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Meat's Place on the Campaign Menu: How U.S. Environmental Discourse Negotiates Vegetarianism

Carrie Packwood Freeman

Given the impact of America's food choices, particularly animal-based foods, on life-sustaining systems, to what extent is the environmental movement making meat-based diets an issue? This research analyzes websites of 15 U.S. environmental advocacy organizations (EOs) to examine how they negotiate the question of animal versus plant-based diets and propose solutions for food producers and consumers. EOs proposed that industrial agriculture and commercial fishing/aquaculture severely limit destructive practices to more sustainably meet consumer demand for animal products. EOs offered consumers choices, including: 1) replacement of much industrial food with local, organic, and/or sustainable animal or plant foods, 2) reduction of animal products, and, to a lesser degree, 3) vegetarianism. To consistently promote justice for all animals, the author recommends environmental discourse more explicitly critique animal agriculture/fishing as a primary source of environmental problems, consider food needs not just preferences, and promote fundamental changes toward a plant-based, largely organic diet.

Key Words: Plant-Based Diet, Vegetarianism, Meat, Environmental Campaign, Web Discourse

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In an era of climate change, environmental crisis is garnering increased media attention, especially the topics of energy and greenhouse gases. Gore and other environmental leaders are asking people to green their choice of light bulbs, appliances, and transport. Yet dietary choices are often left out of environmental discussions, despite growing food movements, best-selling books, and documentaries making food production and consumption an ecological, political, and

ethical issue (Foer, 2009; Kingsolver, 2007; Pollan 2006; Schlosser, 2001; Singer & Mason, 2006; Kenner & Pearlstein, 2009). Consider that between 2005-2008, fewer than 3% of climate change articles in U.S. newspapers mentioned food and agriculture, with much fewer mentioning food-*animal* contributions specifically (Neff, Chan & Smith, 2009). *The New York Times* only covered meat's connection to climate change three times between 2006-2008 (Kiesel, 2009). This lack of news attention gives the impression that environmental movement discourse may not be prioritizing food, particularly animal products, as a key issue.

As leaders craft global climate-change and sustainability policies, the agenda-setting function of the media is needed to instigate more education, debate, and critique on the topic of how animal agriculture and fishing significantly contribute to our current environmental crisis. But who is doing the agenda-building? There is cause for concern if the animal rights movement is the only entity offering a significant critique of meat-based diets, as the isolated voice of this single, smaller movement is likely not enough to create major awareness and change. The booming voice of the environmental movement is also urgently needed to build an ecological case for a shift toward plant-based diets. So to what extent are environmental organizations putting meat on their campaign menu?

To investigate how environmental organizations are negotiating issues of vegetarianism in their proposed solutions to environmental problems, I analyze the discourse of food on the websites of 15 U.S. environmental protection organizations. I then make recommendations for improving the consistency and strength of their messages in accordance with environmental and animal ethics philosophy.

I begin by exploring the environmental impacts of producing animal products, motivations around meat and vegetarianism, environmental advocacy and the need to promote fundamental change, overlap between environmental and animal ethics, and obstacles in environmental and animal organizations working together to promote vegetarianism.

Literature Review

While food is a biological need, the choices we make about food are cultural and increasingly political, as diet can have devastating environment impacts, especially in an age of growing populations and industrialized agriculture (Retzinger, 2008). Environmental impact varies based on food choices and production methods, with animal products being a significant contributor to problems. Magazine editors at the Worldwatch Institute (2004) concluded:

The human appetite for animal flesh is a driving force behind virtually every major category of environmental damage now threatening the human future – deforestation, erosion, fresh water scarcity, air and water pollution, climate change, biodiversity loss, social injustice, the destabilization of communities and the spread of disease (p. 12).

Similarly damning, a report by the United Nations' (UN) Food and Agriculture Organization (FAO, 2006) described animal agriculture as “one of the most significant contributors to today’s most serious environmental problems” (para. 2). Confined animal feeding operations, also called “factory farms,” and the feed requirements for these billions of animals cause pollution and use significantly higher amounts of resources such as soil, water, land, and energy than does

agriculture geared toward a plant-based human diet (Singer & Mason, 2006). Rather than using land to grow plants to feed “food-animals,” Americans could eat these crops directly, thereby utilizing food calories more efficiently, using fewer resources (such as water and energy), and causing less pollution (greenhouse gases, excrement, chemicals, etc). However, environmentalists often advocate limited animal agribusiness when it is sustainable in certain bioregions, such as raising grass-fed cows on land not usable for plant agriculture (Pollan, 2006).

The human demand for food from the sea has also caused a serious crisis in ocean life, particularly due to overfishing. The Environmental Group of the Pew Charitable Trust (2007) reports that:

90 percent of the world’s large fish have disappeared, that close to one-third of the world’s commercial fisheries have collapsed, and that, unless current trends are reversed, all of the world’s remaining commercial fisheries are likely to collapse by 2048 (p. 7).

Pew expressed major concerns about destructive fishing methods that lead to wasteful bycatch (unmarketable animals thrown back, often dead or injured), such as trawlers that “crush everything in their path” (p. 20) and nets that “indiscriminately strip life from the sea” (p. 6). Increasingly, almost half of seafood is farmed. Irresponsible aquaculture practices cause pollution, spread disease and genetically-modified organisms (GMOs) into wild populations, and raise carnivorous fish that inefficiently require “the need for three or more pounds of wild forage fish to make enough fish meal and oil to produce one pound of farmed fish such as salmon” (p. 19). Lack of regulation in fishing and in food labeling make it difficult for consumers to be assured that their seafood choices are not part of the problem.

Animal agribusiness has also been linked to the largest crisis facing living beings – human-induced climate change; the UN concluded that a meat-based diet is a major culprit in

contributing to global warming because raising land animals generates 18 percent of the world's greenhouse gas (GHG) emissions, proving even more damaging than transportation (FAO, 2006). Yet World Bank researchers recently argued that these UN estimates are low, calculating that animal agribusiness, including aquaculture (and some aspects of consumption), is responsible for an astounding 51% of global GHG emissions (Goodland & Anhang, 2009).

When it comes to reducing GHG emissions, an American's choice to switch from a meat-based to a plant-based diet is purported to be equally as important as switching from a gas-guzzling SUV to a fuel-efficient car (Eshel & Martin, 2006). Similarly, a public health report on food and energy issues concluded "for the world's higher-income populations, greenhouse-gas emissions from meat-eating warrant the same scrutiny as do those from driving and flying," (McMichael, Powles, Butler & Uauy, 2007). Along with recommending reduced emissions in livestock production, authors suggest greatly reducing meat and milk consumption in high-income countries and tapering it in developing countries.

Americans alone consume an average of 200 pounds of red meat, poultry, and fish annually, up from 190 pounds in 1995 (USDA, 2009). Almost 30% of the average American's dietary calories are comprised of animal products (Eshel & Martin, 2006). Unchecked, global consumption of animal products is expected to double halfway through the century (FAO, 2006). Currently, over 50 billion land animals are slaughtered worldwide. The U.S. alone kills more than 10 billion land animals (FARM, 2007) plus an estimated 17 billion aquatic animals annually (Singer & Mason, 2006).

A quarter of Americans say they are reducing meat consumption (HRC, 2007), but the percentage of Americans who are actually vegetarian is likely only around 3%, with approximately a million people eating a vegan diet (containing no animal products) (Maurer,

2002; Singer & Mason, 2006). Vegetarians are more often initially motivated by an animal suffering/moral rationale, more so than a health or environmental rationale (HRC, 2007).

Maurer (2002) suggested that a substantial number of Americans will not go vegetarian unless they are convinced meat is either dangerous or immoral, concluding that “promoting concern for animals and the environment is essential to the advancement of the vegetarian movement” (p. 45).

Maurer’s moral appeals to vegetarianism fit within Jamieson’s (2007) recommendation that environmentalists should frame climate change as a moral issue, appealing to such values as care, empathy, and responsibility in calling for “long-term sustainable changes in the way we live” (p. 481). Values of justice and well-being are deficient in environmental rhetoric, according to Agyeman (2007). While Agyeman focuses on aligning the environmental movement with *human* justice movements, the notion of environmental justice and equitable distribution of life-sustaining resources can be extended to *nonhuman* animals, aligning it with the ideology of the animal rights movement.

While animal and environmental ethics are often positioned at odds, based on different prioritizing of well-being for individuals versus the whole species-group, respectively (Callicott, 1993; Sagoff, 1993), their values can be perceived as overlapping. For example, both movements share a desire to protect habitat (Jamieson, 2002), and Regan (2002) claimed that caring for individuals leads to greater good for the group/species, expressing concern that the holistic environmental ethic, if applied to individual humans, would equate to a fascist disrespect for human rights. Similarly, Schutten (2008) noted the hypocrisy of perpetuating a nature/culture dualism in our reluctance to acknowledge that the human is an animal who can become prey. When a man is eaten by a grizzly bear, for example, we lament that he is reduced to a mere

“piece of meat” (p. 204), objectified to “nothingness” (p. 205), all body and no mind.

Deconstructing the nature/culture binary will require some sacrifice on the part of humans and the humility to admit our own vulnerability as a member, not a master, of nature.

Animal rights advocates, who often see themselves as environmentalists too, lament the environmental movement’s reluctance to fully embrace vegetarianism. Holt (2008) called for increased coalition-building between animal rights and environmentalists to fight the proliferation of factory-farms but found that environmentalists shied away from these coalitions out of fear of alienating their hunting and farming members. *E Magazine* editor Motavalli (2002) investigated this “great divide” over vegetarianism. Motavalli described environmental strategy and priorities as broader and more flexible, while animal rights’ strategy and priorities were narrower and often more alienating in their absolutism. Whereas most animal rights advocates request veganism, many environmentalists would be satisfied if people collectively reduced meat consumption. This is because environmentalists, who tend to protect only wild animals, are not primarily motivated by sentimentalism or compassion over the suffering of individual nonhuman animals. Motavalli concluded that the environmental movement should begin to more openly acknowledge the extent of meat’s impact but called for animal activists to be more flexible on vegetarianism.

In a country where meat is so ingrained in our cultural narrative (Willard, 2002), the idea of American activist organizations requesting vegetarianism seems like a much less pragmatic strategy than asking people to just switch to greener products or reduce meat (HRC, 2007). These small dietary changes are part of a “foot in the door” strategy to behavior change, believing that if people take a small virtuous step in the right direction, they will inevitably take much greater steps. Crompton (2008), an environmental change strategist, challenges the small

steps myth, arguing that the severity of environmental crisis requires drastic changes and should not be reliant on green consumerism nor expedient appeals to whatever works, such as appeals to self-interest. Change strategies should challenge materialism and “the perceived need to preserve current lifestyles intact” (p. 3). Similarly, Moser and Dilling (2007) argue that deeper changes should not be overlooked in favor of asking for small, easy steps. This would also require a broader structural critique of a free-market system that enables rampant factory farming exploitation by limiting regulations on agribusiness (Torres, 2007). This seems to suggest that what Cox (2006) referred to as critical rhetoric, an ideological critique of the status quo, should more directly influence campaign rhetoric, or goal-oriented appeals, so that activists are not too restrained in asking for major change.

In requesting a change in America’s meat consumption, McMichael et al. (2007) argued that, even though consumer preference for meat poses an obstacle, “the unprecedented serious challenge posed by climate change necessitates radical responses” (p. 63). They suggest a massive reduction in the amount of meat Americans consume; for other environmental and animal activists, the suggestion may be promoting a plant-based diet.

Methodology

In examining environmental organization discourse, my own values and ideologies ground my analytical perspective. Van Dijk (2009) notes that critical discourse studies is not so much a

method as a “critical perspective, position or attitude” (p. 62) whose scholars are problem-oriented and “socio-politically committed to social equality and justice” (p. 63). I am influenced by a posthumanist perspective that struggles to incorporate a less speciesist version of human rights into advocacy on behalf of other living beings. Posthumanism critiques the humanist assumption that the central, morally-relevant subject in all discourse must be human, challenging the human/animal dichotomy (Calarco, 2008; Freeman, 2010). As an extension of this, I also align myself with deep ecology principles that include humans in the natural world as a species obligated to modify excessive lifestyles to facilitate healthy ecological processes (Devall & Sessions, 1985). This is complemented by animal rights principles that express inherent value for sentient individuals and holistic value for life-supporting natural systems (Francione, 1996; Jamieson, 2002; Regan, 2002). These non-anthropocentric ideologies largely deconstruct the nature/culture and human/animal dualisms and take an anti-instrumental stance toward the human practice of viewing the nonhuman world primarily as an exploitable resource. Specific to this paper, I advocate that a vegan diet for humans is logically consistent with both of these environmental and animal ideologies (in cases where humans have a choice about what they eat to survive) because using animals for food unfairly impacts those beings, other individuals, and, often, our environment.

In analyzing environmental organizations’ (EOs) web discourse on issues of human diet and agriculture, I wanted to ascertain how their solutions addressed animal-based versus plant-based consumption and production. I was particularly interested in determining how and to what extent EOs might problematize animal products and propose plant-based diets as part of the solution.

The discourse analysis I conducted of U.S. EO websites in August 2009 followed Stuart Hall's (1975) cultural studies qualitative method where the researcher conducts several readings which get progressively tighter, examining verbiage and imagery in context to uncover themes and strategies and explain "what and how meanings were constructed and what realities were represented" (p. 15). It is influenced by a Foucauldian notion of discourse, defined as a certain construction of knowledge on a topic that functions as truth at a particular socio-political historical moment (Hall, 1997).

Certain elements of the discourse were salient to my analysis. On a primary organizational level, I wanted to identify major categories/types of solutions that emerged across all EO discourse and determine toward which agents these solutions were primarily directed. I divided this by EO for cross-organization comparison and analysis of the internal consistency of an EO's messages. Van Dijk (2009) explains the need for critical analysis to also examine local meanings like "the structures and nature of propositions, and coherence and other relations between propositions, such as implications, presuppositions, levels of description, degrees of granularity and so on" (p. 69). At level of local meanings, I examined EOs': emphasis or privileging of certain concepts, entities, or values over others and which relevant concepts were ignored; level of criticality versus cooperativeness toward agents and how this was expressed; and strength of conviction, as in level of definitiveness versus tentativeness in defining solutions or needed change. On a macro-level, my analysis identified over-arching ideologies and assumptions inherent to the discourse, including their implications. I problematized locations where the proposed solutions seemed inconsistent with the problem or with deeper ethical ideologies on the environment and animals.

To select advocacy organizations for inclusion in the sample, I examined over 25 national or international (non-governmental) organizations' websites, including quasi-environmental organizations that emphasized food/agriculture. I eventually excluded those organizations with little to no food discourse, including: Alliance for Climate Protection, Defenders of Wildlife, EarthFirst!, Earth Justice, Friends of the Earth, National Wildlife Federation, Earth Charter Initiative, and the Union of Concerned Scientists. The 15 EOs remaining in the sample represent a diverse range of environmental perspectives and food emphases. They are: Center for Biological Diversity (CBD), Center for Food Safety (CFS), Center for Science in the Public Interest (CSPI), Environmental Defense Fund (EDF), Food & Water Watch (FWW), Global Resource Action Center for the Environment (GRACE), Greenpeace, Nature Conservancy (NC), Natural Resources Defense Council (NRDC), Rainforest Action Network (RAN), Sierra Club (SC), Small Planet Institute (SPI), Waterkeeper Alliance (WA), Worldwatch Institute (WI), and World Wildlife Fund (WWF).

To search for food-related discourse, I followed major links on each EO's homepage, however deep, until I discovered a relevant discussion. To ensure I was not missing anything highly relevant, I conducted site-wide keyword searches for terms such as *food*, *agriculture*, *vegetarian*, *vegan*, *plant-based*, and *meat*. Often these searches only led to informal forums and member blog discussions. However, I chose not to include these participatory forums in my analysis. Instead, I focused on the advocacy information intentionally constructed by the EO leadership/employees as presumably most representative of their ideology and "official" stance on the issues – including photos, charts, videos, reports, program descriptions, brochures, and tipsheets.

It is challenging to convey the number of texts, or amount of information, analyzed in this sample. For each EO, I would explore dozens of links encompassing varying lengths. Links were informative not just when they produced explicit food-based solutions, but also when they failed to address food but should have (such as in global warming sections) or critiqued agriculture without distinguishing between animal and plant-based issues.

Environmental Organizations' Proposed Solutions to Food-Based Problems

My findings reveal that when environmental organizations' (EO) websites discuss food as an environmental issue, they define problems with conventional human diet and agriculture in several or all of the following ways: polluting and altering nature (through chemical-use, genetic modification, and climate change); misusing and wasting resources; destroying life and life-sustaining systems (deforestation and extinction); threatening human health, rights, and opportunities (agribusiness squelching small farming and putting profits before people); and mistreating domestic land animals and marine mammals. This section begins by describing the voluntary and regulatory solutions that EOs propose for land and sea-based food producers, followed by consumer-based solutions.

Production-Based Solutions

Seafood Industry

Most EOs harshly critique the commercial fishing industry for their use of bottom trawlers, nets, and long-lines because the bycatch causes so much devastation and waste of life, putting special emphasis on marine mammals and birds instead of fish. Greenpeace's (2009a) bycatch section estimates that one pound of marine animals are thrown away for every four pounds of caught fish, with shrimp bycatch being worse, at four pounds of "unwanted creatures" dying for every pound of shrimp trawled. Greenpeace (2009b, 2009c) uses harsh rhetoric for commercial fishers, calling them "pirates" and "factory fishers" who rob the oceans and vacuum up its inhabitants. Greenpeace's (2009d) oceans campaign page opens with the declaration that: "Throughout the seven seas, there are many industries committing crimes against nature... Even the deep and remote areas that once served as refuges from fishing are no longer safe havens; today the fish have no place to hide."

Worldwatch Institute's (WI) "Oceans in Peril" report warns "76% of the world's fish stocks are fully exploited or overexploited, and many species have been severely depleted, largely due to humans' growing appetite for seafood." It declares that a shift in attitude is necessary: "current presumptions that favor freedom to fish and freedom *of* the seas will need to be replaced with the new concept of freedom *for* the seas" (Allsopp, Page, Johnston, & Santillo, 2007). WI's "Catch of the Day" report declares an educated public should help governments "pass legislation to ban destructive fishing, mandate seafood labels, decrease consumption of endangered fish, and create sustainable marine preserves" (Halweil, 2006, p. 7). As solutions, Greenpeace also supports creating marine reserves, avoiding fishing in bycatch hotspots, and using extraction devices in netting to allow mammals and birds to escape. Environmental Defense Fund (EDF) proposes catch limits, controls on bycatch, protection of marine habitat, and economic restructuring through instituting catch shares (limited access privilege programs).

Most EOs criticize the booming aquaculture industry for its pollution, ecosystem damage, and inefficiency in feeding unsustainable wild-caught fish to carnivorous farmed fish. Yet the World Wildlife Fund (WWF), WI, and EDF support aquaculture as a solution to meeting human food needs if practiced sustainably. WI's "Farming Fish for the Future" report claims:

Properly guided, the explosive growth in fish farming may in fact be the most hopeful trend in the world food system. Compared to raising cows, pigs, or even chicken, aquaculture is remarkably efficient in its use of feed and water... Rather than contributing to environmental degradation, fish farming can be a critical way to add to the global diet (Halweil, 2008).

Similarly, in "The Promise and Perils of Fish Farming" report, EDF (2009a) states that "consumption is expected to keep rising," and the only way to meet increasing demands for fish is through aquaculture – putting "more seafood on more plates." In that same report, EDF aims to show that "seafood can be farmed in a profitable, eco-friendly way," so they advocate aquaculture regulations such as: farming vegetarian fish or using vegetarian feed-fillers, instituting protections to prevent fish escapes that contaminate wild species, and limiting use of chemicals and antibiotics. In a section labeled, "Aquaculture: Why it matters," WWF (2009a) states they are "committed to making sure aquaculture is good for people and nature" because seafood is "one of the healthiest and most popular sources of protein worldwide." So they work with farmers and regulators on production methods as well as encouraging product labeling and certification standards.

Land-based Agriculture

EOs are critical of corporate/industrial-scale farming and sought reform for: pollution of water and air (GHGs), agri-sprawl and deforestation, genetic modification of life, inefficient animal feeds, and displacement of family/indigenous farming. EOs such as Food & Water Watch (FWW), Sierra Club (SC), and Waterkeeper Alliance (WA) explicitly critique factory farming. For example, WA's "Pure Farms Pure Waters" (2009) campaign "helps protect rural watersheds by working to prevent the spread of factory-style agriculture and promoting the security of family-owned, sustainable farms." WA and FWW both take a more government-regulatory approach to solving the problem rather than expecting corporations to voluntarily reform and regulate their pollution.

EDF takes a more cooperative approach to working with agribusiness to solve problems. EDF's Land Water and Wildlife section describes their attempts to create farm policy that rewards conservation-minded farmers and helps cleanse water pollution caused by hog manure lagoons. Their solution does not involve reduction or moratoriums on hog farms (avoiding the derogatory term "factory farms") but rather works to update "hog waste technologies." (EDF, 2007)

Some EOs are more antagonistic to corporate agribusiness. For example, the Rainforest Alliance Network (RAN) (2009a) primarily works to stop "U.S. agribusiness giants" from: clearing the Amazon rainforest for soy, palm oil, and beef; exploiting laborers and denying land rights to indigenous people; and using chemicals and GM crops. Greenpeace's (2009e) campaign to stop Amazon rainforest clear-cutting takes an indirect economic approach by pressuring corporations, such as Nike, to stop purchasing leather from the Brazilian cattle industry.

WWF (2009b) has an extensive section on agriculture detailing their work with agribusiness and regulators but seems to focus on plant-crop commodities which they fail to connect with animal agriculture, except in this isolated statement: “rising incomes allow people to eat more animal protein--milk, eggs, fish and meat--the production of which requires large amounts of feed grain.” Both Nature Conservancy (NC) and Center for Biological Diversity (CBD) occasionally discuss the need for sustainable agribusiness but ambiguously do not differentiate between issues in animal versus plant agriculture. However, CBD (2009) does speak strongly against cattle grazing on public lands and promotes eliminating federal subsidies and low grazing fees. They critique ranching’s lobbying efforts fighting environmental initiatives (such as wolf reintroduction) and encouraging government “predator control” services to kill wildlife – a program few EOs mention.

Consumption-Based Solutions

Solutions for consumers were, in order of prominence: 1) *replacement* of much industrial foods with local, organic, and/or sustainable versions, 2) *reduction*, particularly of red meat and unsustainable sea animals, and, to a lesser degree 3) *vegetarianism* (see chart).

Replacement

The most common recommendation to consumers was to replace industrialized animal or plant foods, which does not ask them to give up favorite foods but rather just switch to greener sources/species of land and sea animals. Consider this WI report chapter titled “Meat and Seafood: The Most Costly Ingredients in the Global Diet” which assumes demand must be met: “Consumption of fish and meat is growing fast worldwide, but producing these in huge livestock-raising operations generates enormous health and environmental problems. Alternative ways of meeting demand for meat and fish can protect the environment and small farmers” (Halweil & Nierenberg, 2008, chapter 5)

When considering sea animals specifically, several EOs dedicate much space to listing good versus bad fish to buy. For example, EDF (2009b) has a “seafood selector” link on the homepage that ranks fish species as eco-best, eco-OK, and eco-worst, providing pocket guides and smart-phone applications to buying seafood. Natural Resources Defense Council (NRDC) (2009) has a similar list with a “Sometimes OK” column providing caveats for each species such as “only eat farmed,” “eat American and vegetarian-fed, avoid farmed in Asia,” or “avoid if fished by trawlers.” FWW’s “Smart Seafood Guide” (2009a) allows viewers to click on a photo of their favorite seafood for recommendations of substitute species, such as “if you like shark, try U.S. troll-caught mahi-mahi.” FWW also has a “Fish & Tips” recipe booklet (2009b) for “seafood lovers” to learn how to cook sustainable seafood. A WI report “Catch of the Day: Choosing Seafood for Healthier Oceans” encourages conscientious fish consumption, assuring readers that “being a more deliberate seafood eater doesn’t mean a Spartan existence; in fact, it could be the only guarantee that fresh and healthy fish continues to appear on our tables” (Halweil, 2006, p. 7). Tips instruct readers to eat low on the seafood chain, support small-scale fishers, and learn where your food comes from and how it is caught. They embed this direct fish-

consumption message within broader water pollution concerns that consumers avoid nonorganic, factory-farmed food. Greenpeace (2009h) campaigns target *retailers* who sell unsustainable species, compiling a supermarket scorecard to pressure a change in purchasing policies.

For land-based animal products, the issue is avoiding factory-farmed and non-organic products, sometimes on the grounds of animal welfare in addition to environment and health. WI produces a report titled “Happier Meals: Rethinking the Global Meat Industry” critiquing factory farming as “unsafe, inhumane, and ecologically disruptive” and suggests alternative meat production methods are the solution: “*Happier Meals* tells you how you can make a difference by supporting local, organic, or pasture-raised animal products... or including a few vegetarian meals a week to help ensure that meat is made better” (Nierenberg, 2005).

Sustainable, local farming is the main focus for groups like GRACE and FWW. GRACE’s projects include: *The Meatrix* (2003-10a), a series of award-winning anti-factory-farming animated short films; an interactive Eating Well Guide (2003-10b) to “local, sustainable, organic” foods; and Sustainable Table (2003-10c), a resource and blog on food issues aimed at creating community movements. These sites critique animal-based foods on the basis that factory-farming is inhumane, unhealthy, and polluting, so GRACE directs consumers to smaller-scale animal farmers rather than suggesting plant-based substitutes. GRACE critiques animal cloning (unique in its inclusion of an animal welfare rationale), and is the only EO who interprets endangered species in terms of saving domesticated heritage breeds of farmed animals to maintain genetic diversity for food security.

When discussing food choices directly, Small Planet Institute (SPI) (2009) often links to other websites, such as GRACE’s sustainable table, telling viewers to: “support farmers raising

produce and animals sustainably and in the process eschew the factory-farming.” SPI also showcases how social justice and political structures are related to agro-environmental problems and hunger, asking food consumers to engage civically by voting and supporting independent media, fair trade, and anti-corporate cooperatives.

While also vehemently anti-factory farming, WA and FWW less often tell consumers what to eat, as support for small farming and natural animal products is assumed; rather, they encourage citizens to demand that legislators protect public health by restricting corporate farm practices and improving product labeling. FWW (2007) encourages viewers to locate factory farms in their state using a map displaying numbers of animals and farm sites that are “top polluters,” overtly connecting factory farms with climate change. They recommend local, organic, and grass-fed animal products.

Reduction

In addition to suggesting a switch to “greener” meats, some EOs suggest that animal product consumption should be reduced, particularly beef and seafood. NRDC and SPI’s occasional mention of reduction is largely overshadowed by their emphasis on sustainable meats.

Greenpeace (2009f) critiques the fish industry but does not often suggest consumers eat less, except in this statement at the end of their sustainable seafood page: “Greenpeace encourages consumers to eat less fish. If you do eat seafood we encourage you to ask questions; find out where it came from, how it was caught, and what else may have been killed in the process.” SC’s (2009a) sustainable consumption campaign suggests eating local and organic “whenever you

can” but is more definitive in touting meat reduction, saying: “Eat more vegetables, fruit, and grains and less meat.” They then suggest you eat meat that is “grass fed, organic, antibiotic- and hormone-free.” SC’s Green Tips Library’s section called “Mind Your Meat” (2009b) also recommends replacing meat, especially beef, with PB&J, veggies, beans, or “imitation meats,” but follows with the option of switching meats: “Not into plants? You can still reduce your carbon footprint by eating chicken or fish rather than beef. Smaller animals consume fewer resources than larger animals.” This represents a prioritizing of environmental benefits over respect for animal life, as the solution increases the number of animals killed.

EDF’s global warming section is the only place where they once advocate meat reduction, but it is buried in the “what you can do” link, in the home/household section, as the very last tip “Choose Food Thoughtfully” (2009c). It sets the tone for reduction by explaining “raising meat contributes more global warming emissions than raising crops. Cutting back on meat even once a week can make a difference.” Once the link is selected, the “low carbon choices for dinner” article (2009d) makes definitive recommendations about one’s choice of vehicles and lightbulbs but tentative recommendations about meat:

There are lots of ways Americans can help fight climate change and reduce U.S. dependence on foreign oil. Buying a car or truck with better gas mileage. Using compact fluorescent bulbs. For those who choose it, even eating just a little less meat can help.

And after a brief explanation of meat’s excessive production of GHG emissions, readers are assured “You don’t have to be a vegetarian to make a difference. Even small dietary changes can make a big difference.” It then explains how skipping one chicken or meat meal per week would equate to taking millions of cars off the road but does not extend that line of thinking to

explaining a vegetarian diet's GHG savings equivalency. Despite this indictment of meat, EDF's (2009c) printable tip sheets on global warming fail to mention anything about diet.

Plant-Based Diets

The majority of EOs do not overtly ask consumers to go veg, but some imply that veganism is the greenest diet and therefore any meat reduction toward that goal is beneficial. Center for Science in the Public Interest (CSPI) (2009a) uses the most definitive language supporting veganism, saying they “advocate for more healthy, plant-based, environmentally friendly diets.” Their “eating green” (CSPI, 2009b) link on the homepage supports a book by founder Michael Jacobson promoting veganism for environmental, health, and animal welfare reasons. In fact, their eating green calculator assesses impact solely based on one's *animal* product consumption, and their interactive “tour of the food supply” (CSPI, 2009b) demonstrates problems solely with *animal* agriculture. The resources page (CSPI, 2009c) links to animal rights and vegetarian organizations, which is rare for EOs in this study, but also links to more common sustainable or “humane” animal farming sites.

Sierra Club (SC) supports hunting and fishing and fails to mention plant-based alternatives in their factory-farming or global warming sections, yet their “sustainable consumption” link has a section titled “The True Cost of Food” (2009a) that includes all-vegetarian recipes and instructs viewers to eat less meat. Although sustainably-raised meat is also touted here, a Q&A section (2009c) acknowledges the superiority of plant-based diets:

Even when raised in the most sustainable way possible, meat usually requires a greater investment of resources than most plant-based food. . . . Cutting back on our consumption of meat—even sustainably raised meat—is a wise choice, especially since we have been eating much more than our bodies need.

In a separate Green Tips Library, SC (2009b) does have a brief section titled “Go Vegetarian (at least some of the time),” even proposing people go vegan for a week, explaining “dairy cows are a major contributor to greenhouse-gas emissions. So try cutting out meat *and* dairy. Check out www.vegweb.com for tips about how to move toward a vegan lifestyle.”

Greenpeace’s decisively titled “Go Vegetarian” (2009g) page is buried in a lifestyles link under the “Get Involved” section. It mainly suggests consumers “cut down” on animal products and eat more plant-based foods; the choice of the term *animal products* instead of just *meat* implies a support for veganism. A Greenpeace report “Cool Farming” (Bellarby, Foereid, Hastings & Smith, 2008) is only found via a keyword search, but it specifies that vegetarianism is the best diet for reducing GHG emissions, yet Greenpeace’s current global warming section fails to mention dietary change.

Rainforest Action Network (RAN) (2009b) touts meat reduction and vegetarianism only in materials aimed at kids, not adults or teens, indicating that RAN views children as an audience more receptive to dietary change. One of RAN’s steps to protect the rainforest is to “eat less red meat,” since South American forests are cleared for cow pasture. The “Kids Action Toolkit” (2009c) has a page that recommends cutting meat consumption in half and provides “meat-free” (p. 10) menu ideas. This is the one place where RAN clarifies that even though rainforest is also being cleared to grow soy, that soy is typically used for cattle feed not meat alternatives like tofu.

The “Kids Factsheet on Beef” (2009d) goes beyond red-meat reduction and even links to vegetarian organizations as well as acknowledging vegetarianism’s benefits:

Some people choose to eat more chicken, turkey, and fish instead of red meat. While this will help save the rainforests, it is important to know that eating a plant-based diet is the best thing that you can do for the environment. (p. 2)

The Center for Food Safety’s (CFS) (2009) climate change report includes a “What You Can Do” section stating: “Reducing your consumption of animal foods is the most effective way to reduce your Carbon ‘FoodPrint’ ... the fossil fuel requirements of an omnivorous diet were more than twice that of a vegetarian and seven times greater than a vegan.” Yet while veganism is implied as an ideal goal, the immediate suggestion is for reduction: “Every meal makes a difference, so you can begin by switching to a veggie option once a week.” CFS (2009) primarily promotes reduction of “conventional” meat and dairy for replacement with sustainable meat, saying “There may still be a place in your diet for that hamburger too; but, if you choose to eat it, make sure it’s organic, grass-fed and local.”

Nature Conservancy (NC) does not promote meat reduction, and their global warming section only mentions food in terms of buying local. Yet, inconsistent with their rhetoric, NC’s (2009) carbon calculator overlooks food miles and only gives credit for reducing meat and dairy intake, noting the benefits of vegan diets emitting 72% less carbon than the standard American diet.

Discussion

To the extent that environmental organizations (EOs) addressed the role of agriculture/diet in environmental problems, they did so either within a distinct agriculture section or within the context of one or two of the following sections: global warming, oceans, green living/consumption, or forests (see chart). They tended to be stringent when identifying supply-side (industry) as the locus of the problem, proposing solutions such as government regulation or radical changes to business practices. In contrast, EOs tended to be less strict when dealing with the demand-side (consumers), presenting solutions that were voluntary and less radical, such as moderate dietary change. Crompton's (2008) critique of utilizing a marketing approach to environmental change fits here, as the rhetoric of consumer choice was prevalent, with EOs providing consumers with a bevy of greener dietary options: eating more local and organic plants and animals, replacing factory-farmed meats and unsustainable seafood with more sustainable animal products, reducing consumption of animal products (especially red meat and fish), and/or eliminating animal products. EOs privileged consumer *preference* for animal products over the *need* for them and succumbed to the compromise that we should simply try to meet this preference in the most environmentally efficient way without a major re-evaluation of lifestyles or needed sacrifice.

A contradiction exists between how EOs characterized 1) the environmental impact of animal products/production as severe and 2) consumers' responsibility for solving the problem as modest. Without radical market pressures from consumers, it seems unrealistic to expect food suppliers to enact the most radical changes. If EOs allow consumers to believe that minor dietary

changes (particularly switching to “greener” meats) is a viable solution, it gives the misleading impression that sustainable farming/fishing methods can unproblematically supply current demand (and without a substantial increase in price). EOs often fail to discuss whether it is possible to expand “sustainable” fishing and farming methods for mass consumption. These practical limitations of scale are why Pollan (2006) critiques industrial farming, even organic, and suggests humans eat less animal foods. Therefore, I deem messages that promote *significant reduction* of animal products as offering a more honest and viable consumer solution to purely environmental concerns than replacement with “greener” animal products.

Half the EOs suggested reduction of animal products, but many (except Center for Science in the Public Interest) were then tentative about going further and recommending that consumers switch to a plant-based diet, even though many EOs suggested that veganism was the most sustainable choice. Most EOs conveyed an assumption and expectation that people *will* continue to eat nonhuman animals and did not question their need to eat them. Approached apprehensively, if at all, veganism was often embedded as an extreme or unattainable ideal within rhetoric touting more seemingly-reasonable, moderate reforms, such as having one meatless meal a week. While EOs’ contention is true that people do not “need” to go veg to make some level of difference, they could ask for more than just a marginal difference, as the magnitude of environmental crisis seems to necessitate substantial change. Therefore, I propose that EOs set the bar high for determining what kind of diet would make a significant difference and then allow for some gradualism or flexibility in people reaching this goal over time.

EO websites should place more prominence on human diet, particularly animal agriculture/fishing, as a primary source of environmental destruction. To address the complexity and severity of food’s connection to all types of environmental issues, it should be featured

consistently across multiple or all topical platforms on the website – water, forests, energy, wildlife, green living, and especially global warming – rather than existing only in sporadic or isolated areas. Recommended solutions should be proportionate to the problem’s severity by asking, in a less tentative and more consistent way, for a needed shift to plant-based agriculture and diets, retaining an emphasis on organic and local foods.

Supply-side campaigns could work institutionally, with public participation, on improving the accessibility and affordability of these plant-foods for public consumption rather than primarily working with existing animal agribusiness to develop less harmful aquaculture or better waste management. However, to acknowledge that a shift to a plant-based diet would take time, campaigns could ask citizens to support government regulation of industrial agribusiness in ways that permanently decrease its ability to expand, pollute, and use unsustainable levels of resources, forcing industry to internalize costs it now externalizes on nature and the taxpayer. If American domestic laws required increasingly higher standards for environmental responsibility, labor, and animal welfare, EO campaigns would need to also critique free-trade policy because transnational agribusiness will enable unsustainable, cheaper food to be increasingly imported.

When addressing food consumption, it makes sense for EOs to incorporate some flexibility as a pragmatic necessity. When making food decisions, people juggle priorities other than just sustainability and ethics, including price, convenience, accessibility, taste, health, and culture/religion. But in setting standards for sustainability and ethics, EOs should prioritize the following elements (acknowledging that they may vary by bioregion): plant-based, organic and non-GM, local and in-season, and fair-trade. Based on an anti-instrumental stance against valuing animals primarily as a resource, I advocate less flexibility in the category of plant-based than in other categories such as local or organic. While I recognize that in some regions or

instances, animal products might be ecologically sustainable, I advocate veganism based on the added ethical consideration that meat, dairy, and eggs involve exploitation or killing of a sentient individual. When killing is not necessary for human survival, then it becomes less ethically justifiable, even if sustainable. While my recommendation reinforces Motavalli's (2002) advice that activists emphasize meat's environmental problems, it seemingly goes against his recommendation that they avoid rigid insistence upon vegetarianism. However, I am suggesting activist discourse on veganism be flexible, but primarily in deciding when animal products are necessary for human survival, not flexible in terms of settling for primarily endorsing meat reduction or sustainable meats.

When it comes to promoting a vegan diet, it is natural for *animal rights organizations* to choose this abolitionist option because their priority is protecting individual animals from exploitation. But it seems on the surface as if *environmentalists* can more easily justify prioritizing a reformist option such as reduction or replacement of harmful products. Moderation seems to be consistent with EO rationales that privilege ecological sustainability, human health and wellbeing, and, sometimes, welfare for farmed animals and marine mammals; abolition does not seem as logically necessary since EOs did not use animal rights rationales in favor of *avoiding* unnecessary use and killing of fish and domesticated animals. EOs only tended to protect the rights of individual animals if they were human, endangered, or charismatic mega-fauna (particularly marine mammals or key predators), most of which are not animals Americans typically eat.

To support my stance that veganism can be implicit to an environmental ethic based on anti-instrumentalism, I will explain how promoting veganism could shore up a contradiction in environmental discourse. The contradiction occurs between the environmental movement's claim

to be non-sentimentalist and holistic in valuing the health and wellbeing of species/groups over individuals and the fact that their rhetoric expresses concern for the suffering and wellbeing of individual human animals as well as the suffering and killing of charismatic mega-fauna (such as seals, dolphins, turtles, sharks, and wolves). If these particular human and nonhuman animals are not to be objectified as meat, and their individual interests are given priority, then EOs should provide justification for not extending that sense of justice out to all animals for moral consistency (in instances where survival does not dictate killing to survive). Some EOs do show concern for needless *suffering* of land-based farmed animals as an anti-factory farming appeal, without showing concern for their needless *killing*. And even though environmentalists prioritize the protection of wild not domesticated species, EOs respect the lives of *human* animals (many of whom could be labeled domesticated) but not lives of domesticated nonhuman animals.

The privilege given to the human animal is apparent because even though humans are largely responsible for environmental crisis today, EO solutions rightly do not recommend culling or cannibalism (even though humans are a non-endangered species, some of whom could be considered “invasive” or “non-native”). And while we can pragmatically argue that killing/farming of humans is illegal and morally distasteful, then EOs can only justify their stance in promoting humans’ needless killing/farming of nonhuman animals based on an ironic perpetuation of the human/animal and culture/nature dualisms which are at the core of the very environmental problems they seek to remedy. However, for those EOs whose ideology and mission are more humanist than posthumanist, these anthropocentric rationales might make more sense.

To practice ideological consistency in food discourse for those EOs who identify with deep ecology principles and/or seek deconstruction of dualisms privileging culture’s domination

over nature, they would need to do more than just suggest Americans cut back a burger a week or switch to non-GM, vegetarian-fed fish. I advocate that these EO positions on plant-based diets should emerge from a core justice ethic that situates the human as an animal who has tended to exploit rather than share the resources of our planetary home; this supports a moral frame (Jamieson, 2007; Moser & Dilling, 2007) specifically by incorporating some critical rhetoric around increased notions of moral responsibility for solving the life and death problems we cause fellow animals (human and nonhuman).

EO discourse did assume a sense of moral responsibility toward nature to reduce negative environmental impacts (to varying degrees). This was in the context of other implicit ideological assumptions, including: humanism and prioritizing respect for environmental justice and human rights, as well as conscientious carnivorousness, with humans constructed as natural yet “humane” meat-eaters. Anti-instrumentalism and anti-industrialism are also prominent themes in EO discourse promoting small-scale production as more wholesome, honest, sustainable, natural, and humane than large-scale corporate/industry production. The latter involves industrial technologies of mass production deemed destructive and exploitative. Similar populist themes of “big is bad” emerged as assumptions in national news coverage of animal agribusiness (Freeman, 2009).

EO discourse did not question the contradiction between naturalness and animal farming (even small-scale) to acknowledge that farming is not a common practice in nature, outside of modern humanity. While at a minimum *plant-based* agriculture is necessary at this point to feed humankind, EOs could question *animal* farming from the standpoint of its claims to necessity, naturalness, and fairness. This would express moral consistency in EO’s anti-exploitative stance, extending it from protecting nature and individual humans to include individual domesticated

nonhuman animals – in support of not domesticating anyone. Incorporating animal rights concerns increases the logical integrity of environmentalism’s respect for human rights.

Future research could recommend how EO campaign rhetoric could ideologically ground vegetarianism in environmental values and also how organizations supporting the environment, social justice, or animal protection could ideologically align collective food advocacy messages. This would support movement fusion around Agyeman’s (2007) notion of a “just sustainability.” It could connect the civil rights notion of diversity with the ecological ethic of biodiversity, as well as revealing that, when deciding who or what to consume, humans should apply anti-exploitative and anti-instrumental values toward both human and nonhuman animals to protect the ecosystems upon which we both rely.

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References

- Agyeman, J. (2007). Communicating “just sustainability.” *Environmental Communication*, (1)2, 119-122.
- Allsop, M., Page, R., Johnston, P. and Santillo, D. (2007, September). Worldwatch Report “Oceans in Peril: Protecting Marine Biodiversity,” Summary Section. Retrieved August 1, 2009 from <http://www.worldwatch.org/node/5352>
- Bellarby, J., Foereid, B., Hastings, A., and Smith, P. (2008, January). Report: *Cool farming: Climate impacts of agriculture and mitigation potential*. Amsterdam: Greenpeace International. Retrieved August 1, 2009 from <http://www.greenpeace.org/raw/content/international/press/reports/cool-farming-full-report.pdf>
- Calarco, Matthew (2008). *Zoographies: The question of the animal from Heidegger to Derrida*. New York: Columbia University Press.
- Callicott, J. B. (1993). The conceptual foundations of the land ethic. In M. E. Zimmerman (Ed.), *Environmental philosophy: From animal rights to radical ecology* (pp. 110-134). Englewood Cliffs, NJ: Prentice Hall.
- Center for Biological Diversity. (2009). “Grazing.” Retrieved August 1, 2009 from http://www.biologicaldiversity.org/programs/public_lands/grazing/index.html

Center for Food Safety. (2009). "Cool Foods Campaign: What You Can Do, Reducing Your Carbon Footprint." Retrieved August 1, 2009 from <http://coolfoodscampaign.org/your-tools/global-warming-and-your-food/from-field-to-feedlot-to-fork/>

Center for Science in the Public Interest. (2009a). "About CSPI." Retrieved August 1, 2009 from <http://www.cspinet.org/about/index.html>

Center for Science in the Public Interest. (2009b). "Eating Green" Retrieved August 1, 2009 from <http://www.cspinet.org/EatingGreen/>

Center for Science in the Public Interest. (2009c). "Six Arguments for a Greener Diet: Resources" Retrieved August 1, 2009 from <http://www.cspinet.org/EatingGreen/resources.html>

Cox, R. (2006). *Environmental communication and the public sphere*. Thousand Oaks, CA: Sage Publications, Inc.

Crompton, T. (2008). *Weathercocks & signposts: The environmental movement at a crossroads*. Report written as part of the World Wildlife Fund's Strategies for Change Project. Retrieved August 1, 2009, from www.wwf.org.uk/strategiesforchange

Devall, B., & Sessions, G. (1985). *Deep ecology: Living as if nature mattered*. Salt Lake City, UT: Peregrine Smith Books.

Environmental Defense Fund. (2007). "Cleaning Up Hog Waste in North Carolina." Retrieved August 1, 2009 from <http://www.edf.org/page.cfm?tagID=68>

Environmental Defense Fund. (2009a). "The Promise and Perils of Fish Farming." Retrieved August 1, 2009 from <http://www.edf.org/page.cfm?tagID=16150>

Environmental Defense Fund. (2009b). "Seafood Selector." Retrieved August 1, 2009 from <http://www.edf.org/page.cfm?tagID=1521>

Environmental Defense Fund. (2009c). "Save Energy and Money at Home." Retrieved August 1, 2009 from <http://www.fightglobalwarming.com/page.cfm?tagID=267>

Environmental Defense Fund. (2009d). "Fighting Global Warming with Food." Retrieved August 1, 2009 from <http://www.edf.org/article.cfm?contentid=6604>

Eshel, G. & Martin, P. A. (2006). Diet, energy and global warming. *Earth Interactions*, 10(9), 1-17.

FAO. (2006, November 29). Food and Agriculture Organization of the United Nations: News Release titled "Livestock a Major Threat to Environment." Retrieved on November 18, 2007, from <http://www.fao.org/newsroom/en/news/2006/1000448/index.html>

FARM Death Toll. (2007, October 17). Farm Animal Reform Movement news release for World Farm Animals Day titled "Annual Farm Animal Death Toll Drops." Retrieved November 17, 2007, from <http://www.wfad.org/mediacenter/NRVictims7.pdf>

Foer, J. S. (2009). *Eating animals*. NY: Little, Brown & Co.

Food and Water Watch. (2007). "Factory Farm Pollution in the United States." Retrieved August 1, 2009 from <http://www.factoryfarmmap.org/>

Food and Water Watch. (2009a). "Smart Seafood Guide." Retrieved August 1, 2009 from <http://www.foodandwaterwatch.org/fish/seafood/seafood-guide/national-seafood-guide>

Food and Water Watch. (2009b). "Fish & Tips." Retrieved August 1, 2009 from <http://documents.foodandwaterwatch.org/Fish&TipsFrugalFish.pdf>

Francione, G. (1996). *Rain without thunder: The ideology of the animal rights movement*. Philadelphia: Temple University Press.

Freeman, C. P. (2009). This little piggy went to press: The American news media's construction of animals in agriculture. *The Communication Review*, 12(1), 78 -103.

Freeman, C. P. (2010). Embracing humanimity: Deconstructing the human/animal dichotomy. In G. Goodale & J. E. Black (Eds.). *Arguments about Animal Ethics* (pp. 11-30). Lanham, MD: Lexington Books.

Global Resource Action Center for the Environment. (2003-2010a). Film series "The Meatrix." Retrieved August 1, 2009 from <http://www.themeatrix.com/>

Global Resource Action Center for the Environment. (2003-2010b). "Eat Well Guide." Retrieved August 1, 2009 from <http://www.eatwellguide.org/i.php?pd=Home>

Global Resource Action Center for the Environment. (2003-2010c). "Sustainable Table." Retrieved August 1, 2009 from <http://www.sustainabletable.org/home.php>

Goodland, R., & Anhang, J. (2009, November/December). Livestock and climate change. What if the key actors are... cows, pigs, and chickens? *World Watch Magazine*, 22(6), 10-19.

- Greenpeace. (2009a). "Bycatch." Retrieved August 1, 2009 from
www.greenpeace.org/usa/campaigns/oceans/threats/bycatch
- Greenpeace. (2009b). "Pirate Fishing." Retrieved August 1, 2009 from
www.greenpeace.org/usa/campaigns/oceans/threats/pirate-fishing
- Greenpeace. (2009c). "Factory Fishing." Retrieved August 1, 2009 from
www.greenpeace.org/usa/campaigns/oceans/threats/factory-fishing
- Greenpeace. (2009d). "Oceans." Retrieved August 1, 2009 from
www.greenpeace.org/usa/campaigns/oceans
- Greenpeace. (2009e). "Top name brands implicated in Amazon destruction." Retrieved August 1, 2009 from <http://www.greenpeace.org/usa/news/slaughtering-the-amazon>
- Greenpeace. (2009f). "Selective Seafood." In Green Living Guide section. Retrieved August 1, 2009 from <http://www.greenpeace.org/usa/getinvolved/green-guide/green-lifestyle/selective-seafood>
- Greenpeace. (2009g). "Go Vegetarian." Retrieved August 1, 2009 from
<http://www.greenpeace.org/usa/getinvolved/green-guide/green-lifestyle/go-vegetarian>
- Greenpeace (2009h). "Supermarket Scorecard" in Seafood section. Retrieved August 1, 2009
from <http://www.greenpeace.org/usa/campaigns/oceans/seafood>
- Hall, S. (1975). Introduction. In A. C. H. Smith (Ed.), *Paper voices: The popular press and social change, 1935-1965* (pp. 11-24). London: Chatto & Windus.

Hall, S. (1997). *Representation: Cultural representations and signifying practices*. London: Sage Publications.

Halweil, B. (2006, November). "Worldwatch Paper #172: Catch of the Day: Choosing Seafood for Healthier Oceans." Summary section. Retrieved August 1, 2009 from <http://www.worldwatch.org/brain/media/flashpaper/EWP172-sample.html>

Halweil, B. (2008, September). "Worldwatch Report: Farming Fish for the Future." Summary section. Retrieved August 1, 2009 from <http://www.worldwatch.org/node/5880>

Halweil, B. & Nierenberg, D. (2008, January). "Meat and Seafood: The Most Costly Ingredients in the Global Diet." Chapter 5 in Worldwatch Institute's report *State of the World 2008: Innovations for a Sustainable Economy*. Retrieved on August 1, 2009 from <http://www.worldwatch.org/node/5561>

Holt, D. M. (2008). Unlikely allies against factory farms: Animal rights advocates and environmentalists. *Agriculture & Human Values*, 25, 169-171.

HRC. (2007). Advocating meat reduction and vegetarianism to adults in the U.S. A report by the Humane Research Council. Retrieved April 8, 2008, from <http://www.humanespot.org>.

Jamieson, D. (2002). *Morality's progress: Essays on humans, other animals, and the rest of nature*. New York: Oxford University Press.

Jamieson, D. (2007). The moral and political challenges of climate change. In C. S. Moser & L. Dilling (Eds.), *Creating a climate for change: Communicating climate change and facilitating social change* (pp. 475-482). New York: Cambridge University Press.

- Kenner, R., Pearlstein, E. (Producers), & Kenner, R. (Director). (2009). *Food, Inc.* [Motion Picture]. Los Angeles, CA: Magnolia Home Entertainment.
- Kiesel, L. (2009). A comparative rhetorical analysis of US and UK newspaper coverage of the correlation between livestock production and climate change. Presented at the Conference on Communication & the Environment, June 28, 2009, Portland, Maine.
- Kingsolver, B. (2007). *Animal, vegetable, miracle*. NY: Harper Collins.
- Maurer, D. (2002). *Vegetarianism: Movement or moment?* Philadelphia: Temple University Press.
- McMichael, A. J., Powles, J. W., Butler, C. D., & Uauy, R. (2007, September 13) Food, livestock production, energy, climate change, and health. *The Lancet*, 55-65.
- Moser, C. S., & Dilling, L. (2007). Toward the social tipping point: creating a climate for change. In Moser & Dilling (Eds), *Creating a climate for change: Communicating climate change and facilitating social change* (pp. 491 -516). New York: Cambridge University Press.
- Motavalli, J. (2002). Across the great divide. *E Magazine*, January/February, 34-39.
- Natural Resources Defense Council. (2009). "Sustainable Seafood Guide." Retrieved August 1, 2009 from <http://www.nrdc.org/oceans/seafoodguide/page4.asp>
- Nature Conservancy. (2009). "Carbon Footprint Calculator." Food & Diet section. See "How is my carbon footprint calculated?" Retrieved August 1, 2009 from <http://www.nature.org/initiatives/climatechange/calculator/>

Neff, R. A., Chan, I. L., & Smith, K. C. (2009). Yesterday's dinner, today's weather, tomorrow's news? U.S. newspaper coverage of food system contributions to climate change. *Public Health Nutrition*, 12(7), 1006-1014.

Nierenberg, D. (2005, September). "Worldwatch Paper #171: Happier Meals: Rethinking the Global Meat Industry." Retrieved August 1, 2009 from <http://www.worldwatch.org/node/819>

Pew Charitable Trust. (2007). Pew Environmental Group report, *Protecting Life in the Sea*. Retrieved August 28, 2009, from http://www.pewtrusts.org/uploadedFiles/wwwpewtrustsorg/TaxonomyCopy/Enviroment/oceans_final_web.pdf

Pollan, M. (2006). *The omnivore's dilemma: A natural history of four meals*. New York: Penguin Press.

Rainforest Action Network. (2009a). "Rainforest Agribusiness." Retrieved August 1, 2009 from http://ran.org/what_we_do/rainforest_agribusiness/about_the_campaign/

Rainforest Action Network. (2009b). "Seven Steps Kids Can Take." Retrieved August 1, 2009 from http://ran.org/new/kidscorner/kid_s_action/7_steps_kids_can_take/

Rainforest Action Network. (2009c). "Kids Action Toolkit!" Retrieved August 1, 2009 from http://www.ran.org/fileadmin/materials/grassroots/pdf/Kids_Action_Toolkit.pdf

Rainforest Action Network. (2009d). "Student Fact Sheet: Facts About Beef." Retrieved August 1, 2009 from http://ran.org/fileadmin/materials/education/factsheets/fs_beef.pdf

Regan, T. (2002). How to worry about endangered species. In D. Schmidtz & E. Willott (Eds.), *Environmental ethics: What really matters, what really works* (pp. 105-108). New York: Oxford University Press.

Retzinger, J. P. (2008). Pizza as praxis: Bridging nature and culture. *Environmental Communication*, 2(2), 246-255.

Small Planet Institute. (2009). "Ten Things You Can Do Right Now—and Feel Better!" Retrieved August 1, 2009 from http://www.smallplanet.org/action/item/ten_things_you_can_do_right_now_and_feel_better

Sagoff, M. (1993). Animal liberation and environmental ethics: Bad marriage, quick divorce. In M. E. Zimmerman (Ed.), *Environmental philosophy: From animal rights to radical ecology* (pp. 84-94). Englewood Cliffs, NJ: Prentice Hall.

Schlosser, E. (2001). *Fast food nation: The dark side of the all-American meal*. Boston: Houghton Mifflin.

Schutten, J. K. (2008). Chewing on the grizzly man: Getting to the meat of the matter. *Environmental Communication*, 2(2), 193-211.

Sierra Club. (2009a). "The True Cost of Food." Retrieved August 1, 2009 from <http://www.sierraclub.org/truecostoffood/>

Sierra Club. (2009b). "Green Tips: Food and Drink." Sections on "Mind Your Meat" and "Go Vegetarian." Retrieved August 1, 2009 from <http://www.sierraclub.org/tips/food-drink.aspx#meat>

- Sierra Club. (2009c). "Sustainability and Meat: Can We Have Both? Eating Less Meat." In Discussion Guide. Retrieved August 1, 2009 from <http://www.sierraclub.org/truecostoffood/leaders.asp>
- Singer, P., & Mason, J. (2006). *The ethics of what we eat: Why our food choices matter*. Emmaus, PA: Rodale, Inc.
- Torres, B. (2007). *Making a killing: The political economy of animal rights*. Oakland, CA: AK Press.
- USDA Economic Research Service (2009, February). Food availability spreadsheets. Retrieved August 25, 2009, from <http://www.ers.usda.gov/Data/FoodConsumption/FoodAvailSpreadsheets.htm>
- Van Dijk, T. (2009). Critical discourse studies: A sociocognitive approach. In R. Wodack & M. Meyer (Eds.), *Methods of critical discourse analysis* (pp. 62-86). Thousand Oaks, CA: Sage.
- Willard, B. E. (2002). The American story of meat: Discursive influences on cultural eating practice. *Journal of Popular Culture*, 36(1), 105-118.
- Waterkeeper Alliance. (2009). "Pure Farms, Pure Waters." Retrieved August 1, 2009 from <http://www.waterkeeper.org/ht/d/Contents/cids/275,1383/pid/201>
- Worldwatch Institute. (2004, July/August). Is meat sustainable? *World Watch Magazine*, 17(4), 12-10.

World Wildlife Fund. (2009a). "Aquaculture: Why it Matters." Retrieved August 1, 2009 from <http://www.worldwildlife.org/what/globalmarkets/aquaculture/whyitmatters.html>

World Wildlife Fund. (2009b). "Agriculture: What We are Doing." Retrieved August 1, 2009 from <http://www.worldwildlife.org/what/globalmarkets/agriculture/whatwearedoing.html>