powerless to meet their needs in a world food system dominated by agribusiness (McMichael, 1998; Patel, 2008; Clapp and Cohen, 2009). Globalization has created large-scale agricultural production in the form of an expanded global supply chain in which food is treated as a commodity just like any other product on the market (Friedland, 2004; Moreira, 2004; Magdoff and Tokar, 2010). Such dynamics have enormous consequences concerning the power one has over what is eaten, where food comes from, and how much it is going to cost thus leaving a great portion of the world's population limited food sovereignty (Gottlieb and Joshi, 2010). Hunger remains a large element of this system with the numbers topping one billion hungry people for the first time in human history in 2009 in the wake of the global food crisis, though declining to 870 million in 2012 (FAO, 2012).

In this article I will examine agribusiness environmental communication as it pertains to corporate social responsibility (CSR) and hunger. I will analyse messages

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from companies such as Archer Daniels Midland (ADM), Cargill, and Monsanto, among others, touting contributions toward sustainability and alleviating hunger through increased free markets, global integration and supply chains, and the implementation of new technologies. I will contrast CSR claims with what I call 'grainwashing'. I will introduce this term to emphasize the particular importance of greenwashing to agribusiness and its place in the world food system. Using a core food staple at its root, the term applies specifically to agribusiness, implying the potential for deceit in the industry with the term's derivation from combining greenwashing and brainwashing. Grainwashing is therefore agribusiness greenwashing.

An analysis of this dynamic is important to an ever-evolving sociology of agriculture, food, and hunger in which structural challenges, conflict, power, and inequality determine food availability, access and sovereignty in an increasingly fragile natural environment.

Food Insecurity and the Environment

Food insecurity is lacking access to enough food for an active healthy life (Reutlinger, 1986). Food insecurity has multiple structural causes and numerous components, with research discussing hunger not simply as food supply but also distribution, empowerment, entitlement, nutritional value, and the ability to withstand socio-economic and political instabilities (see Sen, 1981; Bennett, 1986; George, 1989; Uvin, 1994; DeRose et al., 1998; Buttel, 2000). Taken together, these mean that hunger concerns food availability, access, utilization, stability, and sovereignty (Scanlan, 2009). Intrinsic to this are hunger's roots in inequality and the political economy of the world food system and agribusiness power (Friedmann and McMichael, 1989; Friedmann, 1993; McMichael, 1995; Magdoff et al., 2000; Clapp and Fuchs, 2009). Although politically charged and with disagreement as to its root causes or how best to address the issue, as a social concern no one necessarily favours hunger or famine – particularly as manifested in the face of the child or an overcrowded refugee camp. For this reason it is an important cause for corporations stake a claim in supporting – including its environmental links.

Among many other components of this complex issue (Scanlan, 2009), hunger is inherently an environmental concern and much attention has been paid to sustainable agriculture and population threats (Ehrlich et al., 1993; Henke and Zappacosta, 1996; Harper and Le Beau, 2003; Brown, 2009; Pretty, 2010). But, food scarcity is not the predominant problem and those most critical of hunger focus on its access and distributional problems. Furthermore, there needs to be greater consideration of the limits of and stress on the environment associated with the world food system and barriers preventing access – including the challenges of what are touted as solutions such as genetically modified organisms (GMOs) and industrial agriculture. Global efforts to cope with environmental threats have been significant, but many argue care must be taken to minimize the ecological footprint of feeding the planet (Magdoff and Tokar, 2010).

CSR or Grainwashing?

Environmentalism, CSR, and sustainability have become buzzwords among the world's multinational corporations, with agribusiness no exception (Munshi and

Kurian, 2005). With a growing demand for 'green goods' (Smith et al., 2010) businesses and organizations of all kinds are expected to become increasingly conscious of the environment – part of what Friedmann (2005) has described in agribusiness as the 'corporate environmental food regime', in which emergent and expanding ecological concerns shape the world food system. This demands vigilance of company actions and claims, asking whether the world's agribusiness multinationals reflect shared values and true social responsibility or if in reality they are greenwashing their image as a public relations (PR) or spin tactic to gain trust and improve their reputations and bottom line (Dinan and Miller, 2007a, 2007b). In this article I will compare and contrast the promotion of environmentally friendly images with grainwashing, addressing the following research questions:

1. How do the world's most powerful agribusiness corporations present their role in alleviating hunger and protecting the environment in print advertising and CSR statements?
2. In what ways are such claims grainwashing in that the underlying actions behind them are actually harmful to global food security and sustainability?

Theoretical Considerations

I will connect sociological perspectives on the environment with the field of environmental communication. Incorporating a critical approach on environmental discourse and focusing on greenwashing specifically, I will evaluate agribusiness efforts at creating shared values through CSR and advertising. The centrality of advertising to global capitalism parallels theoretical debates in environmental sociology pertaining to the compatibility of the consumptive dynamics of this system with sustainability (Corbett, 2002) and sound environmental principles (Beder, 2006a).

Corporate Environmental Communication

Environmental communication takes on multiple concerns, focusing on the persuasiveness and symbolism of language as it pertains to ecological messages (Cox, 2006). From an anti-fracking protest or a newspaper editorial on 'green jobs' to a scientific study on climate change, environmental messages are pervasive. It is beneath this wide umbrella that I will examine grainwashing.

Cox (2006, p. 12) defines environmental communication as 'the pragmatic and constitutive vehicle for our understanding of the environment as well as our relationships to the natural world; it is the symbolic medium that we use in constructing environmental problems and negotiating society's different response to them.' As for corporate environmental communication specifically, academics and companies use a variety of terms to account for such practices including green advertising, green marketing, green PR, and sustainability marketing (Greer and Bruno, 1996; Karliner, 1997; Nakajima, 2001; Laufer, 2003).

As business practices are expected to become increasingly 'green', a major goal of corporate environmental communication is to reflect an image of what Jermier et al. (2006) call the 'new corporate environmentalism', through which a company acts responsibly toward protecting the planet (Maxwell et al., 2000; Simone, 2007; Crane et al., 2008; Lyon and Maxwell, 2008; Campbell, 2009). New corporate environmentalism is 'rhetoric with regard to the central role of business in achieving both economic

growth and ecological rationality and as a guide for management that emphasizes voluntary, proactive control of environmental impacts that exceed or go beyond environmental laws and regulatory compliance' (Jermier et al., 2006, p. 618) This can be done in multiple ways including using green energy, reducing waste, avoiding harmful inputs in company operations, or presenting consumers environmentally friendly offerings such as organic food, hybrid cars, or green investment portfolios.

A major component of the new corporate environmentalism can be increasingly found in CSR statements. Citing the World Business Council for Sustainable Development, Soule (2009, p. 19) notes that CSR is a public 'commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large.'¹ Companies that fail to establish themselves as good corporate citizens are doomed to lose legitimacy and public trust – particularly when viewed as being hostile to the environment (Beder, 2002a, 2002b). For example, British Petroleum, Dow Chemical, ExxonMobil, Monsanto, and Royal Dutch Shell have had suspect reputations from their harmful environmental practices and are thus expected to 'clean up their act' or at least appear as if they are doing so, and CSR is central to this (Athanasίου, 1996; see also Jenkins, 2004; Edoho, 2008; Bieri and Boli, 2011). Connecting to environmental communication in general, CSR has to be more than statements alone but also reflect actions exhibiting responsible values. Reinforcing an image of sound corporate environmentalism, these can come on many fronts from contributing money to local parks systems and zoos or sponsoring Earth Day activities to supporting community recycling efforts or partnering with schools or universities to promote environmental education. Research has thus argued how corporations can positively impact communities through CSR activities (Waswa et al., 2009; Bieri and Boli, 2011; Johnson et al., 2011).

Porter and Kramer (2011) have expanded CSR to what they refer to as 'creating shared value' (CSV) in corporate operations. The idea here is that addressing social concerns in a company's business practices is not counter-intuitive to profit but instead can contribute to profit maximization (Moon et al., 2011, pp. 51–52) and a company's long-term success (Büchner, 2012). This can be particularly useful to agribusiness (Sojamo and Larson, 2012). Referring to the issue of food insecurity specifically, for example, it is in the interest of agribusiness as well as hungry nations and individuals that agricultural productivity be as efficient and far-reaching as possible. New technologies, expanded markets and supply chains, environmental protection and water conservation, and more food mean greater profit potential while also addressing world hunger. Helping a world in need is the centrepiece of CSR claims while profit maximization keeps shareholders happy. To illustrate, Table 1 presents a number of CSR interests.

Taking the above into consideration, debates over CSR focus on the underlying motivations and ultimate outcomes of such policies in practice (Hussain, 1999; Frankental, 2001; Lyon and Maxwell, 2008; Lin, 2010) and this is central to greenwashing, to which I will now turn.

Environmentalism or Greenwashing?

Given the tenuous and often incompatible relationship between capitalism and environmental well-being argued by Marxist ecology (Foster, 2000), corporate environmentalism has prompted skepticism. Given emphases on globalization, mass

Table 1. Examples of agribusiness CSR statement initiatives and claims.

Company	Sample of CSR Initiatives and Claims
ADM	<p>Environmental stewardship; promoting diversity; promoting safety; responsible supply chain management with its Socially and Environmentally Responsible Agricultural Practices and Doing It Right programmes for cocoa and soy, respectively; social investment with the ADM Cares programme; and emphasizing 'the responsible development of agriculture, improving the quality of life in ADM communities, and fostering employee giving and volunteer activities.'</p> <p>'To realize our vision of being the world's most admired agribusiness, we are intent on creating value while growing responsibly. That's why our 30,000 colleagues are working to continuously improve our environmental performance, establish a sustainable supply chain for the crops we source, and ensure that our capital investments, social investments and investments in people help us fulfill our vital purpose' (Archer Daniels Midland Corporate Social Responsibility Overview 2011).</p>
Bunge	<p>Creation of the Bunge Foundation to develop the communities in which the company works through education and volunteerism; maintaining value chain sustainability 'from field to table'; managing risk; promoting an environmental programme focused on sustainable agriculture, climate change, healthy diets, and waste reduction.</p> <p>'Ensuring food security for a growing world requires sustainably producing and delivering millions of tons of agricultural commodities. Bunge's value chains – integrated businesses and operations – begin at the farm and end with consumers. They enable us to produce the food, fuel and other products people count on every day' (Bunge Sustainability Report and 2010 Annual Report).</p>
Cargill	<p>Conducting business with integrity; enriching the communities in which it works through promotion of education, environmental protection, mentoring, and volunteerism through the creation of its Cargill Cares Councils; operating responsible supply chains that promote sustainability, manage risk, and share 'best practices'; working to feed the world with expanded production, less waste, and improved nutrition through its 'grow your own' gardening initiatives.</p> <p>'Cargill is committed to operating responsibly as we pursue our goal to be the global leader in nourishing people. Expectations for companies are rising, and we are responding by making our company more accessible and helping others understand not only what we do, but how we do it. To earn trust, we must meet our obligations to the wide array of people and organizations we serve' (Cargill 2013 Corporate Responsibility Report).</p>
Conagra	<p>Fighting food insecurity through its Child Hunger Ends Here campaign; giving back to communities in which the company operates and in which its employees live; promoting health, nutrition, and food safety; protecting the planet by sustainably using resources and sourcing materials, managing waste, and reducing climate change and energy use.</p> <p>'The people of ConAgra Foods create everyday food in extraordinary ways. That means making food that's delicious, safe, nutritious and convenient, while collaborating with others like farmers, suppliers, customers and people who love our food. We're looking forward to making food for generations to come, and doing so in a way that's not only good for business, but good for you, good for the community and good for the planet' (Conagra Foods 2013 Citizenship Report).</p>
Monsanto	<p>Commitments to community involvement with its Monsantogether programme; enhancing food security and nutrition; fostering diversity and inclusiveness; promoting product stewardship and safety; seeking responsible supply chain management; sharing knowledge; and sustainable agriculture and protecting the environment and limited resources.</p> <p>'Our people are working for a better tomorrow by putting the right tools in the hands of farmers today. Farmers can be people working as little as an acre in Africa, to a family working 10,000 acres in the Corn Belt of America, to a large enterprise farming hundreds of thousands of acres in Ukraine, Brazil or Argentina. By offering these growers better tools and information, we become their partners, protecting their natural resources, fighting hunger, improving nutrition, and providing economic benefits to everyone involved in an improved system of agriculture' (Monsanto 2012 Sustainability Report).</p>

consumption, and profit above all else, corporate efforts to present themselves as socially responsible or sustainability friendly are viewed by critics as nothing more than marketing, PR spins, or new motives for profit that deflect attention from environmental destruction. It is in this context that skeptics apply the term greenwashing to imply deception within corporate environmental communication.

Greenwashing occurs when an industry or specific company presents an appearance of environmental stewardship when in reality their practices are ecologically harmful. CorpWatch defines greenwashing as 'the phenomenon of socially and environmentally destructive corporations attempting to preserve and expand their markets by posing as friends of the environment' (2001; also see Athanasiou, 1996; Beder, 2002a, 2002b). TerraChoice, an Underwriters Laboratories firm, similarly defines greenwashing as 'the act of misleading consumers regarding the environmental practices of a company or the environmental benefits of a product or service' (2010). According to TerraChoice, corporate claims-making commits numerous 'sins of greenwashing' including hidden trade-offs, lack of proof, vagueness, false labels and outright fibbing, irrelevance, and praising the lesser of two evils.

According to Tokar (1997), greenwashing is comprised of two simultaneous processes: the emergence of corporate environmentalism and the rise of environmental consumerism demanding greener business practices and products. Tokar notes the consequences for this are not just in how the environment is treated but for environmental politics in that consumers become increasingly disengaged from politics, believing they can instead buy their way toward a sustainable planet – a market solution prevails when corporate advertising and CSR statements frame the discussion. Along these lines greenwashing is made possible and perpetuated by corporate PR firms increasingly important to multinational companies needing a sustainability strategy (Frankental, 2001; Beder, 2002a; Grant, 2008; Esty and Winston, 2009).

Reinforcing this, Dinan and Miller (2007a, 2007b) speak to the powerful role that PR has not only for corporate environmentalism but public perception and company interests that reveal the power of communication. Athanasiou (1996, p. 1) similarly argues that 'public relations, not physics – or even ecology – is the paradigm science of the modern age' with roots evolving 'to the development of advertising as we know it today and the emergence of professionally organized systems of appearance management.' In an era of corporate personhood affirmed by the U.S. Supreme Court in *Citizens United v. Federal Election Commission* [2010] 558 U.S. 310' in 2010, greenwashing parallels sociological notions of dramaturgy and 'impression management' strategies of individuals (Goffman, 1959). Goffman's 'presentation of self' takes place at organizational levels as companies devote energy towards appearing as amicable corporate citizens (Young and Massey, 1978; Miller and Hunt, 2008). Image management and a corporation's reputation are as important as the quality of its products or services and these not only reflect its values but attempt to alter those for society (Beder, 2002b, 2006b). The need for sound environmental PR is thus invaluable to corporate communication in all industries (Beder, 2006b; Dinan and Miller, 2007a). This includes global agribusiness and because favourable environmental spin is so important, a Terrachoice study cited by Derber (2010, p.84) found that more than 99% of 1,018 randomly selected consumer products were guilty of at least one of their greenwashing sins.

Switzer (1997) further connects the power of PR firms to agribusiness, citing their significance for increased opposition to environmental groups on institutional and grass-roots fronts using greenwashing, lobbying, the media, think tanks, and oth-

er means – essentially a tool for wielding power (Dinan and Miller, 2007a, 2007b). Beder (2002a, p. 110) notes two of the largest and most powerful firms are Hill & Knowlton and Burson-Martstellar, whose services for global clients have been more than just PR but have also included lobbying, grass-roots organizing, and even gathering intelligence on environmental activists. The networks that PR firms create and the influence they have make greenwashing not only possible, but believable. As part of a PR programme of environmental spin promoting products and practices, corporate messages persuade policymakers, government regulators, consumers, concerned citizens and even environmental organizations themselves who cooperate with corporations in programming, often being accused of greenwashing as well (Beder, 2002a). This means that through greenwashing and the power of PR, corporations find it easier to change public opinion than change harmful practices, challenging the need for more stringent regulations and attacking critics as Monsanto infamously did with Rachel Carson after the publication of *Silent Spring* (Beder, 2002b, p. 108; also see Beder, 2006b; Dinan and Miller, 2007a).

Greenwashing comes in many forms including billboards, corporate environmental reports, mission statements, philanthropy, print advertisements, television commercials, and an array of web content. In an era of 24/7 information access with blogging, Facebook, Twitter, and YouTube, corporations are becoming increasingly savvy at distributing positive messages and managing impressions. BP, for example, devoted a great deal of effort on many fronts following the 2010 Gulf oil spill, developing its YouTube channel and buying Google link space when people searched for information. In addition, corporations sponsor programmes in schools to ‘educate’ children on various issues, while supporting conferences, organizations, and sustainability initiatives (Doyle, 1992; Beder, 2002a, 2002b; Laufer, 2003). Finally, events and campaigns intending to generate greater public awareness of environmental issues and solutions to achieve sustainability are preyed upon by corporations, with Earth Day activities being a particular favourite (Beder, 2002a). Corporations have the power to control the content and hijack the message of such events as with the 1992 Rio Earth Summit and others that have followed. As Greer and Bruno note, ‘the Earth Summit itself was greenwash on a grand scale because it gave the false impression that important, positive change was occurring and failed to alert the world to the root causes of environment and development problems’ (1996, p. 24).

Agribusiness ‘Grainwashing’

Addressing hunger can be valuable to corporate public image. Examining grainwashing can get at how agribusiness may tout its role in addressing the world’s food security needs while simultaneously contributing to many problems within the world food system. Parallel to Lubitow and Davis’s (2011) analysis of corporate co-optation of ‘going pink’ in the fight against breast cancer, grainwashing potentially co-opts discussions of hunger and creates an image of environmental CSR.

Hunger is a popular cause and agribusiness that is in the business of food would seemingly benefit from promoting its ability to address it. In this regard, CSR is not just about ‘doing no harm’ but also emphasizes the positive in promoting good deeds. Building on statements seen in Table 1, for example, the list of financial partners donating millions of dollars and tons of food to Feeding America, the leading domestic hunger-relief agency in the United States, is a who’s who of agribusiness and food industry giants, including Campbell, Cargill, ConAgra, Dean Foods, Gen-

eral Mills, Kellogg, Kraft, Nestlé, and others. Sponsorship keeps food banks stocked and supplies funds for agriculture programmes such as Invest an Acre, in which Feeding America has partnered with ADM and Monsanto. Another hunger organization, Share Our Strength, also works closely with Bird's Eye, ConAgra, Duncan Hines, Jimmy Dean, and others in its No Kid Hungry campaign. Companies may also initiate their own programming to address hunger, such as Tyson's Hunger Relief or Kraft's sponsorship of the Fight Hunger Bowl. A major collaborative effort has been the Global Harvest Initiative, combining the efforts of ADM, DuPont, John Deere, and Monsanto with the consultancy of several environmental organizations including Nature Conservancy and the World Wildlife Fund. Although one cannot doubt the enormous need that hunger organizations have for support or the impacts that corporate programming may achieve, such actions may overshadow the negative impacts agribusiness may have on hunger and the environment.

Hence the scrutiny of such practices and consideration of whether this is true CSR or grainwashing. Sojamo and Larson (2012), for example, analyse the environmental stewardship of agribusiness giants Bunge, Cargill, and Nestlé in managing water security essential to their global supply chains, while Jansen and Gupta (2009) and Glover (2010) look at the potential for biotechnology to be 'pro-poor'. Bruno (1998) examines European backlash against the introduction of genetically modified soybeans and the agribusiness campaign marketing itself as environmentally enlightened. Similarly, McKenna et al. (1999) explore the branding practices of the H.J. Heinz Company, which incorporate images of nature to increase marketing to Asia, while Opel (1999) reveals how the bottled-water industry commodifies the environment in text and images on its containers. Finally, Entine (1996) looks at 'green' manufacturers such as Ben and Jerry's, for example, revealing that even good-intentioned companies with the outward appearance of CSR can fall short in their altruism and sustainability practices.

Environmental Sociological Perspectives

Despite the significance of greenwashing for a variety of subfields in the discipline including economic sociology, environmental sociology, organizations, political sociology, and media studies, among others, there has been little analysis by sociologists (McKenna et al., 1999; Krieg, 2008). However, discussion outside of sociology provides a solid research foundation (see Banerjee et al., 1995; Entine, 1996; Helvar, 1996; Bruno, 1998; Karna et al., 2001; Nakajima, 2001; Munshi and Kurian, 2005; Lubitow and Davis, 2011). This research, though strong, is largely void of sociological theory in its analysis. Greenwashing fits nicely in debates between treadmill of production and ecological modernization perspectives over the environment and the world food system, and I will discuss these here.

Ecological modernization theory has roots in neo-liberal economics (Hawken et al., 1999; Mol and Sonnenfeld, 2000). At the core of this perspective is the idea that modernity and its high levels of energy use, resource consumption, and standard of living can be achieved and maintained sustainably. Making modernization possible, it argues that capitalism is essential to environmental well-being and that it is through human ingenuity and the logic and efficiency of the free market and improved productivity that ecological problems are best addressed. For example, if pollution, carbon emissions, or other 'negative externalities' become too costly, the market will discover ways to address them – hence the proliferation of hybrid and

electric cars or promoting the miracles of 'clean coal technology'. Modernity and development thus do not threaten the environment but instead are rooted in scientific progress that provides solutions for protecting it. It is based on the rational principle that 'cutting down all of the trees' is not good business if you need them to make a profit. So, that resource will therefore be rationally managed or an alternative will be developed. CSR is a component of ecological modernization in that industries must act in ways that consider the 'triple bottom line' of profit, social responsibility, and the environment to survive (Elkington, 1997).

Considering agriculture and food, the manner in which agribusiness frames biotechnology, genetic modification, or the Green Revolution as solutions to hunger closely reflects ecological modernization. Global agribusiness views global supply chains and science as best capable of feeding the most people efficiently and cost effectively thereby addressing hunger. Supporters of ecological modernization point to growth in food production and other options in a 'greening' economy as evidence that ecological modernization works.

Treadmill of production theorists are skeptical in that although 'green economics' and corporate sustainability claims through triple bottom line thinking are attractive, it is the *capitalist system* that is problematic but remains unchanged in ecological modernization thinking (Foster et al., 2010). The treadmill of production perspective questions the compatibility of capitalism and environmental well-being because of the inherent exploitive and inequality dynamics of the global capitalist system (Schnaiberg, 1980; Gould et al., 2004; Foster et al., 2010). This perspective argues that the earth is in peril because of the placement of profit over ecology, even if the former is destroyed by the latter and is ultimately not sustainable. CSR claims from this perspective are greenwashing spun by a PR machine that presents companies in the best possible manner to convince the public that corporations are doing what's right. In this vein, Athanasiou (1996, p. 3) notes, 'the key to greenwashing is manufactured optimism... to carry out the message that, though the world may seem to be going to hell, everything is in good hands.' Treadmill of production perspectives argue that in this context, problems such as hunger persist and multinational corporations manage their images of leadership towards solutions to distract from the harm they do.

Modernity has enormous detrimental impacts on the human ecological footprint (York et al., 2003) and the technology, energy, and resource consumption dynamics of the world food system are a large part of this. To grow, package, and transport the food we eat, modern societies use energy and raw materials at an unprecedented rate, making present-day agriculture emblematic of the treadmill of production – with industrialized, 'factory farming' that critics note alienates us from our food (Manning, 2005; Petrini, 2007; Pollan, 2007). Advances like a hybrid corn plant may yield more per acre but do not alter the fact that such innovation is grounded in a capitalist system of profit over people. This system would downplay, among other things, the health uncertainties of GMOs, the impacts of biodiversity loss, or the consequences of a peasant being displaced from the land and the effect on the world's poor (Pray and Naseem, 2007; Scuro, 2007). Treadmill of production ideas argue systemic change is needed to correct the injustices associated with hunger and environmental degradation while grainwashing masks needed reform.

Finally, treadmill of production ideas complement approaches critical of globalization that argue it has created greater dependency and a transition of countries from feeding themselves to exporting cash crops for the global marketplace. Former-

ly self-sufficient countries have become net food importers through purchasing food for consumption in the 'global food regime' dominated by agribusiness and central to the treadmill (Friedmann, 1993; McMichael, 1995, 2005). Grainwashing promotes the efforts to address global food needs while shrouding corporate dominance and the ecological impacts of the world food system (Magdoff and Tokar, 2010). Corporations approach hunger as pertaining primarily to the lack of food, emphasizing free-market and technology solutions to confront threats from population pressure and distracting the public from more important root causes of food insecurity such as inequality, conflict, and politics, let alone the environmental challenges (Scanlan et al., 2010).

Data and Methods

Company statements are made for public consumption. Otherwise, they do not fulfill the purpose of environmental communication and touting CSR. In this regard there is a wealth of data for analysing the image that agribusiness portrays.

I will focus primarily on grainwashing as it appears 1. in print magazine advertising by agribusiness companies; and 2. on company websites, including advertising, CSR statements and annual reports, fact sheets, and other documents. For print advertising, I will examine ads from *Harper's Magazine*, *Atlantic Monthly* and *National Geographic* from 2000 to 2012 in addition to ads appearing in *The Economist* since the 2007 global food crisis, a key benchmark for examining the political economy of the world food system. I based the selection of these magazines on their reputations for reporting and analysis of environmental and social issues, their broad and relatively mainstream readership, their mix of progressive and conservative perspectives and the regularity of corporate advertising of interest. As for company websites, I will examine a sample of the largest and most globally far-reaching agribusiness companies according to *Fortune 500*, focusing on ADM, Bunge, Cargill, ConAgra, Dow, Monsanto, and Pioneer (a DuPont company), and documents available particularly since the global food crisis.² I list these companies and their respective websites in Table 2. Taken together these forms of environmental communication complement each other nicely and use similar language to emphasize the core messages.

I will examine the text and imagery presented in the environmental communication of the companies of interest, extrapolating key themes as they pertain to hunger and sustainability. I am less concerned at this point with the frequency of certain themes that would come from 'counting' instances of references to hunger, sustaina-

Table 2. Food and agribusiness corporations analysed in this analysis.

Company	Company Homepage
Archer Daniels Midland	< http://www.adm.com/en-US/Pages/default.aspx >
Bunge	< http://www.bunge.com >
Cargill	< http://www.cargill.com >
Conagra	< http://www.conagrafoods.com >
Dow	< http://www.dow.com >
DuPont Pioneer	< https://www.pioneer.com/home/site/us >
Monsanto	< http://www.monsanto.com/Pages/default.aspx >

bility, CSR, and so forth that emerge. Instead, I will take a more qualitative approach to the analysis, pulling out representative text and categorizing themes and quotations from the data without the assistance of software. This approach has enabled me to capture larger bits of narrative that I believe speak more richly to the grain-washing I examine. The categories I will describe below emerge from that narrative analysis. I am planning a more quantitative analysis in my future research, however, which includes as noted above an expanded variety of food companies and a much greater number of cases.

Although numerous themes exist, I will focus on hunger to contrast impression management regarding the responsibility agribusiness claims for feeding the planet with the contradictions that the world food system presents for hunger and the environment. The methods in this article fit within a tradition in the social sciences of examining the forms and influences of advertising on a variety of fronts, including children, gender and race inequality, and health, among others (Goffman, 1979; Roy, 1998; Frith et al., 2004; Stone, 2007; Calvert, 2008) as well the usefulness of analysing corporate sustainability reports in research (Feller, 2004). As to the environment and food specifically, Sturgeon (2009) discusses the significance of advertising for framing the perception of nature and the meaning for environmentalism and how the public responds to those messages, while Corbett (2002) looks at growth in the 'greening' of advertising practices, speaking to the commoditization of nature. In another example, exploring company 'greenness', Grillo et al. (2008) examine advertising in the forestry industry, reinforcing the importance of corporate environmental communication and stewardship – especially for industries impacting nature directly such as agriculture, mining, or forestry.

I will extend arguments to hunger and food, noting that advertising not only manages corporate image but can also shape consumer and government responses and discussions of food security. Global agribusiness seeks to win what Gronski and Glenna (2009, pp. 130–131) emphasize as 'dueling visions for producing food: global, high-tech, and profit-driven versus localized and people-centered.' Championing a more critical perspective, the latter approach tends toward the concept of 'food justice' (Gottlieb and Joshi, 2010; Alkon and Agyman, 2011), which seeks to build a better, more sustainable food system developed from the bottom up. Through academic research, the social sciences can also influence public debate, framing the question of food security with an alternative vision as to its roots and public perception (Rivera-Ferre, 2011) This is central to the findings and discussion that follow.

Findings and Discussion

Flaunting slogans like ADM's 'Resourceful by Nature', Cargill's 'Nourishing Ideas, Nourishing People' or ConAgra's 'Good for You, Good for the Community, Good for the Planet', agribusiness has defined the political economy of food in its interest while seeking to appear as good citizens. Ultimately pursuing profits and *corporate* sustainability, agribusiness exemplifies global interconnectedness and power. Grain-washing reinforces the dynamic of marketing scientific solutions to hunger – peddling CSR versus the realities of maintaining a destructive global food economy laden with harmful inputs and unequal distribution systems and outcomes. I will examine these ideas, elaborating on key themes emerging from agribusiness corporate communication and greenwashing. These include biofuels, GMOs, global supply chains, and industrial agriculture, which are all presented as solutions to hunger.

Biofuels

With the energy crisis and recent spike in global fuel prices, the topic of alternative energy has attracted great attention. The nation's chemical producers, farmers, fuel companies, and policymakers placed biofuels at the centre of this discussion, making them the alternative fuel of choice though with important implications for the world food system (Borras et al., 2010; McMichael, 2010; Tokar, 2010).

Biofuels such as corn ethanol, for example, have been argued to have many attractive benefits, including being made from a renewable energy source and burning more cleanly with reduced carbon dioxide emissions than petroleum. Furthermore, biofuels could contribute to job creation and economic growth and improve energy security by reducing U.S. foreign energy dependence. Agribusiness is certain to benefit from growth in biofuels research, production, and consumption and therefore was at the forefront in promoting them as a viable alternative, cooperating with petroleum companies also eager to capitalize.

Consider a 2006 advertisement from ADM. Pushing biofuels as 'a growing solution to energy needs', ADM reinforces all of the above claims in the text of the advertisement, displaying images of soybeans at the top and rows of corn taking up one third of the page. ADM is not alone in its efforts, with Pioneer proclaiming they are 'leading the way in biofuels' (2007, p. 6). In doing this Pioneer is seeking to develop corn hybrids with characteristics specifically suited for ethanol while also yielding higher output per acre, taking full advantage of 'the miracles of science' – a clear example of an ecological modernization perspective. Also touting ecological modernization, DuPont (2008) proclaims:

'The global transportation industry requires new alternatives to petroleum fuels that are renewable, locally sourced, cost effective, and viable across all geographies with minimal environmental footprints. At DuPont, we believe biology will help reduce the global reliance on fossil fuels. DuPont's unique scientific capability will provide solutions that are sustainable, renewable and matched to real-world needs.'

Agribusiness believes in the potential (and profitability) of biofuels as a solution to the global energy crisis. Science and new technologies applied to agricultural production are viewed as central in solving energy problems, and without scrutiny much of the public and the policymakers who dole out research grants and subsidies to support such endeavours become believers themselves. Agribusiness has the image of finding solutions in a challenged world with great faith given to it even when the corporations have much to gain (Clapp and Fuchs, 2009). Furthermore and reinforcing work by Gronski and Glenna (2009), agribusiness advertising examined here underlines patterns of global trade envisioned in U.S. farm policy and promoted by the World Trade Organization, which speak to important political economy dimensions of this.

The problem with biofuels, however, is that the devotion of cropland and energy to them shifts agriculture away from food needs, contributing to scarcity and rising food prices. Cargill (2011), in collaboration with the World Bank and the World Wildlife Fund notes the sensitivity to and negative impacts of biofuel production on food security. Despite this, the company (Cargill, 2013) still aggressively promotes its ability of 'adding value to things that grow' in biofuel initiatives 'sharing knowledge, insight and resources to grow your *biofuels* business', developing a slick promotional brochure targeting farmers and even devoting a telephone number specifically for

biofuel inquiries. This is a perfect example of agribusiness saying one thing but doing another at the expense of the environment and global food needs.

In an often-cited example, a *Washington Post* editorial (Brown, 2006) notes that the same amount of grain needed to fill an SUV's 25-gallon gas tank with ethanol could feed a single person *for a whole year*. Increased biofuel production has been blamed for having a large role in the global food crisis and hunger that stems from it as the world's poor become further strapped to meet food needs (Magdoff, 2008; Patel and McMichael, 2009; Scanlan et al., 2010). Furthermore, biofuel technology has not produced an efficient nor realistic alternative as agribusiness claims and the problem is not just with corn. Bunge's sugar-cane ethanol programme and the consumption of Brazilian rainforests raise additional questions concerning agribusiness profits at the expense of the environment.

Grainwashing skews the negative impacts of biofuels and their resource-intensive production processes and threats to hunger. From a treadmill of production perspective, agribusiness does little to promote sustainability or improve hunger but instead profits from political influence and public trust, garnering research and development funds, and generating new grain markets. Agricultural productivity is higher than ever, but if it is at the expense of food crops and sustainability this does little to reduce hunger – especially when prices are impacted (Magdoff, 2008; Magdoff and Tokar, 2010). In sum, while promoting the outward appearance of corporate responsibility, agribusiness simultaneously commits multiple sins of greenwashing, including fibbing, vagueness, and hidden trade-offs with the impact on hunger being the largest of these.

GMOs

Whether it is growing drought and pest-resistant wheat or more resilient 'super rice', GMOs are central to agribusiness in that they are a recurrent theme in how companies present themselves in this analysis. GMOs have attracted a lot of attention in food and environmental discourse with discussion addressing the uncertainty present in debates over their safety (Cook, 2004; Pringle, 2005; Tamis et al., 2009) as well as their application to the world's poorest societies with the greatest need to address hunger (Tripp, 2001; Jansen and Gupta, 2009; Glover, 2010). Considering food security as a specific component of this discussion, the ability of GMOs to meet the needs of hungry citizens versus their safety and their increasing 'environmentalization' are hotly contested (Buttel, 2005). Exemplifying this conflict, numerous countries have banned the importation of GMO food, even aid in the midst of widespread hunger as was the case in Zimbabwe, among numerous others. Agribusiness has much at stake and is certain to protect what it sees as a lucrative endeavour in the form of new Green Revolution technologies from which they argue poor and hungry countries will benefit. This is revealed in their grainwashing.

Monsanto prides itself at being on the leading edge of what it terms 'agricultural biotechnology' research, promoting 'innovation, collaboration, speed' and taking great aims in educating the public through its 'biotech basics' on their website. As Glover (2010) notes, Monsanto has been making these arguments for decades using the idea that its technology could improve the lives of the world's hungriest citizens, thus emphasizing its emergent science and product line as 'pro-poor biotechnology' or 'biotechnology for the poor' (see Jansen and Gupta, 2009). Furthermore, highlighting GMO safety and claiming that 'the genetic enhancement of agricultural

products may be one of the oldest human activities', Monsanto (2010) argues for the many benefits of genetic modification as a solution on multiple fronts:

'Given increasing demand for food, feed and fuel, agricultural biotechnology provides a way for farmers to produce more grain on the same amount of land, using fewer inputs. Ultimately, this technology helps farming become more sustainable. For farmers, biotech crops can reduce cost by raising yield, improving protection from insects and disease, or increasing tolerance to heat, drought and other stress. Value-added biotech traits can provide consumer benefits such as increased protein or oil, improved fatty-acid balance or carbohydrate enhancements.'

Agribusiness therefore claims that GMOs can end hunger, improve nutrition, be environmentally sustainable – all in all, a magic bullet of sorts 'producing a better seed for a brighter future' in Monsanto's words. It was argued therefore that government policies that assisted in the development and promotion of biotechnology seeds alongside programmes aimed at education and implementation of such seed systems in developing countries could empower farmers on the frontlines of hunger (Tripp, 2001), thus tapping into a grander vision and purpose for the science and its potential (Jansen and Gupta, 2009; Glover, 2010).

Agribusiness communications praising biotechnology are widespread and being used in a way that intends to persuade the public of the good they are doing. Each of the corporate websites examined provides reassuring statements about GMOs and their importance. Consider a similar cure-all example from DuPont (2011):

'Biotechnology holds a great deal of promise to enhance our lives and planet. With a world population expected to reach nearly nine billion by 2050, biotechnology offers new potential for meeting the world's demand for food, feed, fuel and materials while reducing our footprint on the planet. DuPont is putting science to work by creating sustainable solutions essential to a better, safer, healthier life everywhere.'

Agribusiness advertising thus reflects ideas from Athanasiou (1996, pp. 11–12), who notes that companies sell biotechnology as the only choice against the specter of overpopulation and the 'Malthusian nightmare' – making them necessary 'as a key plank in the second Green Revolution that will again massively increase the productivity of agriculture, feeding all the world's people.' Furthermore, it is an important example of ecological modernization in that great faith in technology and the wonders of science will provide the solution to global food needs and hunger. Treadmill of production theorists would counter that GMOs are a key element in fueling profit motives of the industrialization of the world food system, citing the harm to food security, the poor, and the land that the agribusiness-dominated Green Revolution has done (see Shiva, 1991).

In addition, there are industry-wide endeavours to cooperatively promote genetic modification and what agribusiness views as its benefits. Advertisements from the Council for Biotechnology Information (CBI), for example, argue the benefits of biotechnology and how genetic manipulation means fields with less pesticide and more efficiently produced crops, be they for biofuels, clothing, or food. As evidence of further arguments to win over the public (and younger audiences), the council's website (<<http://www.gmoanswers.com>>, formerly <<http://www.whybiotech.com>>) even contained an 18-page activity book for kids and potentially schools to save

the children from 'Frankenfood' fears they may hear of and distract from the widespread criticism levied against GMOs.

One should not confuse the CBI with the National Center for Biotechnology Information ([NCBI] <<http://www.ncbi.nlm.nih.gov>>), which is a public, non-partisan U.S. government agency connected with the National Library of Medicine/National Institutes of Health and dedicated to education on biomedical and genomic topics. In what could be evaluated critically as a greenwashing sleight of hand given the similarity of names and associated acronyms, the privately funded CBI is comprised of founding corporate members that include BASF, Bayer CropScience, Dow AgroSciences, DuPont, Monsanto Company and Syngenta. These companies in turn collaborate with supporting agribusiness organizations, including the American Farm Bureau Federation, American Seed Trade Association, American Soybean Association, National Association of Wheat Growers, National Corn Growers Association, and National Cotton Council, who have a vested interest in promoting GMOs and presenting their case that public health and safety concerns are their primary mission.³

A large critique of GMOs is that their long-term effects on human health are undetermined – hence the distrust not just from consumers but also policymakers in the European Union and elsewhere (Athanasίου, 1996; Buttel, 2005; Dąbrowska, 2007; Tamis et al., 2009). Food safety is of no uncertain concern, thus making industry claims to address hunger by feeding the planet with GMO technology subject to scrutiny based on the sins of greenwashing framework, particularly the sins of no proof, vagueness, and the lesser of two evils.

Extending this, as these technologies are marketed, globally traditional agricultural practices such as 'seed saving' are no longer possible – or in fact become illegal as companies view this as violating their patent protections (Shiva, 2000). Monsanto is infamously known for patrolling the fields for violators and suing small farmers who commit violations (Water Willow, 2011), even recently winning the case '*Bowman v. Monsanto Co. et al.* [2013] Sup. Ct. 11-796' in the U.S. Supreme Court and upholding their patent rights. Furthermore, such technology is also expensive and well beyond what can be afforded by the world's poor, who are most dependent on the land for their livelihoods. In this regard, the promising potential of biotechnology argued by agribusiness to be of assistance to the world's poorest comes up short, and many times because the poor themselves are not included in the discussion of what is best for them (Jansen and Gupta, 2009; Glover, 2010). Pursuits of true food sovereignty and food justice could alter the negative outcomes, empowering the poor in ways for them to best address hunger and do so in an ecologically sound manner.

Increased production and efficiency from GMOs and Green Revolution policies may thus do nothing for improving food security but in fact constrain the poorest developing countries who are squeezed out from its benefits. *More* may be produced, but this ultimately does not mean *more accessible* or *more affordable*. Furthermore, companies fail to fully acknowledge the impact of the growing amount of grain swallowed up as animal feed that does not even directly reach people and also affects pricing. This is central to what McMichael (2012a) refers to as the 'global livestock complex' resulting from shifting diets connected to industrial food systems and the global expansion of Western diets. Thus, as with the use of grain for biofuels, production and agribusiness profit to expand markets on this front is detrimental to food security and the environment.

In sum, hidden trade-offs, irrelevance, lack of proof, and vagueness are greenwashing sins that run throughout claims publicizing the benefits and promise of GMOs. As for hidden trade-offs specifically, Athanasiou (1996) notes that biotechnology firms promote their products as solutions to hunger and growing population pressure with no mention of the threats to biodiversity loss from GMOs or their unknown health impacts. When this intricate balance is upset, food security suffers ultimately even though ecological modernization ideas would have us believe otherwise.

Global Supply Chains

Globalization is also a dominant theme in agribusiness environmental communications. Endorsing the benefits of unfettered, free trade practices, the world food system is shaped by agribusiness interests and cooperation with the vision of governments and organizations such as the International Monetary Fund, World Bank, and World Trade Organization (Madeley, 2000; Jarosz, 2009). Globalization has accelerated with the growth of new technologies in communications and travel, but is fueled first and foremost by economic interests. What results are 'global grocers' (French, 2000) and a 'supermarket revolution' (World Bank, 2007) in an industrial food system designed to produce, store, transport, and market as much food as efficiently as the global supply chain will enable (Weber, 2009).

Reinforcing this, ADM boasts in an advertisement that it 'can link farmers to almost any market in the world', connecting growers and sellers with consumers who need what agribusiness has to offer, while Bunge (2013, pp. 1–2) makes 'setting the world's table' the focus of its work, bringing 'food from where it is grown to where it is needed, whether it comes from close to home or thousands of miles away.' ADM makes clear the global sourcing of food in its corporate mission. Consider the following, which features a boy seated at a table holding tofu in his chopsticks. Flushed right as in the ad, the text reads:

'Somewhere west of Shenyang, a teenager is stopping for dinner.
Which is why the soybean harvest west of Peoria is not stopping.
And why a soybean processor west of St. Louis is not stopping.
And why a ship's captain on the west coast is stopping but just for a while.
Somewhere west of Shenyang a teenager is stopping for dinner.
A dinner rich in soy protein.
As one of the world's largest soy processors,
we like the idea there will be no stopping him now.'

Globalization and agribusiness seeks to put food on the world's tables, be it in China as in this advertisement or 'somewhere in the heartland' where a child is sitting down to breakfast as depicted in another. ADM (2010, p. 8) summarizes this nicely, noting its desire 'to connect the harvest to the home to serve the vital food and energy needs of a growing world.' What such a statement does not reveal is the impact of globalized, corporate agriculture on small farmers who cannot compete in their own marketplace, as has been the case with Mexican maize growers and Chinese soy producers – a pattern of 'depeasantization' contributing to poverty, unemployment, urban migration, wage exploitation, and food insecurity (Magdoff and Tokar, 2010). Agribusiness power and the disenfranchisement from sustenance and the land among the rural poor thus create not only misery in the countryside but compound

this with the enormous growth of urban slums as people search for opportunity in the city. Small producers find themselves unable to compete in a free trade system in which they are unfairly disadvantaged, further exacerbating structural inequalities in the system (Madeley, 2000; Bello, 2009; Clapp and Fuchs, 2009) and leaving local communities more powerless (Murphy, 2010).

Ironically, grainwashing the impacts on small-scale agriculture, these advertisements emphasize the role of 'the small farmer'. This occurred, for example, in an advertising series titled 'ADM Thanks Farmers', where they feature family farms and their important contribution to the food system. Monsanto exhibits a parallel depiction with its America's Farmers Mom of the Year Contest. Such efforts essentially distract the public and policymakers from agribusiness dominance and the global, corporate, industrial farm. In presenting small operations and the 'face' of farmers, production is portrayed as being carried out by individuals in small-scale operations despite them being connected to a global infrastructure that ships their grain around the world, dramatically increasing 'food miles' (Norberg-Hodge et al., 2002) and the 'oil we eat' (Manning, 2004). Agribusiness must hope in this advertising that in consumer questions of 'where does my food come from' the public may console itself in believing it was grown on a family farm close to home – one responsible not only for their personal food security but their community and the planet.

Another irony in emphasizing the family farm in corporate environmental communication is that in the wake of the global food crisis there has been a growing trend in large-scale 'land grabs', which involve the purchase of foreign agricultural land for the purpose of outsourcing food production, commoditizing food in new ways and further threatening the sovereignty of small-scale producers and natural resources (Smaller and Mann, 2009; Borras et al., 2011). Although at first the pursuit of governments wanting to reduce their vulnerabilities to global markets and hunger, land grabbing increasingly has become the practice of investors, speculators, and multinational corporations that take control of the land, doing so with state cooperation (GRAIN, 2010). From a treadmill of production perspective, land grabs further solidify the power of agribusiness in the global food regime focused on worldwide production and distribution without consideration of consequences.

Additionally, the global supply chain and industrial nature of the world food system has enormous environmental impacts. The food miles incorporated into getting sustenance from field to table has a large ecological footprint from the energy used to store, process, and transport food throughout the world (Norberg-Hodge et al., 2002). Inputs from heavily mechanized agricultural processes, chemical herbicides, pesticides, and fertilizers, and enormous water consumption have additional ecological impacts among many other biophysical constraints on food production (Ehrlich et al., 1993; Harper and Le Beau, 2003; Manning, 2005). When the energy and multiple inputs used to generate the food people around the world consume is vastly greater than the caloric benefits they actually attain, the long-term sustainability of such a system is questionable, nor does it guarantee access to food for those in need while also devastating local markets.

Cargill (2010) also underscores its role in the world food system, claiming sound global citizenship in its CSR statements and a 'neighbour-like' presence in 65 countries. Cargill seeks to not merely provide a network for distribution and supply but also a 'local presence', in which it can act as a good citizen and promote community investment, environmental protection, food safety, responsible supply chains, rural development, and partnerships with stakeholders and 'neighbours' with whom it

claims to live and work. As with ADM, Cargill emphasizes the 'down-home' feel to its presence, invoking images of partnerships and family farms to distract from corporate domination of the system. A Cargill advertisement elaborating this theme features two men leaning on a pickup truck on a farm. One is the producer of premium eggs for food cooperatives in Japan while the other is an Illinois farmer growing corn to very precise standards for feeding the chickens producing those eggs. The text reads:

'They live across the ocean from each other, but we help them conduct business like they live across the road... Cargill's *Signature Growers* program brought the egg producer together with a farmer... The result is a mutually beneficial business relationship that has grown into a friendship. This is how Cargill works with customers.'

Thus, like ADM's claim to be 'the supermarket to the world', Cargill's goal is reaching out to a global marketplace, integrating food systems in a way that achieves their vision 'to be the global leader in nourishing people' (2008).

Leading the world in nourishing people should not be separated from the enormous power and profitability agribusiness gains in this position – nor forget that these profits are given more importance than people or the environment as a treadmill of production perspective would argue. Critiques of globalized, industrial agriculture such as from McMichael (1995), Shiva (2000), Bello (2009), or Patel (2008), and the dismay over contemporary food systems as espoused by the slow food movement (Petrini, 2007) among others, are skeptical that the globalization of agriculture improves food security. Portraying the world food system as beneficial for all neglects the widespread prevalence of hunger, which has been as bad as ever with globalization and puts a lot of faith in an industry that has shown to be untrustworthy (Eichenwald, 2001; Robin, 2010). Grainwashing in this regard is part of what Munshi and Kurian (2005) call an 'imperializing spin cycle' central to the neocolonial dynamics of agribusiness power in the world food system associated with the supermarket revolution, global land grabs, and ultimately what in the United States can be seen as a 'foodopoly' (Hauter, 2012).

Global agribusiness impacts local food systems in ecologically harmful ways that connect to hunger. Grainwashing shrouds these dynamics and the vulnerabilities of those most dependent on the land for their survival, demanding critical evaluation (Lacy, 2000). Even with its neo-liberalism emphasis, the World Bank (2007) acknowledges the risks imposed by agribusiness concentration and globalization. As part of a development agenda with those most dependent on agriculture at the centre, the World Bank recognizes the need for competition and small-scale markets that empower local farmers. The more dependent the global citizenry is on large-scale operations, the less food sovereignty they have, and the more destructive the consequences when prices increase or food becomes scarce.

Globalization means greater transportation of food around the planet, making it available in new places and forms, but this does nothing to ensure that those most in need are able to afford and access it or that people will be able to continue working the land. The fact that famines remain a devastating phenomenon, as evidenced by the 2011 drought in East Africa – the worst in over half a century – indicates that markets and agribusiness not only cannot prevent catastrophes but may actually exacerbate them in disrupting local markets and dramatically changing the way people have lived their lives for generations. Furthermore, agribusiness even profits from

them as governments and relief agencies buy and distribute food-for-aid packages delivered during crises (Murphy and McAfee, 2005). Although agribusiness may pledge to work closely with small farmers who know all of their animals by name as depicted in one Cargill ad, agribusiness seems incompatible with and contradictory to their well-being. The power differentials are too disparate and the profit potential too large for empowered peasants and genuinely localized food sovereignty to exist – ultimately a question of food justice.

Conclusions

The above themes culminate around the responsibility addressing hunger that agribusiness claims to pursue. The contradiction of this, however, is that food is viewed as a commodity more than a right in a world food system wrought with devastating ecological consequences. In the hands of the multibillion dollar agribusiness industry, this responsibility typically means profit and corporate survivability over improving food security and environmental sustainability. Be it what they see as CSR or what critics view as grainwashing, agribusiness messages are important studies in sociology and impression management. The questions thus remains, is agribusiness feeding us or fooling us with its PR?

Agribusiness emphasizes a solution for improving food security that reflects ecological modernization thinking. Firmly believing that biotechnology and genetic modification, industrial agriculture, and a global food distribution network are the best ways to address hunger, food multinationals present themselves as responsible corporate citizens committed to eliminating social ills, protecting the planet, and supporting local farmers and the poor (Jansen and Gupta, 2009; Glover, 2010).

To sum up with a couple of additional corporate environmental communication examples, advertisements from Monsanto warn that climate change and a global population that will soon reach nine billion threaten food security, but that their biotechnology can address the looming peril. In a different advertisement they note that they are finding ways to do more with less, increasing output while consuming fewer precious resources such as water. Cargill speaks of its virtue in capturing energy from the waste produced at their beef facilities, while ADM claims that its practices ‘improve agricultural efficiency, make food more affordable, and feed a hungry world’. Marketing these ideas and coupling efforts with massive lobbying efforts costing over USD 139.2 million in 2012 (Center for Responsive Politics, 2013), agribusiness seeks to influence policymakers and the general public to believe it is doing the right thing. It does this by convincing others that a world food system can meet challenges with technological innovation – that ecological modernization is possible. Through what is ultimately a corporate environmental food regime (Friedmann, 2005), agribusiness PR optimistically portrays the status quo of the food production, distribution, and consumption system as sustainable and that any future threats from hunger, overpopulation, or environmental degradation can be resolved if we trust in its expertise.

Critics would respond that such claims are grainwashing that masks the reality of the true workings of the political economy of food. Politics and widespread inequality are prevalent in this system, resulting in hunger’s persistence while agribusiness expands its profits and power through supply chains centred on a treadmill of production churning out food from factory farms and ‘grabbed’ land. The global food crisis and responses from and impact on the world’s poor speak to great vulnerabil-

ity and instability (Patel and McMichael, 2009; Magdoff and Tokar, 2010). Ecological modernization claims are 'good business' but not sustainable or sound social responsibility. CSR statements and advertisements that speak to the ability of agribusiness to improve the well-being of the planet without acknowledging the treadmill of production they promote can be viewed with skepticism by dissecting the language they speak and contrasting that with the impacts of their actions. Grainwashing is a distraction from the inequality and ecological harms of the world food system that is not about the good neighbours and family farms agribusiness promotes as its image.

Grainwashing fits with what others (Greer and Bruno, 1996; Beder, 2002a; Feller, 2004) have described as the well-crafted spin of the agribusiness PR machine, seeking to rewrite history, define the present, and ensure its future through capitalizing on the legacy of and what it views as the ongoing potential of a continued Green Revolution. Thriving on fears of overpopulation, this collaborative project of international development and agricultural organizations with the world's governments and agribusiness in many ways has achieved its objective of 'more' regarding food supply. The problem, however, has been determining at what cost and for whom have such benefits been garnered the most and whether the poor are truly served (Jansen and Gupta, 2009; Glover, 2010)? In the world food system more food does not mean more access, better nutrition, greater stability, or increased sovereignty. Hunger has remained persistent and a majority of the world's population remains vulnerable to price shocks and environmental degradation while having little power in a global marketplace dominated by a few. Food sovereignty withers and food justice is non-existent as localities are consumed.

Treadmill of production ideas emphasize the shortcomings of ecological modernization perspectives on food and the environment as portrayed in agribusiness CSR statements and its advertising. Unlike a running shoe ad or automobile commercial, agribusiness is not necessarily directly selling a product in its environmental communications but instead promoting ideas: that high energy and resource input, scientifically engineered, globally sourced food systems are better at feeding the planet and can operate in a sustainable manner; that the poor farmer in the developing world and local markets are better off as their partner; and that taking on the challenge of addressing hunger is their primary mission – one that they are most capable of doing and are emboldened to pursue.

In some respects the neocolonial dominance of global agribusiness takes on the feel of a new version of 'the white man's burden', given the efforts agribusiness seemingly goes to. Findings here, however, and a growing body of work, much of which I have cited above, offers counterarguments to the agribusiness vision that has created a global food regime wrought with hunger, food injustice, and limited food sovereignty – ideas reflected nicely on land grabs by the international nonprofit organization GRAIN: 'Today's global food crisis will not be solved by large-scale industrial agriculture... but the governments, international agencies, and corporations steering the global food system are bankrupt in solutions' (2010, p. 147).

Building on this quotation, one should note that agribusiness is certainly not acting alone in promoting the food system it envisions as ideal, nor is it the only beneficiary of its practices. In this regard there is certainly a mutual 'seeking out' of players in the global food regime. Examining the larger dynamics of the political economy of the world food system, industry think tanks, research universities, and governments throughout the world in cooperation with international agencies such as the World Bank, the Food and Agriculture of the United Nations and the World Food

Programme among others, shape food policy in ways that benefits agribusiness. Consider again the international food aid regime noted above, for example, which Murphy and McAfee (2005) argue greatly profits global agribusiness that produces and transports food around the world in a market solely for this purpose. Critics argue that this system actually creates more food insecurity under the guise of providing assistance – contrary to what agribusiness or the sponsorship of the state would have the public believe.

Another important collaboration between the state and agribusiness and its lobbyists and industry associations in both the United States and the European Union are agricultural subsidies and their implications in the world food system (see Peterson, 2009), particularly for the global peasantry. And of course, probably the most telling examples of these processes are the current global land grabs that epitomize Gronski and Glenna's (2009) discussion of the global, profit-driven, and technology-intensive food production that overlooks the food injustices of the system and its effects on people who most depend on the land (see McMichael, 2012b; Cheru and Modi, 2013; White et al., 2013). Agribusiness acts with the complicity of the state, international organizations and agencies who help frame and support its interests. Grainwashing should therefore not be separated from the politics and policies that define the food system, shaping what farmers grow and what we ultimately eat (see Winders, 2009; Nestle, 2013). Therefore, future research should analyse further the collaborative and interlocking power dynamics shaping CSR, hunger, and the environment

In closing, so widespread has been the impact and so fervent are the feelings of those refusing to be a part of the treadmill that new battle lines are being drawn and new visions of food justice are being formed to expose grainwashing and to take back the world food system (Bello, 2009; Patel and McMichael, 2009; Gottlieb and Joshi, 2010; Magdoff and Tokar, 2010). As part of this, the social sciences can take more active role in presenting this more critical alternative perspective (Rivera-Ferre, 2011). In portraying itself as socially responsible, agribusiness as 'the supermarket to the world' manages its image while carrying out the Green Revolution ideas of old. You cannot spell treadmill without 'ADM', and unless change is not only demanded but achieved, those affected by and most in need of solutions to food insecurity will find themselves continually powerless and hungry in a world food system forever dominated by agribusiness.

Notes

1. There are numerous definitions of this concept and a vast amount of research discussing its conceptualization, including business-focused and market-oriented perspectives to more critical analyses. For additional discussion, see Michael, 2003; Dahlsrud, 2008; Lyon and Maxwell, 2008.
2. In addition to these corporations, I have collected some data and have begun to examine other food consumer products, production, and services companies such as Kraft Foods, Nestlé, Smithfield Foods, and Tyson, among others. Because of the focus in this article, I will leave analysis of these companies for future research.
3. Although I do not analyse more fully industry associations such as this, the CBI and its work appeared multiple times in the process of doing my research. Because three of its founding members are corporations of interest here (Dow, DuPont, and Monsanto), I will present this example as an important extension of their grainwashing strategies. Because of their power and the influence they seek to have over public opinion and policymaking, future research will examine more thoroughly these organizations and their role in the political economy of the world food system.

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