

Of Humans, Natures and Human Nature in the Modern Food Chain

Valérie Bourdeau

A Thesis

in

The Department

of

Sociology and Anthropology

Presented in Partial Fulfillment of the Requirements
for the Degree of Master of Arts in Sociology
at Concordia University
Montreal, Quebec, Canada

May 2010

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Your file *Votre référence*
ISBN: 978-0-494-70992-4
Our file *Notre référence*
ISBN: 978-0-494-70992-4

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ABSTRACT

Of Humans, Natures and Human Nature in the Modern Food Chain **by Valérie Bourdeau**

The North American culinary landscape is scarred with deep rifts between consumers, producers, the food we eat and the soil it comes from. Those disruptions in natural flows are shaped and cultivated for profit by the capitalist interests that dominate our food chain. My aim in this thesis is to consolidate knowledge from different areas of research into a robust critique of modern food production. As a theoretical reference point, I propose a multidisciplinary critical naturalistic framework based on the work of Barkow, Bhaskar, Bookchin and Latour. Then, using reinterpretations of Marx's work on commodification, fetishism and the metabolic rift by geographers, evolutionary psychologists and other (r)evolutionary thinkers, I highlight some of the disruptions that define the current state of food in North America. First, I show how the web of relations that constitute agricultural ecology is parceled out to conform to the rationality of the modern capitalist mode of food production. Finally, I argue that those disruptions are reproduced in the North American popular food culture, as evidenced by the spectacular, 'pornographic' imagery that dominates contemporary food media.

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INTRODUCTION

In the early months of American participation in World War II, the United States National Research Council established the Committee on Food Habits. Their mission? Mounting a full-scale campaign to overhaul American eating habits in view of wartime restrictions or, in their own words, “finding the most effective ways and means of adjusting habits to needs, of getting people to wish what they need” (Guthe and Mead 1943, p. 10). In 1942, the Committee appointed famed anthropologist Dr. Margaret Mead as its executive secretary and head of the Washington office. It was felt that her expertise on cultural phenomena would be vital to the success of the wartime food program. Under her direction, Committee researchers gathered the data that would be used by the government to design a new rationing system. The report on the Committee’s activities prepared by Dr. Mead and Committee Chairman Carl Guthe (1943) is a fascinating read. It touches on many elements of the American food culture, such as the particular feeding habits of ethnic subcultures and blue collar workers in war industries, food aversion in children and adults, the acceptability of offal and other lesser cuts of meat, the nutritional potential of geophagy (or clay-eating), local food sufficiency initiatives and cooperative victory gardens.

The report also reveals the long-term perspective of the program of research in peace time: “to alter American food habits so that they are based upon tradition which embodies science and to do so in such a way that food habits at any period are sufficiently flexible to yield readily to new scientific findings” (Guthe and Mead 1943, p. 20). This statement reflects the all-American optimism and enthusiasm for science and technology that animated many aspects of the culture at the time, echoing throughout the food landscape in the rise of processed foods, the commercialization of new domestic appliances, or the recurring motif of the ‘food pill’ in science fiction. The involvement of anthropologists in the research program implies that this technological

revolution could not have unfolded without significant changes in the cultural mores surrounding the preparation and consumption of food.

This scientific approach to food remains with us today in a new battlefield as we grapple with a paradoxical two-prong threat. As promised, the scientific revolution has freed people in the wealthiest regions of the world from the vagaries of a limited food supply. We live in a privileged time, able to experience an abundance and diversity of food our ancestors could only dream of. However, the overabundance is creating serious public health concerns. Obesity is on the rise along with diabetes and a host of cardiovascular diseases that have been linked to dietary excesses and sedentary lifestyle, leading some to worry that the next generation of children will have a shorter lifespan than their parents for the first time in modern history. Furthermore, the new agricultural technologies that made this abundance possible have proven ecologically, economically and socially unsustainable. Food production is one of the leading causes of pollution worldwide, particularly the cattle farming practices that enable our meat-heavy diet by expending staggering quantities of land, water and fossil fuel. Our delocalized global food webs depend on the exploitation of people and natural resources in underprivileged areas of the globe. The Food and Agriculture Organization of the United Nations estimates that even as we tuck into our cheap cheeseburgers and fries, over 923 million people around the globe are starving to produce the food we import, their land and water supplies poisoned by the pesticides, fertilizers and by-products of modern farming (FAO 2008C, p. 2).

Countering threats to food safety, security and sovereignty in the global South will require substantial changes in the way we eat in the global North. Over the last 40 years countless authors have been sounding the alarm and suggesting possible solutions. Leading the charge was Frances Moore Lappé, author of the 1971 book *Diet for a Small Planet* in which she argues that the hunger that plagues many regions of the world is not

the work of a cruel Mother Nature but an anthropogenic disaster rooted in the food habits of wealthy industrialized nations. She was the first to advocate vegetarianism in terms of 'protein economy', noting the inefficiency of using 16 pounds of grain to produce 1 pound of beef (Lappé 1991, p. 69). She also popularized the notion of complementary proteins central to the diet of many vegetarians.

Her book has sold over 3 million copies since it was first published, and she inspired many authors to make the connection between food habits and questions of ethics, democracy and environmental conservation. Among them is Peter Singer, philosopher, ethicist, author of the animal rights activist bible *Animal Liberation* and prophet of the secular ethical vegetarian movement. In 2006, Singer published *The Ethics of What We Eat*, where he makes a case for the extension of human rights to animals through a horrifying description of current practices in the meat industry. His book joined the growing ranks of exposés criticizing modern food production methods, alongside Eric Schlosser's 2002 *Fast Food Nation*, Michael Pollan's 2006 best-seller *The Omnivore's Dilemma* and Paul Roberts' 2008 *The End of Food*.

These authors and many others have lifted the veil on the hidden machinery of the modern food chain, and what they uncovered had a real impact on the North American diet. They have informed chefs, critics and food writers, and actuated new standards of gastronomy that attempt to account for the environmental cost of food production. Their influence is not limited to elite foodie circles. The recent wave of food journalism has managed to attract an audience reaching across class and cultural barriers, leading millions to question their eating habits and, more importantly, to challenge the way the industry operates. People who would not otherwise consider themselves anti-corporate activists are now expressing concerns about industrial agriculture, pesticides and fertilizers, genetically modified organisms, food contamination, the lack of nutritional value of processed foods and the cultural loss of

culinary traditions. This new food consciousness is embodied in the White House vegetable garden, an initiative launched in 2009 by First Lady Michelle Obama based on an open letter from Michael Pollan in the *New York Times* (Burros 2009). A portion of the White House lawn was ripped up and replaced by a pristinely organic self-fertilising wonder tended by an army of volunteers, chefs and ground staff. The garden is little more than a symbolic gesture, but as the first edible garden to be planted at the White House since Eleanor Roosevelt's WWII victory garden, it is indeed symbolic of changes in the way the people relate to food.

Thanks to this awareness-raising onslaught, food is on everyone's lips. It seems like everybody has something to say about what we put in our mouths. With such a high level of noise, the clarity, coherence and conviction of arguments is of the utmost importance for social commentators. As an illustration, or perhaps a cautionary tale, let us take a look at some of the arguments presented by Jamie Oliver, celebrity chef-turned-food activist whose recent efforts to change school cafeteria programs in England and the American Midwest were documented in two widely discussed reality television shows. Here is what he had to say to the eminent audience of the 2010 Technology, Entertainment, Design (TED) conference, where he accepted a \$100,000 grant to promote food education and fight childhood obesity:

OK, I see it as a triangle, OK? This is our landscape of food. I need you to understand it. You've probably heard all this before, but let's just go back over it. Over the last 30 years, what's happened that's ripped the heart out of this country? Let's be frank and honest. Well. Modern-day life.

Let's start with the Main Street. Fast food has taken over the whole country. We know that. The big brands are some of the most important powers, powerful powers in this country. Supermarkets as well. Big companies. Big companies. 30 years ago, most of the food was largely local and largely fresh. Now it's largely processed and full of all sorts of additives, extra ingredients, and you know the rest of the story. Portion size is obviously a massive, massive problem. Labeling is a massive problem. The labeling in this country is a disgrace. They want to be self ... They want to self-police themselves. The industry wants to self-police themselves. What, in this kind of climate? They don't deserve it. How can you say something is low-fat when it's full of so much sugar?

Home. The biggest problem with the home is that used to be the heart of passing on food and food culture, what made our society. That isn't happening anymore. And you know, as we go to work and as life changes, and as life always evolves, we kind of have to look at it holistically -- step back for a moment, and re-address the balance. It ain't happening. Hasn't happened for 30 years. (Oliver 2010)

There are many persuasive arguments here, the exact ones I will be making in this paper, as a matter of fact. Oliver weaves together all the most common contemporary critiques of the modern food chain: big portions, big people, the dominance of fast food and faceless corporations, the lack of regulations, the rip in the cultural and social fabric. He even tops it all off with a sprinkle of the magic fairy dust of holistic thinking. Sadly, without the benefit of Oliver's charismatic and passionate delivery, his critique reads a little like the ravings of a madman. He is not entirely to blame; when one becomes aware of all the dysfunctions in the agro-industrial machine, it is not always easy to decide how to most effectively channel the resulting outrage. Still, the narrative will have to be structured a little better if we are to persuade anyone that "it's all connected, man..." To make sense of the modern food chain, I need a framework that will allow me to develop a clear, coherent, and above all else convincing case against Big Food and ensure I do not fall into the same rhetoric traps as the Naked Chef.

How do Lappé, Singer, Pollan and their fellow food pundits manage to make their voices heard in the chaotic outcry against the food industry? While food writers come from a wide variety of educational backgrounds and schools of thought, I detect two similarities:

1) They favour a multidisciplinary approach. As Mead said in the opening line of her 1943 report, “problems of changing food habits cut across ordinary discipline lines, in addition to involving contributions from both pure and applied sciences.” (Guthe and Mead 1943, p. 20) All the authors I mentioned show a remarkable openness to science, even as they deplore the impact of technology on environment and culture. Their arguments are backed by scientific and quantitative data as well as qualitative social science work, and they tend to take an explicitly evolutionary approach in their analysis.

2) While they are widely read in the social sciences and have been inducted into the sociology of food canon, they are not sociologists. Michael Pollan and Eric Schlosser identify as journalists, Frances Moore Lappé began as a social worker but spent most of her life as an activist, and Peter Singer considers himself a philosopher. Their work may touch on sociological topics such as labour, globalization, identity politics and social movements, but they rarely refer to sociological theory in their treatment of those issues.

These observations force me to admit my true motive for choosing this topic for my Master’s project. Food is a pretext, a familiar terrain to discuss what I perceive as a significant weakness in sociological theorizing. Our relative unease when confronted with issues that cannot be explained in purely social terms severely limits our relevance in areas where the natural and the social realms are inextricably enmeshed. My objective here is to develop a theoretical framework that can be used to address the relationship between human societies and natures without relegating them to irreconcilable spheres.

My project falls in a line of inquiry that stretches as far back as human memory. We have been pondering our place in nature ever since we developed the advanced cognitive abilities that make such pondering possible, well before theologians and Greek thinkers formalized the familiar dichotomy of Man and Nature. In the quest for answers to the Big Questions, the connection, or lack thereof, between human beings and their environment has been formulated in many ways, but in Western philosophy the concern has too often been to determine what makes humanity unique among all of creation, what separates us from animals, what justifies our sense of entitlement to the Earth's resources. The Aristotelian notion that "a living creature consists in the first place of soul and body, and of these two, one is the ruler and the other the subject" (in Everson 1996, p. 16) has informed much of our understanding of nature. In the first part of this essay, I will explore the work of some authors who paint a more holistic picture of human/nature relations. These authors propose different ways to break down the artificial walls erected between academic disciplines in order to overcome the problematic dichotomies that dominate our understanding of the interactions between human societies and the environment in which they evolve and of which they are an integral component. I will evaluate the strengths and weaknesses of their respective approaches and combine complementary concepts to develop a theoretical framework that recenters nature as an active agent in social theory without losing the critical edge that is the hallmark of our discipline. This frame will situate my point of view and justify my choice of references and approaches in the rest of the paper.

In the second section, I will apply the framework to a more concrete discussion of modern food production. I will take a closer look at some of the common critiques raised by Jamie Oliver and other concerned gastronomes who claim that food has become a commodity like any other in the capitalist system, that a natural balance has been disrupted, and that our feeding habits are unsustainable long term. Those popular

arguments emerge from a respectable lineage of Marxist and environmentalist literature and are supported by a wealth of empirical evidence, but through unthinking repetition they have become boilerplate rhetoric, one half of a familiar verse that ends with "...but modern science is the only way we can feed the world." To cut through the noise and strengthen the critique, we need to break those statements into more precise questions. How does commodification happen? Is all of nature now colonized by capitalist interests, or is there a part that always remains wild? What does sustainability entail, and why is it anathema to the demands of the market? To clarify these important questions, I will employ concepts developed by Marx (1887) in *Capital* and later interpreted through the lens of geography and environmental history.

While the second section focuses on the relations between humans and the soil, in the third section I pursue the arguments into a more abstract landscape: the food culture. I will cast a critical look at the dominant visual mode in food-related media, the mouth-wateringly fetishistic world of 'food porn'. Based on my observations of food media and my own hands-on experience creating 'pornographic' food photography (a photo essay is attached in the appendix as a sort of visual abstract for this section), I will define the main characteristics of this hyper-idealized imagery to tease out its role in shaping the way we eat today. I will trace the gradual 'pornification' of cookbooks and food television from their beginnings as technical, practical or educational media to the current industry of food-based entertainment. Using Debord's (1967/2006) notion of the spectacle in conjunction with theories on the psychology of food habits, I will argue that food porn serves to further divorce consumers from the processes of production, thus maintaining our dependence on industrial food conglomerates.

In light of the critiques developed in previous sections, I will conclude with a brief overview of Slow Food and offshoot movements that emerged in response to the dominance of capitalist interests on the modern food chain. I hope to make a convincing

case for my theoretical framework by evaluating the successes and failures of Slow Food, a movement that has been simultaneously lauded for raising awareness of the many dysfunctions in our food culture and raked over the coals for promoting an elitist lifestyle designed to assuage the liberal guilt of the wealthy as they revel in the hedonistic pleasures of good food and wine. I will argue that such alternatives are doomed to fall into the traps of cooptation and image-based consumerism unless they adopt a philosophy that can bridge the gap between nature and culture, between producers and consumers, and between doing and simply watching.

SECTION I: THE FRAMING OF HUMANS AND NATURES

Vertical Integration

When we study food, we take on a topic that encompasses a wide range of phenomena. We can talk in economic or ecological terms about the soil, plants and animals we eat. We can describe food preparation methods and analyze cultural rituals, taboos and *terroirs*. We can delve into the human body and measure the effect of various nutrients on its functioning, or we can plumb the human brain for the mechanisms that regulate hunger and cause eating disorders. Food studies have something for everyone to be excited about, and with all the serious issues we are now confronting it has become a hot topic in many academic disciplines. We have torn apart the food web into sections to be analyzed by the proper experts, the rituals and taboos going to the anthropologists, the plants to the agronomists, hunger to neuroscientists and anorexia to psychologists. Sociologists have produced some excellent work on the globalization of food production and consumption (Kiple 2007, Ritzer 2008, Roberts 2008), the changing role of women as labourers and vectors of cultural transmission (Charles and Kerr 1988, Counihan and Kaplan 1998, Wilk 2006), the effect of class and other socio-economic factors on food habits (Belasco 2002 and 2007, Bourdieu 1984, Simmel 1997), and various food-centric social movements such as Slow Food (Counihan & Van Esterik 2008, Guthman 2002, Rigby and Bown 2007). However, while almost everyone who writes about food openly acknowledges that it is a multi-layered topic that extends into every area of human existence, those questions are most often examined in isolation from one another. Because food is so inextricably tied into both human life and the natural world, there is something eminently sensible about taking a multidisciplinary approach to study it. In this section, I will attempt to develop a theoretical framework that can help us better

understand those areas of research where social and natural factors do not divide neatly along the traditional boundaries of academic disciplines.

This sensibility is reflected in the concept of vertical integration proposed by Canadian evolutionary anthropologist Jerome Barkow (2006A and B). Integration, he argues, is the reason why the natural sciences have been so successful in providing useful accounts of how the world functions.

[V]ertical integration emphasizes the systematic search for compatibilities and incompatibilities among the multiple levels of explanation required to account for the complexities of human social life, and a forsaking of dated dichotomies such as “nature vs. nurture” and “mind vs. body” and “culture vs. biology.” (Barkow 2006A, p. 29)

Vertical integration is a “modest” form of interdisciplinarity. The intent is not to dissolve the boundaries between disciplines, but to employ the test of compatibility as a way to weed out flawed theories. In the natural sciences – where the disciplines are just as rigidly delineated as in the social sciences, if not more – this test is taken for granted. While they study different objects using specialized tools and theoretical constructs, all scientists, be they chemists, biologists or mathematicians, must take into account the principles that are most widely accepted in related disciplines. If a scientific discovery was found to violate the laws of physics, for example, it would mean one of two things: either there is something wrong with the new discovery, or a whole new area of research just opened up for physicists.

Compatibility should not be equated to reducibility. As Barkow puts it, “different levels of organization have emergent properties, properties that cannot be readily predicted from lower levels.” (Barkow 2006A, p. 30) Complex biological processes cannot be reduced to chemistry alone, and science as a whole cannot be reduced to mathematical formulas; however, explanations for those biological processes refer to chemical processes, which in turn can be expressed mathematically. Assumptions made

in one discipline have to be checked for compatibility with relevant works in connected disciplines. Vertical integration allows for specialized knowledge formation along traditional disciplinary lines, but also provides a way to evaluate discoveries in light of other accepted findings.

Integration is the key to scientific progress. It ensures cohesiveness, and the result is the steady accumulation of compatible data about the world we live in. In *Missing the Revolution*, Barkow (2006A) appeals for a similar approach in the social sciences, which he finds mired in fashionable “display prose” and lacking a coherent thread. This state of affair is due in part to the linguistic turn and the ensuing multiplication of jargon, the institutionalized appreciation for “the aesthetic interplay of the hybridized potentialities of pastiches of multivocalic subjectivities” (Barkow 2006A, p. 30) that has pulled social disciplines away from other sciences and towards the more literary branches of the Humanities. If sociology hopes to remain a science, that is to say if sociologists wish to provide explanations of social phenomena that have some internal logical thread and can serve as a basis for further knowledge production as well as social change, we should strive to provide accounts of socio-cultural phenomena that are compatible with accepted theories in other areas related to human affairs including anthropology, psychology and economics as well as the natural sciences.

The idea here is not to create a new discipline to amalgamate various schools of thought into a mish-mash of compatible ideas, but to add one more level of rigour to the research process. We do not have to sacrifice the heterogeneity that makes sociology such a rich and varied discipline, nor should we expect to reach consensus on every issue. So-called “hard” sciences also recognize the impact the researchers has on the research, as evidenced in plain language formulations of Einstein’s theory of general relativity and the Heisenberg principle, and disagreements abound in every scientific discipline, as we saw recently with the controversy over contradictory conclusions in the

research on climate change. Vertical integration is a methodological tool, a way to look through jargon, logic models and trendy neologisms to find the core ideas and link them to similar ones. I think of it as a way for social scientists to stay current; for example, while it is possible to construct elegant explanations of human behaviour based on Freud's work, presenting them as an accepted understanding of the human psyche would betray a profound ignorance of 60 years of progress in psychological research.

Vertical integration is a pragmatic way to unify natural sciences with social sciences without sacrificing disciplinary sovereignty or heterogeneity, and it has added benefits aside from giving us a way to evaluate and cull incompatible or outdated explanations. The adoption of compatibility as a guiding paradigm in the social sciences would help us identify and correct deficiencies in academic training (Barkow 2006A, p. 34). It would no longer be sufficient to master one author and to cite one another in an incestuous circle in isolation from other disciplines. To arrive at compatible explanations, scholars must become familiar with the world outside of their preferred school of thought and be able to express their point of view in a way that is intelligible to outsiders, which can only make them more well-rounded thinkers. It would also allow for more thoughtful designs for social programs and policies. Decision-makers are always exhorted to consider every aspect of every problem, but to do so they have to parse neatly compartmentalized literature. If our role as social scientists is to inform and advise those who make the decisions that shape our society, the least we can do is to give them the big picture along with the pieces of the puzzle in a language they can understand.

Evolutionary Framework

Of course, this unification project requires a unifying thread, a foundation upon which we can build. Barkow proposes the evolutionary framework as a likely candidate:

Human beings apprehend the world through stories, and stories about stories, and the Darwinian metanarrative is one of the greatest stories about stories ever told. For the human sciences, it serves two purposes. One of these is to provide a framework which “makes sense” to researchers, which permits us to put human and nonhuman behaviors and societies in a framework meaningful to ourselves and our students and readers.

Regardless of whether the evolutionary framework provides some kind of cognitive satisfaction, of “fitting together” for any particular individual, it serves its second human science purpose for everyone: it is an incredibly powerful generator of theories and hypotheses. (Barkow 2006A, p. 40)

Rather than harking back to that old Enlightenment chestnut of the Knowable Truth, this shift to a more scientific way of thinking about culture is driven by simplicity and productivity. Whether it truly reflects an objective reality or is simply a narrative that is easy for us to understand, the evolutionary framework provides compelling explanations and enables the kind of coherence needed for vertical integration. One must however be careful when bringing together knowledge from divergent sources. Once we start looking for compatibilities, it is easy to get carried away and miss the trees for the forest. Mesoudi, Whiten and Laland’s (2006) proposal for a unified science of cultural evolution provides a good illustration of the pitfalls of Grand Theories. Much like Barkow, the authors promote the adoption of a multidisciplinary approach to social sciences within an evolutionary framework. In stating their case, they draw parallels between disciplines in the social and natural sciences by comparing the types of objects and questions they study (see Fig. 1). They go further to suggest that since those paired disciplines study similar questions, they should use the same tools in their investigation. Despite well-chosen case examples from each field, the pairings are clumsy and the overgeneralizations and omissions quite evident.

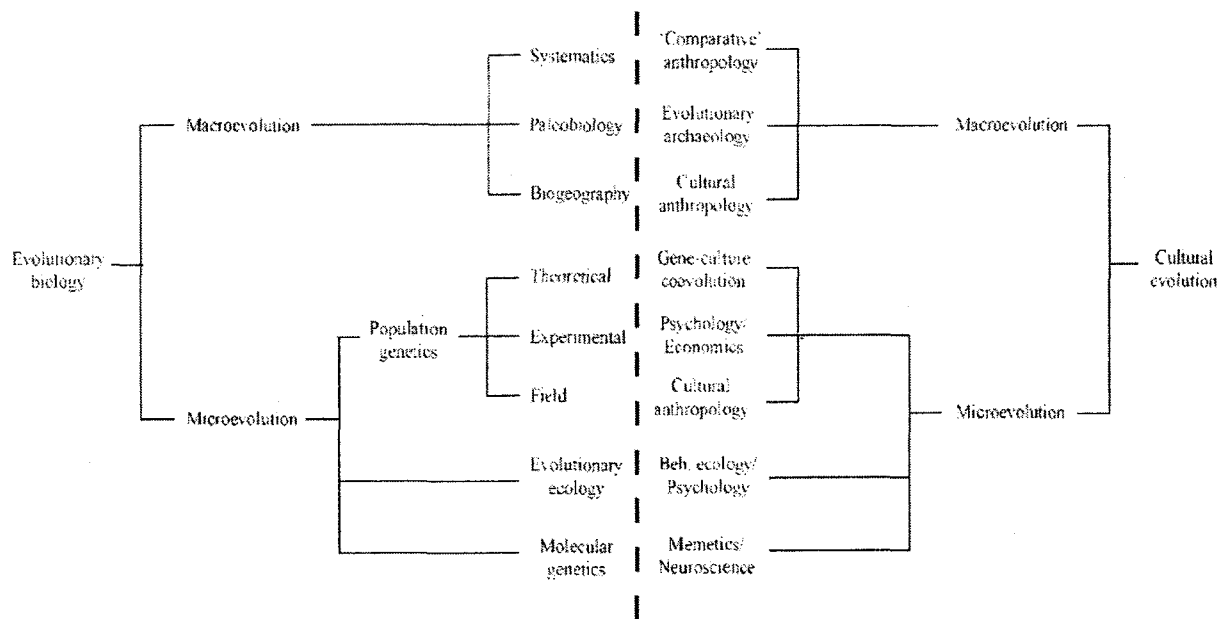


Figure 1: Major Subdivisions Within Evolutionary Biology (left) and Corresponding Disciplines in the Study of Cultural Evolution (Right) (Mesoudi, Whiten and Laland 2006, p.331)

This article is mainly of interest because of the criticism it attracted in the “Open Peer Commentary” section. As it was published in *Behavioral and Brain Sciences*, the authors are preaching to a choir of academics known for their work using evolutionary theory. This includes Daniel Dennett, who along with many others criticizes the authors for assigning an intentional stance to the workings of evolution and for failing to grasp some of the finer technicalities of the evolutionary framework when applied to the study of culture (Mesoudi, Whiten and Laland 2006, p. 353). Barkow more charitably commends the authors for bringing attention to the need for more biology in the humanities, but warns that their efforts are in vain. “Instead, humanities-oriented anthropologists will probably simply lose the turf war as policymakers and the educated public turn to the hypothesis testers, the data gatherers, the mathematical model builders for their understanding of human societies,” he laments (Mesoudi, Whiten and Laland 2006, p. 349). He uses the occasion to clarify some key points of vertical

integration, which he promotes as a way to 'salvage' the bulk of works in anthropology and sociology. His point is not that social scientists have to embrace positivism or empiricism to be relevant, but that instead of rebuilding social disciplines from the bits that come closest to 'real' sciences, we should apply the test of compatibility to get beyond display prose to the useful core of sociological and anthropological explanations.

Evolutionary explanations tend to resonate with the greater public, as exemplified in the recent best-selling books on food. Barkow notes that references to evolved psychology (more commonly known as 'human nature') often sound like common wisdom, or things your grandmother might say. "Smile and the whole world smiles with you", for example, neatly encapsulates recent research on the role of mirror neurons in social relations (Iacoboni 2008). Evolutionary psychology can also sound like the discourse of a graduate of marketing school. When you are trying to 'keep up with the Joneses' or doing things because 'all the cool kids are doing it', you are engaging in what primatologists refer to as status-based preferential attention or, to use the term popularized by Thorstein Veblen (1899/1967), conspicuous consumption. Sociologists are trained to look askance at common wisdom, to view clichés as artefacts of the construction of knowledge to be deconstructed in order to root out hidden prejudices and received thinking. Those are admirable and important goals, but they sidestep one unseemly question: what if there was a kernel of truth to those sayings? By truth, I do not mean to imply proverbs are equivalent to natural laws, but that perhaps they reflect the way our brains have evolved to apprehend the world we live in.

Despite the wariness of social scientists, people with a stake in social engineering like policy-makers and marketers seem to have a good practical understanding of evolutionary psychology. For an illustration, no need to look very far; Dr. Gad Saad (2007), Research Chair in Evolutionary Behavioral Sciences and Darwinian Consumption at the Concordia John Molson School of Business, is working to

understand the evolutionary bases of consumption in order to develop more effective marketing strategies. Rejecting the behaviourist/social construction framework that dominates consumer studies, he uses Darwinian principles to explain how evolved mechanisms like mating preferences, attraction to higher status people, group bonding dynamics, our taste for certain foods or our basest sexual urges are manipulated to promote consumer behaviours. He identifies four major modules that drive behaviour – reproduction, survival, kin selection and reciprocation – and links them to common marketing strategies.

As careful as Saad is in his use of language, his work has deterministic and exploitive undertones that are highly problematic for sociologists. His assertion that depictions of women in advertising are reflections of irreversible features of the human psyche that have nothing to do with “the whims of the patriarchy” (Saad 2007, p. 161), for example, would rightfully send many of us into frothing madness. His discursive positioning may provide a good justification for sociologists to stay far away from evolutionary explanations for social behaviours. However, I believe that effective tools for public understanding should not be left in the “objective” hands of scientists or the invisible hands of salesmen. If we could press these ideas into service for progressive ideals rather than profit, they could turn out to be great tools for social activism.

As counterintuitive as it may seem, the constraints that the evolutionary framework imposes on human potential could help explain why major social problems like prejudice, discrimination, conflict, power differentials and inequality reoccur despite our best intentions. More importantly, this understanding could light a path towards long-term solutions. As an example of a social issue that could benefit from a bit of evolved thinking, Barkow discusses the ongoing exploitation by the food industry of our evolved drive to seek fatty, sweet and calorie-dense foods, and shows how evolutionary psychology might provide some counter-strategies:

Could we develop a workaround to correct the industrial food problem previously discussed? We could and we should. Perhaps the attend-preferentially-to-the-high-in-status mechanism previously discussed could be enlisted: high-status individuals would be presented as disdaining some industrial food products in favour of more healthy foods. Perhaps the ethnocentrism response could be harnessed if we taught children to associate fat, sweet, and salty foods with out-group membership. Linking healthy foods to having a competitive edge would be a likely tactic, as would associating them with sexual attractiveness. (Barkow 2006A, p. 38)

As it turns out, all those tactics are currently employed with some measure of success to encourage people to adopt healthier and more sustainable habits. Recent foodie trends such as diets based on local, organic, vegetarian, vegan, and unprocessed foods have been heavily promoted by renowned chefs and celebrities and are realistically only within the financial reach of the privileged. This has led many to link those practices with a certain culinary elitism, but according to Barkow this may be exactly why the awareness-raising efforts have been successful. Ethnocentrism is another strategy often employed to promote certain food habits over others, whether positively, as in the regional pride behind the notions of *terroir* and local cuisines, or negatively, as in the disdain for the American diet of fast and processed foods. Finally, one look at the dizzying array of diet books that promise you can be a more spiritual, more ethical, healthier, sexier person by changing what you eat are evidence that food habits are often linked to attractiveness, competitiveness and reproductive success. Those promotion strategies will be discussed further in later sections, but I introduce them here to show that that the kind of arguments brought forward by proponents of evolutionary psychology do not necessarily have to support the status quo or the machinations of those in power. They can be pressed into service to further progressive causes or to promote alternative behaviours that are better for our health and that of the planet.

Critiques against Naturalism

Barkow acknowledges that the kind of unabashed naturalism his framework requires is unlikely to find much purchase among sociologists and anthropologists. Anticipating the critics, he identifies a number of issues that could explain why social scientists are wary of explanations based on human nature.

Misuse of science

Darwin's work has been twisted by all manners of vile individuals to justify everything from racist and sexist attitudes to discriminatory practices and policies, oppression of women and minorities, eugenics, ethnic cleansing, even the Holocaust. This understandably justifies some of the reluctance on the part of enlightened social scientists to consider evolutionary theory as a valid paradigm. Those good intentions are misguided. As we have seen, by turning away from the newest iterations of evolutionary biology and psychology, we not only deprive ourselves of a powerful tool for shaping the public debate, but we abandon it in the hands of those who would misuse it, thereby perpetuating those problematic interpretations of Darwinian principle. I do not, of course, imply that we should blindly accept scientific discourse, but critical thinking does not always have to result in absolute rejection. If our role is to provide explanations for social phenomenon and to imagine better ways to coexist with each other and the world around us, there is no reason we should not fight fire with fire and turn scientific concepts in more progressive directions.

Cartesianism

Almost all scientific endeavours bear the mark of Descartes. We have fully embraced the duality of mind and body, with culture replacing the soul as the metaphysical mark of separation between humans and other species, between different human groups, and even within our selves. Evolutionary explanations that are readily accepted when speaking of lesser species are rejected when applied to humans, who are

defined and set apart by their unique position as holders of culture. However, this neat division between us and the rest of the world can only be maintained if one knows nothing about other social species. Non-human animals also live in organized groups and soak in cultures that, as alien as they may seem, share many characteristics with our own: communication, songs and visual displays, tool use, food sharing rituals, even agriculture and husbandry. The mind/body separation itself is highly debatable. It is founded on the *tabula rasa* hypothesis, or the belief that the mind begins as a blank slate on which experiences are inscribed. This hypothesis, which used to underlie much of our understanding of child development and the limitlessness of human potential, has been seriously brought into question by new research, particularly in the fields of linguistics and neurology. Among the most vocal critics of the *tabula rasa* hypothesis is Noam Chomsky (2002, 2006), whose theory of innate language rests on the existence of hardwired cognitive modules. Also notable is Harvard professor and McGill alum Steven Pinker, who has spent his entire career searching for the stuff thoughts are made of. In his book *The Blank Slate*, Pinker (2002) exposes the dangers of the *tabula rasa* conception of human consciousness, noting the harm it has caused by putting the responsibility for how a child grows up entirely on the parents and the blame for criminal recidivism on ineffective rehabilitation treatments, to cite only a few examples. He concludes the book with a powerful indictment of the blank slate hypothesis:

The Blank Slate is not some ideal that we should all hope and pray is true. No, it is an anti-life, anti-human theoretical abstraction that denies our common humanity, our inherent interests, and our individual preferences. Though it has pretensions of celebrating our potential, it does the opposite, because our potential comes from the combinatorial interplay of wonderfully complex faculties, not from the blankness of an empty tablet. (Pinker 2002, p. 421)

If genes and instincts are perfectly acceptable explanations for the behaviours of animals, including those with whom we share genetic kinship, then there is no reason

why those concepts could not be useful in understanding the interplay of biology and culture in our own species. No reason, that is, aside from a misplaced sense of superiority. The moat we have dug around ourselves reflect the arrogant belief that we are at the top of a hierarchy of our own creation. Bringing the mind back into the body and incorporating nature back into our understanding of culture does not negate the uniqueness of our species but puts it back into its proper place in the continuum of life.

Durkheim's Legacy

The father of sociology wished for his offspring to be a true science of institutions. His conception of science reflected the views of his time: positivistic, centred on empiricism and the deductive method. His methodology may no longer be in fashion, but his legacy to the discipline remains the focus on social facts. Social facts are defined as objective information about the world that can be discovered empirically and cannot be reduced to biological or psychological impulses, and should be analyzed by sociologists solely in relation to other social facts. This approach to social studies poses some problems. Brushing aside psychology as a tool for understanding the motivations for individual and collective action in favour of vaguer notions of agency may make sociology much easier in practice, but it elides a significant range of behaviours and emotions. More crucially, the emphasis on the diversity of cultural representations rather than the universality of the experiences they signify obscures the similarities in human expression that exist across cultures and time periods.

Utopian Beliefs and Moral Mission

If one rejects the hypothesis that culture is both enabled and constrained by evolutionary pressures, it becomes possible to assert that our potential as a species is without bounds. This belief is the heartbeat of countless social programs and movements, but it is also the root cause of much of the disappointment and jadedness social activists experience when the same social problems of inequality, discrimination,

oppression, and exploitation persist despite all their work and best intentions. Explanations that involve evolutionary psychology are often thought to naturalize the status quo and somehow excuse these ills. Naturalistic theory can be used to make claims about the inevitability of war, to support unjust distribution of resources, or to justify male infidelity, just to name a few sadly common examples.

Those who use those arguments are deriving morality from biology and are thus committing a well-known fallacy; we should all know by now that “is” does not imply “ought” (Hume 1739). However misguided, these interpretations of evolutionary biopsychology are the ones most often decried by critics like Eder and Ritter (1996), who provide an extensive critique of the implications of naturalistic theories. A proponent of the culturalist perspective, Eder argues that social scientists with naturalistic tendencies theorize the relationship between humans and non-human entities as one of domination, an eternal struggle between civilization and a cruel Mother Nature that must be tamed to ensure our continued survival. What he proposes instead is to view nature as something that is symbolically constructed, and to go beyond cognitive and normative accounts to define it as a cultural expression of our interdependence with our environment (p. 28-32). This social constructivist approach is an attractive proposition for sociologists, however it is also limiting, especially when studying a topic like food. External reality simply cannot be bracketed out or explained away as symbolic construction except in abstract theorizing. The biology of plant growth and animal reproduction can hardly be divorced from agricultural labour and husbandry practices, just as the food culture cannot be separated from the primal hunger that lies at its core.

That is not to say that social constructionism, the bedrock for great swathes of sociological literature, is a mistake. We cannot do otherwise but view culture as a construction of the human mind. What evolutionary thinking adds to constructionism is the nuance that, while humans unquestionably play a productive role in the creation and

evolution of social institutions, that creative potential is both enabled and constrained by our own evolution. Civilization and society are situated in the extended phenotype of the human species; we are built to construct social environments that reflect our needs and aspirations.

A culture-bearing species, one that like ours depends primarily on socially transmitted information pools for adaptation to local conditions, must also evolve mechanisms permitting and even requiring social construction—how else could individuals adjust to local reality, that is, to the different constructions of different cultural informational pools? Social construction is thus not an alternative to a biological account of human behavior; properly understood, it is a biological account, a major aspect of our evolved psychology. (Barkow 2006A, p. 25)

Critical Realism

Critiques of naturalism and the evolutionary perspective are valuable because they force us to temper our understanding of truth and reality, a task that science-minded folks –the ones cited here in any case – undertake with enthusiasm. It is because we take great care to nuance our position regarding objectivity, truth, reality, determination and all those thorny issues that discussions surrounding them can become so heated. There is nothing quite as frustrating as having to defend good ideas against mischaracterizations based on outdated conceptions of the goals and methods of science. We must be explicit about how scientific knowledge is produced, what purpose it serves, and above all else how fallible it is.

Bhaskar's critical realism, which radically departs from the positivistic tradition so roundly criticized by proponents of hermeneutics and constructionism, is a good place to start. Naturalism, he argues, has been shackled for too long to an overly rigid form of empiricism in the quest to extract immutable regularities from the apparent chaos of nature. Taken as such, it is no wonder social scientists have rejected nature, but the backlash was perhaps too hasty. Like Barkow, Bhaskar (1998) finds that the opposite

reaction, the retreat into human agency at the other extreme in the nature/society continuum, is equally unsatisfying because it is the mirror image of natural determinism (p. 20). Instead, he proposes a middle ground philosophy of science meant to salvage naturalism and realism from the wreckage of positivistic theorizing.

His philosophy falls under the rubric of realism because it assumes the existence of an external reality that is independent from human thought. He asserts this with a cleverly pragmatic tautology: "It is not necessary that science occurs. But given that it does, it is necessary that the world is a certain way. It is contingent that the world is such that science is possible." (cited in Carolan, p. 397). This echoes Barkow's assertion that the scientific discourse makes sense because it is easily understood and provides a foundation for producing more knowledge. If knowledge is produced that describes an external reality, therefore we must assume this reality exists. Attempting to determine whether or not anything is real independent of our observations is an interesting but ultimately irrelevant mental exercise.

Social phenomenon both belong in and emerge from this reality. While society cannot be fully separated from its surrounding context, it also cannot be reduced to foundational claims. In contrast to Mesoudi et al., Bhaskar readily accepts the inapplicability of positivist prescriptions in social studies:

Because social objects are irreducible to (and really emergent from) natural objects, and so possess qualitatively different features from them, they cannot be studied in the same way as them, they can still be studied 'scientifically'. Indeed, it is only because social objects possess such a 'non-natural surplus' (as it were), differentiating them from purely natural ones, that it makes sense to suppose that they can be studied scientifically, as social objects, at all. (Bhaskar 1998, p. 20-21)

Bhaskar's philosophy is critical in the sense that it does not assume absolute correspondence between descriptions of the world and its real attributes. Science does seek to provide descriptions that are as accurate as humanly possible, but to conflate reality with our claims about it, in other words to reduce ontology to epistemology, is the classic epistemic fallacy. As a form of knowledge production, science must above all be fallible. It must embrace the critical process and be open to radical overhaul when warranted. Fallibility is what separates Bhaskar's realism from the traditional Enlightenment ideals about science, but also from "superidealistic" postmodern hermeneutics according to which all knowledge claims are pure social constructs of equal philosophical validity. While such constructionist positions may at first glance appear to provide strong counter-arguments to the positivist quest for rigid laws, as we have seen with Eder (1996) they do so by imposing their own universal, infallible constraint and by bracketing a reality that can only be ignored in theory. In his interpretation of Bhaskar's philosophy of science, Carolan (2005) summarizes the problem with absolute constructionism by taking the position to its most absurd extreme:

(If there is no biological substratum lending experiential force to either pleasure or pain, then pleasure and pain become mere discursive constructions—on further discursive constructions all the way down—whose existence could be reduced through either discursive denial or discursive reconstruction. (p. 410)

Social Ecology

Part of the reason why naturalism has been all but abandoned by sociologists in favour of more fluid and more anthropocentric models might be, for lack of a better word, idealistic. While I personally have been moved by the writings I have cited thus far, I cannot deny that the third person perspective in scientific thinking requires a certain detachment. That attitude can turn off some readers, particularly those who turn to social sciences to find support for a cause they hold dear. As we have seen previously, the

fact that scientific discourse has historically been misused by vile individuals to justify atrocities is a strong deterrent, but the ideas themselves are not to blame for their failure to inspire social progress. There is a growing literature approaching evolutionary social theory from Marxist, libertarian, feminist, queer, culturally diverse, and socially conscious perspectives. If Darwin's work can be twisted to justify horrific abuses and genocide, could it not also be put into service to promote cooperation, justice and tolerance? What would that look like?

Perhaps something like the project formulated by Murray Bookchin (1990). If naturalists are often called to task for justifying the status quo, the same cannot be said of this anti-capitalist anarchist-turned-ecolibertarian. Bookchin deploys evolutionary theory in support of progressive, ultra-Leftist ideals of intercultural cooperation, a sense of stewardship for the diversity of the natural world, and more humane and human-scale economic and political structures. His social ecology philosophy is founded on what he calls dialectical naturalism. He opens *The Ecology of Freedom* with the Big Question: "What is humanity's place in natural evolution?" (Bookchin 2005, p. 21) Like the authors previously mentioned, Bookchin locates society in the extended phenotype of the human species, as an organizing principle that is rooted in and emergent from natural processes, enabled and constrained by evolutionary pressures.

This does not mean that he has to dispense with human agency. Dialectical naturalism is all about interactions and potentiality, not deterministic regularities. Bookchin's view of evolution is not passive, but participatory; humans (and other living things, to different degrees) are not machines shaped and propelled by natural pressures, but rather active agents engaging in creative and productive interrelations with their environment. Not only is human agency a factor, it is squarely to blame for the multiple ecological crises we are currently facing. For Bookchin, environmental issues stem from an ideology of dominance over nature, which itself can be traced to the domination of

humans over other humans. We paint nature red in tooth and claw to justify the hierarchies we construct among ourselves:

For social ecologists, our environmental dislocations are deeply rooted in an irrational, anti-ecological society, a society whose basic problems are irremediable by piecemeal, single-issue reforms. I tried to point out that these problems originate in a hierarchal, class, and today competitive capitalist system that nourishes a view of the natural world as a mere agglomeration of “resources” for human production and consumption. This social system is especially rapacious. It has projected the domination of human by human into an ideology that “man” is destined to dominate “Nature”. (Bookchin 2005, p. 16)

Bookchin is very much opposed to easy monism, whether it takes the form of a hermeneutic ouroboros, *uber*-positivistic scientism or the mystical sense of planetary oneness often associated with the environmentalist movement. He cautions against equating the statements “We are of nature” with “All nature is one.” Environmentalists tend to romanticize the insignificance of our place in nature, often pushing the sentiment to its extreme to claim that the Earth would be better off if we should return to our Pleistocene preliterate state, or even go extinct. Bookchin rejects this strand of ecological thinking, pointing out that what makes us a danger to the environment is also what justifies our existence. Humans occupy a special place in the world by virtue of our advanced cognitive abilities. For better or for worse, he argues, we are the sole ethical agent on the planet.

As the embodiment of value, indeed as the very source of value, a human life can no more be placed on a par with the life of a grizzly bear or a wolf than the lives of those admirable animals can be placed on a par with the existence of an inorganic entity like a rock. For with the disappearance of human beings, value too would disappear, and the biosphere would be left with no basis for any ethical evaluation or discussion of “intrinsic worth,” much less ethical agents who can appreciate its wondrous qualities. (Bookchin 2005, p. 40)

Bookchin disagrees with the conventional environmentalist thinking that we should seek to minimize our impact on the world. To begin with, it is unlikely that the noble savage state of harmony with nature so romanticized ever existed. Preliterate societies had a hand in the elimination of many species, including all land megafauna, and they radically redesigned their environment through controlled forest fires and grasslands engineering. We have always been an intrusive presence, has have all successful living species. Natural evolution has shaped us into something quite unique, however, a species possessed with the capacity to create ethical rules and assign worth to other forms of life. This is what puts us in a position to either exploit or exercise responsible stewardship over the Earth's resources.

The problem is that our capacity to modify the environment has advanced to the point where we are less and less in control of consequences. The solution is not to look back, but to reform our relationship with nature to ensure we use technology responsibly. This task must begin with radical changes in social organization. The superiority of our abilities does not entitle us to a place at the top of a hierarchy, nor does it justify dominance over other beings, human or not. The main goal of social ecology is to dismantle the interpretations of naturalism that prop up the capitalist system or any other forms of hierarchies, and to instead develop an ethic of common stewardship. The role of the fragmentation of nature in capitalism and the importance of a more holistic reconceptualization will be discussed in greater details in the next sections. The important point here is that Bookchin's dialectical naturalism bends evolutionary thinking to revolutionary purposes and gives us a vantage point to critique the way in which "the most pernicious laws of the marketplace are given precedence over the most compelling laws of biology" (Bookchin 1990, p. 45). Bookchin's goals are emancipatory, even utopian: to imagine new forms of social and political organization that are better suited to our development and happiness and to the long-term health of the planet.

Defining Nature

So far, I hope to have established the importance of studying topics like food with an eye towards natural as well as social factors. I proposed vertical integration as a potential way to achieve multidisciplinary without collapsing disciplinary boundaries, and suggested that the evolutionary framework might be a useful unifying thread. I reviewed some of the more common objections to this form of naturalism and presented critical realism as a way to clarify the place of science in social sciences. Finally, I showed what it might look like when evolutionary theory is turned into praxis. Observant readers have no doubt noticed that I have been using and abusing the terms “nature” and “culture” without any formal definition. Situating those two poles is the last piece that remains in this puzzling framework before we can move on to talking about food.

One of the main problems with Bookchin is his unsatisfying definition of nature. He acknowledges that it is a slippery concept and a source of much confusion. Nature resists a simple definition and is often simplified into very narrow concepts, like wilderness, that equate “natural” with lack of human influence. However, in trying to avoid the simplistic monism and mystical “Oneness” so common in the type of environmentalist discourse he loathes, Bookchin insists on a strict delineation between “first nature”, that which is untouched by humans, and anthropogenic “second nature,” the environment that we modify or create for our own purposes. It is a neat dialectical model, but it does not offer any new categories. Humans remain on one side, nature on the other, and we are left without a standpoint to discuss what is in between. If we want to recenter nature in the social sciences without falling into the traps of reduction and oversimplification, we need a flexible definition that leaves ample space to talk about the interactions of humans with their environment without separating the two completely. Bookchin has the right goals, but his model too easily slips into the hierarchies he wants to avoid.

Defining nature is not as simple as sorting the human from the non-human. The natural world includes what we think of as wilderness, of course, along with “natural laws” like gravity and inertia, but it also includes all kinds of interactions and processes that are all tangled into human affairs. The problem with Bookchin’s first/second nature model, which he readily acknowledges, is that there is no real First Nature to be found anymore, nowhere that has been unspoiled by human influence. It is not even clear if such a natural state even existed since we climbed down from the trees. The most obvious illustration of this is anthropogenic climate change, a phenomenon that impacts even the most remote regions of the globe. Perhaps less obviously, nature has always been shaped by the discourses we weave about and around it. Conservation areas, for example, might be strenuously protected from human actions, but they are affected by the policies and practices that designate them as sites worthy of protection. Just as society cannot pretend to bracket itself from its environment, the natural world cannot be entirely removed from the sphere of human influence.

We need a definition of nature that can help us account for all its biophysical and discursive dimensions. In this task, the work of Bruno Latour provides valuable insight. Like the authors previously cited, Latour (1991) believes that the gulf that divides the natural and the cultural in theory is an artificial creation of the modernist project. Social scientists, he says, have staked three turfs in which to take a critical stand: naturalization, socialization and deconstruction (p. 5). From those mutually exclusive standpoints, we weave explanations together with critical barbs aimed at the weaknesses of the other two perspectives.

When the first speaks of naturalized phenomena, then societies, subjects, and all forms of discourse vanish. When the second speaks of fields of power, then science, technology, texts, and the contents of activities disappear. When the third speaks of truth effects, then to believe in the real existence of brain neurons or power plays would betray enormous naiveté. Each of these forms of criticism is powerful in itself but impossible to combine with the other two. (Latour 1991, p. 6)

This division of knowledge into three distinct jurisdictions is set out in what he calls the Modern Constitution, the understandings that underlie the practice of social sciences. Its main tenets are that nature and society are at once transcendent and immanent, absolutely irreconcilable, and that the task of describing their particularities (purification) should not be confused with the creation of hybrid object-subjects for the purpose of explanation (translation). Latour asserts that despite our adoption of the Modern Constitution, we have never truly been modern because we have never been able to fully separate the world into its constituent pieces. All along, modernity has been nothing but an artifice, the illusion of linear progress. No matter which faction scholars pledge our allegiance to, objects are never purely natural, social, or discursive. The world is made of hybrids, neither objects nor subjects, always “real as Nature, narrated as Discourse, collective as Society, existential as Being.” (Latour 1991, p. 90)

Latour does not consider himself a postmodern; if there was no modernity to begin with, there is nothing to be post about, nothing but “disconnected instants and groundless denunciations” (p. 46) that arise out of our unease with the artificial divisions of modernism but finds nothing to latch onto instead. The solution is obvious: radically transform the Modern Constitution to eliminate the dual poles of Society and Nature, and instead focus all our energy on that proliferation of interesting hybrid objects/subjects that populate the in-between. He evokes the image of two great continents, Culture and Nature, formed out of the same cooled essence, endlessly grinding against each other and shaping new landscapes. Our work is to plunge into the

rift between tectonic plates, to witness the eruption of that stuff the world is made of, to track its effects on the topography, and to predict coming shockwaves.

Latour has had a marked influence on the field of philosophy and sociology of science, but his prose is not the most accessible, and consequently he is often misunderstood and lumped in with postmodern “debunkers of science” and old-school social constructionists. The logic models he provides (see Fig. 2 below) appear deceptively simple but don’t readily translate into concrete issues. For that, we can turn to Carolan, who provides a logic model of nature (see Fig. 3) that can be useful to untangle the complex interactions between biophysical and socio-cultural processes. His work follows the basic premise of Bhaskar’s naturalism, the emergence of phenomena both natural and social from more basic phenomenal forms. Carolan’s framework allows for distinctions to be made between social and bio-physical processes while leaving ample room for emergence and interaction effects, or the Latourian hybrids quasi-subjects/objects that make up the bulk of our reality.

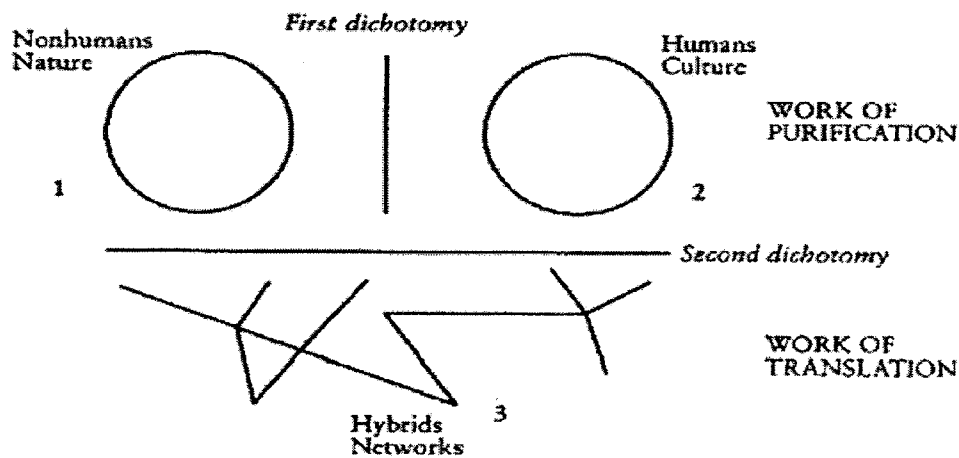
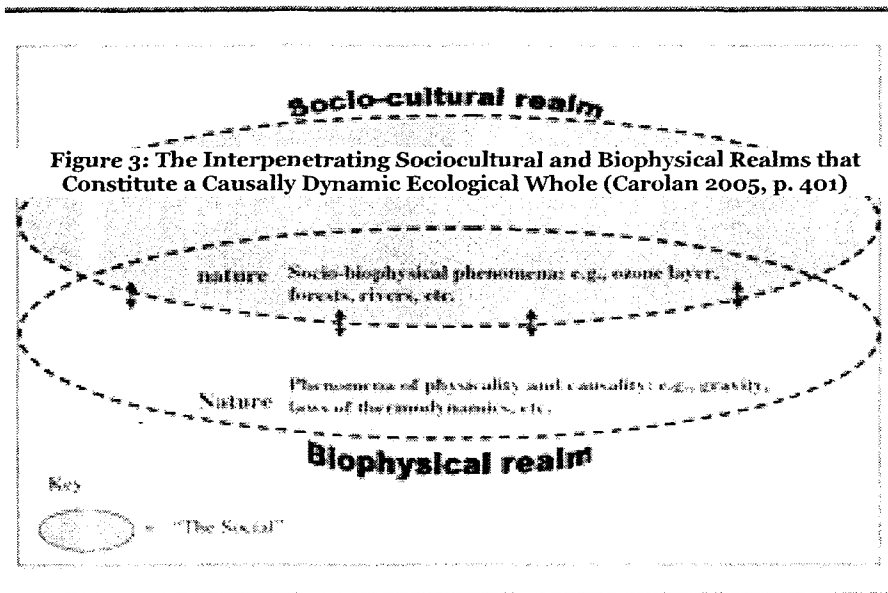


Figure 2: Purification and Translation (Latour 1990, p. 11)



Carolan (2005) asserts that the only way nature can be bracketed out of social processes is if it is conceived of as a constant, an inert ‘out there’ that we act upon. He suggests instead that we think of deep natural structures as existing in a state of “permanence-with-flux”. This model counters reductionist arguments by allocating a space for dynamic indeterminacy; it allows us to talk about reality (“being”), but also processes of “becoming” (Carolan 2005, p. 397). His stratification of the natural world reflects the importance of emergence and rootedness and proves useful in untangling the various levels of analysis that must be accounted for when we speak of nature. It does not simply delineate nature from non-nature, but rather fans out the natural into three interconnected realities: *Nature*, the bioorganic level of physical regularities, of laws and causality; *nature*, the socio-cultural realm socially constructed, the sphere where the natural gets deployed through “games of truth” and “relations of power”; and *nature*, the sphere that should be of most interest to sociologists, where the biophysical and the socio-cultural collide with observable effects on both sides (Carolan 2005, p. 401-407).

These three spheres are not distinct realities but intersecting realms linked by processes of mutual causality. Interactions between the social and the biophysical occur at each stratum, however they vary in degree and significance, hence the need for classification. The author does not question the fact that the natural world can be subdivided into an infinite number of gradual stratus, but as he pragmatically puts it, for the purposes of social theorizing “the three levels serve us well.” (Carolan 2005, p. 410). He then goes on to highlight a few interesting applications of this theoretical understanding of nature in epidemiology, geology and Marxist theory, demonstrating the potential of this approach to further our understanding of human/nature relations and to spur new research, especially on environmental issues.

Assembling the Puzzle

Throughout this section, I have highlighted a few concepts that I believe may help us reconcile sociological understandings with complementary knowledge produced in other disciplines. As we have seen, many theorists have appealed for further integration of social and natural sciences but found resistance in a discipline that claims to study social and cultural phenomenon in isolation from the natural world. Taking the best bits from Barkow, Bhaskar, Bookchin and Latour, I argue for the usefulness of a theoretical framework that:

- Allows for the integration of compatible knowledge from different disciplines;
- Accepts evolutionary theory as a way to apprehend human agency, and culture as an emergent property of human mind;
- Takes a pragmatic stance regarding the existence of material reality;
- Casts a critical eye on scientific discourse and embraces its fallibility;
- Focuses on interaction, processes and emergence rather than laws, dualities and fixed states;
- Situates human society in a complementary, non-hierarchical relation within the “unity of differences” that is nature;
- Does not collapse the different meanings of Nature, “nature” and nature, but locates all things in the hybrid space between the poles of Nature and Society.

I believe that the nuanced form of naturalism espoused by Bhaskar and articulated by Carolan coupled with Barkow's test of theoretical compatibility and Bookchin's radical attitude give me a strong platform to explore the contemporary literature on food production and consumption, to improve on critiques of the capitalist food chain, and to begin to imagine viable long-term alternatives. This section has admittedly been dense in theoretical and abstract concepts, and the best way I know to prove their usefulness is to apply them to real concrete issues. In the next section, I will peel back some of the layers of alienation that characterize the agricultural landscape in the industrial mode of production using interpretations of Marxist theory from geographers and environmental scientists. I will then pursue those arguments about the commodification of nature deeper into the realm of culture by highlighting some significant interactions of human nature and social engineering in the modern North American food culture. Using the sociobiological work of Fischler and Debord's situationist take on spectacular media, my goal is to show how the disconnection between nature and culture is cultivated, manipulated and exploited to benefit the dominant capitalist/industrial mode of production in the food culture as in agriculture. In light of this analysis, I will finally take a look at some emerging social movements that promote alternative food systems to evaluate how they address the nature/culture rift to reconcile eaters in their dual roles as producers and consumers.

SECTION II: MARX AND THE PRODUCTION OF NATURAL FOOD

In the 19th century, British agriculture was in a crisis. The Industrial Revolution was accompanied by a revolution in agriculture; technological advances and radical changes in methods and mindset concerning things like crop rotation, animal husbandry, and soil chemistry enabled the subjection of natural processes to the demands of the capitalist mode of production. However, the rapid increase in productivity outpaced the ability of the soil to regenerate. The crisis in Britain was a precursor to the great Dust Bowl that would devastate the American plains in the 1930s. As they observed the fallout, Marx and his contemporaries made some astute observations linking soil depletion to the commodification of nature. The passages of *Capital* that describe the state of agriculture at the turn of the Industrial Revolution are not as widely read in sociology. They come at the end of Volume I, after all the exciting stuff on use and surplus value, labour relations and commodity fetishism, and too often glossed over as interesting but largely irrelevant historical footnotes. To learn more on what Marx had to say about the relation between society and nature, we have to turn to theorists in other disciplines who have developed those passages in ways that relate directly to modern agricultural practices.

In this section, I will provide an overview of two important concepts introduced by Marx and elaborated by geographers and environmental scientists to explain the inner workings of the modern agricultural machine. First, I will review the processes through which a natural entity becomes a commodity. I will then show how environmental crises can be seen as the result of failed attempts to bend the natural world to the rationality of the market. The concept of sustainability will be explored through the metaphor of the metabolic rift. Where Marx used soil depletion as a launching point to discuss these theoretical issues, I chose a more contemporary bogeyman: extensive corn monoculture. The corn industry has come under heavy fire in

recent years and the practices I describe in this section have been well documented. My hope is that the reader's familiarity with the context will make the relevance of commodification processes and the metabolic rift obvious before I venture in more novel territory in the last sections.

Commodification

How does nature become a commodity? The term commodification has taken on a multiplicity of meanings both in academic and in popular anti-capitalist discourse, but at first glance the definition appears straightforward: a thing has been commodified when it conforms to the requirements of the marketplace, when it becomes a product that can be bought and sold. Through a sort of capitalist alchemy, objects are atomized, standardized, made to fit the rationality of the system. The definition serves us well if we are talking about plastic widgets that can be mass-manufactured and distributed through regular commercial channels, but it quickly becomes muddier when we talk about soil, plants and animals. Critical geographer and green Marxist Noel Castree (2003B), who has spent his career writing about the political economy of environmental change and the limits of commodification, proposes a much more complex definition. He breaks commodification down into six processes: privatization, alienability, individuation, abstraction, valuation and displacement. There is some semantic overlap in his model, and certainly not all features need to be present for something to be a commodity, but fanning out the concept in this way highlights the different levels of separation between the land, the producer and the consumer and, more importantly, it hints at spaces where nature resists full absorption into the capitalist mode of production. I will now review each of these processes as they come in play in the context of industrial corn production in the United States.

First, a bit of historical context so we can understand how the industry got to where it is now. Until the mid-1980s, US agricultural policies were aimed principally at maintaining market stability through price and supply management instruments. Each year, the Secretary of Agriculture determined how much of the fertile land available should be exploited and asked farmers to let a few acres lay fallow in order to limit the supply of commodity grain. The set-aside program was by all measures successful. It stabilized prices, encouraged crop rotation and diversification, and limited some of the environmental consequences associated with monoculture and extensive production (Ray, Ugarte and Tiller 2003, p. 21)

Ray and Schaffer (2005) identify two watershed events that moved US agricultural policy away from a supply management mindset towards expanded production. First, in the late 60s, the US government liquidated public grain stocks and exported massive quantities of wheat to Russia. Earl Butz, Nixon's Secretary of Agriculture, convinced everyone that the international hunger for grain would only increase and instructed American farmers to plant "from fencerow to fencerow" (as cited in Pollan 2006, p. 52) so that they would be ready to meet the demand. This meant abandoning the set-aside program and diversified livestock-based agricultural methods in favour of extensive corn, wheat and soybean monocultures. The ensuing flood of grain turned the boom to bust. As prices plunged, farmers were forced to plant even more just to break even. They had reached a point of no return; after investing in expensive machinery and making their soils dependent on chemical inputs, going back to the old way of farming was no longer a rational economic decision.

The government intervened with the 1985 Farm Bill designed to maintain a high rate of production to keep prices down and stimulate international demand. The bill provided for government payments to compensate for the lower sale value of commodity crops. The 1996 iteration of the Farm Bill removed even more of the regulations limiting

production, favouring a “free market” approach and keeping prices low by buoying suppliers with subsidy payments. The ultimate goal was to increase US competitiveness on export markets. Despite criticism of the program, the 2002 Farm Bill continued much in the same vein. As a result of these policies, the agricultural landscape has been radically transformed. Family farms growing a variety of crops and animals have all but disappeared, to be replaced by consolidated specialized farming operations. Farmers are paid by the bushel regardless of demand, which makes overproduction almost mandatory. The land itself has been reshaped to accommodate farming equipment designed for large-scale operations. To maintain high yields season after season, exhausted soils depend on chemical inputs, which are sold in entire lines of agricultural “solutions” that include fertilizers, pesticides, and proprietary patented seeds bred to resist the chemical onslaught.

Now, let us look at the evolution of US agricultural policy and the changes in corn production methods in light of Castree’s commodifying processes.

Privatization and Valuation

Privatization refers to the attribution of a title that guarantees an owner rights to an object. Valuation is the assignation of a commercial value based on some form of exchange currency. In the simplest terms, commodities are things that can be owned, bought and sold for money. An ear of corn is a commodity when it is assigned a value based on supply and demand and exchanged from one owner to the other. Of course, nothing is that simple outside of Intro to Economics models. The turn to industrial agriculture has significantly changed the composition of property interests. Since the 1950s, the number of individual farms has gone from 5.5 million to 2 million, but the acreage per farm has more than doubled (Ray, Ugarte and Tiller 2003, p. 10). In an environment characterized by financial precariousness, independent family-owned farms cannot survive, nor are they needed: advances in machinery mean that more acres

can be exploited more efficiently using less labour. The small farms that remain often subsist on external sources of income like second jobs or renting land and buildings to third-party livestock companies (Ray and Schaffer, p. 3). Ownership of the land, the seeds and the harvested corn is fragmented among different interests through multiple layers of patents, rents and contracts.

Ownership of seeds is a contentious issue. The genetic material contained in seeds is a form of intellectual property that can be patented and receive legal protection. Monsanto, the world's leading seed patent-holder, engineered a corn hybrid with built-in resistance to RoundUp, its flagship herbicide. The company imposes severe limitations on the property rights attached to their creation. Farmers who buy Monsanto seeds must attest they will not share seeds or save them for future harvests, and any breach exposes farmers to lawsuits and bankruptcy. Because Monsanto seeds belong to a line of products engineered to conform to large-scale production methods, most farmers do not have the luxury of choice. Roundup-ready seeds now make up 70% of the corn grown in the United States (Neuman and Pollack 2010).

As we have seen, the value of corn is determined not by supply and demand but by a baroque system of deals and subsidies that dates back to the Nixon administration. The policy mindset that has prevailed since Earl Butz has driven the price of corn well below what it costs to produce. Losses are shifted onto taxpayers through so-called "emergency payments" that commodity crop producers have been receiving every year since the early 1990s. Subsidies now reach \$20 billion each year, and often represent over half of a farmer's income (Ray, Ugarte and Tiller 2003, p. 8). Producers are kept on a treadmill; they must continue to produce as much as the soil will bear at a razor-thin margin or risk losing the government hand-outs that keep them afloat. They cannot afford to switch back to more sustainably diversified – but unsubsidized – forms of agriculture. With their income entirely dependent on the number of bushels harvested,

farmers have no incentive to limit production, ensuring that the supply remains high and prices very, very low. On the other hand, the resulting glut of grain has been a boon to the people who supply the inputs that make over-production possible (seed, fertilizer and pesticide vendors like Monsanto) and those who transform the cheap grain (livestock feedlots, biofuel producers, processed food companies). The current system for the privatization and valuation of corn was built in such a way that corporations benefit at the expense of farmers and taxpayers.

Alienability and Individuation

On to the next pair of commodifying processes. Alienation refers to “the capacity of a given commodity, and specific classes of commodities, to be physically and morally separated from their sellers.” (Castree 2003B, p. 7), while individuation is “the representational and physical act of separating a specific thing or entity from its supporting context.” (Castree 2003B, p. 8) Both processes thus refer to a different form of separation between the product and the context of its production. As we saw, a horde of middle-men now stand between the farmer and the consumer with their hand out; the seed and input companies and the industries that buy and transform corn are the agents that put those two commodifying processes in action.

The separation between the farmer and his corn begins with the seed. The restrictions Monsanto puts on the use of seeds limit the extent of property rights, but they also disrupt an important relationship between the farmer, the plant and the soil. Traditionally, seeds were stored and saved for future harvests, each generation of corn selected to be better adapted to the soil where it originated and where its descendents would also be planted. Farmers could chart this evolution and influence its course by selecting seeds from the best plants in function of their specific soil conditions. This required an intimate understanding of the land, weather patterns, insect and wildlife, and farmers had to be attuned to the particular ecology of their farm. Under patented

seed contracts, that long-term relationship between soil, plant and farmer cannot blossom. Rather, the transaction between the farmer and the corn lasts only from planting to harvest. The seed is not adapted to the specificities of its immediate environment, but to the mode of production that most benefits its parent corporation.

The separation between the corn and the farmer is not only physical but, as Castree notes, moral as well. Once harvested, corn is delivered to gigantic silos to join harvests from hundreds of other farms. It is impossible to trace the provenance of a single ear of corn back to its original field. The incoming corn is inspected on arrival, but should a problem arise after that – contamination, for example – the responsibility cannot be assigned to the producer. Different plants or animal products have more or less stringent inspection regulations, but as we have seen with the many recent product recalls due to *E. coli* contamination, the buck often stops at the distributor rather than the producer originally responsible for the introduction of the bacteria. While traceability has become a priority for the USFDA and many other regulatory agencies around the world in recent years in light of food recalls and the Mad Cow Disease scare, the system by which agricultural products are commercialized relies on individuation. Therefore, the responsibility for protecting consumers has been shifted from the industry to individual eaters. We are warned over and over to cook meat to bacteria-killing temperatures and thoroughly scrub produce because the industry is not built for safety.

Abstraction and Displacement

Questions of food safety lead us into the last pair of commodification processes: abstraction and displacement. Abstraction is, in Castree's words, "a process whereby the qualitative specificity of any individualized thing (a person, a seed, a gene or what have you) is assimilated to the qualitative homogeneity of a broader type or process." (Castree 2003B, p. 9) When the ear of corn joins millions of others into the grain silos, it loses its specificity and takes on the attributes of the mass. It is further abstracted as it is sorted

into grades and ceases to be Old MacDonald's corn to become No. 1-5 corn fit to be shipped abroad or fed to beef or transformed into all manners of processed foods based on that label.

Displacement of course refers to transportation, the ability to take the corn away from the field, to store it and transport it easily across vast distances. Sometimes, geographic displacement defies all logic but capitalist logic. The United States imports many products (meat, grains, flowers and horticultural products) that are already produced for export on its own soil (Hanrahan 2006). Displacement is not only a question of distance, but also involves the temporal space between the producer and the consumer, the number of steps between the farm and the plate. Consumers nowadays almost never come into contact with the farmers who produce the corn they eat, or even the army of middle-men at each step of production. In fact, the consumer is often unaware that he or she is eating corn in the first place. Commodity corn is produced so plentifully that creative outlets had to be created for the flood of cheap grain. People can only eat so much cornbread, an inherent limitation the industry calls "the fixed stomach problem" (see Roberts 2008, pp. 58-109).

Much of the flow is directed to livestock, but cows are grass grazers by nature, not corn-eaters. The change in their diet from grass pastures to feedlots made large-scale meat production possible, but it came at a high cost to the welfare of the animals. Steers taken to Confined Area Feedlot Operations are fattened quickly before slaughter with a diet of corn by-products, but their stomachs are not designed to efficiently break grain down, and they become prone to liver abscesses and "feedlot bloat", a build-up of lactic acid that can lead the animal to suffocate on its own gases. For approximately 150 days, about all their digestive system can stand, beef steers are fed between 30 and 40 pounds of grain a day, which they metabolize into muscle marbled with much-prized veins of fat (Singer and Mason 2006, pp. 61-62). In *The Omnivore Dilemma*, Michael Pollan (2006)

estimates the corn content of a burger using a ratio of 7 pounds of grain for half a pound of edible meat. His calculations are confirmed by a mass spectrometer analysis that finds that a cheeseburger is in fact composed of 56% corn atoms (pp. 116-117).

Meat is not the only way we consume hidden corn. Nutrition science has managed to break the grain into its minute components and recombine them into an astounding range of products. Many of the ingredients that show up in processed foods, like citric acid, glucose, fructose, maltro- and all other dextrins, monosodium glutamate (MSG), and all manners of derived starches are corn by-products. The most infamous at the moment, high-fructose corn syrup (HFCS), is found in virtually everything on the supermarket shelf. Pollan (2006) found that over 530 million bushels of corn are converted each year into 17.5 billion pounds of HFCS, which replace sugar in almost every processed product (p. 103-104). They are found in soft drinks and sweet snacks, but also in more surprising places like breads, cereals, hams and other processed meats, and prepared meals. Achieved through feats of abstraction and displacement, the omnipresence of HFCS represents the triumph of corn producers over fixed stomachs.

Produced Nature as a Fictitious Commodity

The industry has proven itself very effective in turning corn into a commodity, but many question the extent to which nature can truly be commodified. These are not simply normative objections. It is not that Nature should not be exploited for profit, although that certainly is a common ethical argument. What Castree and others assert is that nature actively resists the processes of commodification via constraints both internal (dictated by the Nature of nature) and external (effected by the actions of social institutions).

As a label for nature that has been partially commodified, Castree chose “produced nature”, an expression he borrowed from Neil Smith’s (1998) theory of nature–capitalism relations. The concept corresponds very closely to that middle strata

in Carolan's model of Nature/nature/"nature", it is the natural space where society's influence is felt and observed. Produced nature is not nature that is spoiled by humans, nor is it entirely under human control. The relationship is much more fluid, the social and the natural realm interacting in mutually productive ways. Castree's definition hints at spaces where nature resists the processes of commodification. Nature, he says, has "a materiality that escapes social control and whose unanticipated effects are internal to – and, indeed, alter—the capital-nature nexus" (Castree 2002, p. 20). It does not make sense to think of farmland as "first nature" in Bookchin's sense, but it is equally absurd to claim that capitalism determines every aspect of its existence. The production of nature refers to the ways in which natural objects are brought into labour processes, it is a nuanced version of commodification that accounts for the impossibility of entirely controlling natural processes.

To elaborate on this idea of resistance in more economic terms, we can turn to the concept of fictitious commodities developed by Polanyi (1944/2001). Fictitious commodities are objects that have to be organized in markets, but cannot be fully commodified. Polanyi identifies three fictitious commodities: labour, money, and land.

In other words, according to the empirical definition of a commodity they are not commodities. Labor is only another name for a human activity which goes with life itself, which in its turn is not produced for sale but for entirely different reasons, nor can that activity be detached from the rest of life, be stored or mobilized; land is only another name for nature, which is not produced by man; actual money, finally, is merely a token of purchasing power which, as rule, is not produced at all, but comes into being through the mechanism of banking or state finance. (Polanyi 1944/2001, p. 75-76)

So-called "unfettered" markets are organized as though money, labour and land can be bought and sold, based on the fallacy that society and the market operate in different spheres. However, because economic and political life cannot be separated, regulations have to be put in place to protect the social order against the worst abuses of

capitalism. Those abuses and the regulations meant to counter them always articulate around the three fictitious commodities. Laws and regulations direct the flow of money to, in theory, put the brakes on reckless financial speculation and control the cycle of bubbles and recessions. Workers are protected from discrimination and exploitation through laws and charters that impose limits on the commodification of labour. Finally, conservation and environmental protection policies regulate the exploitation of natural resources. The effectiveness of the social institutions responsible for implementing those protection measures is open for debate; what is interesting is that those objects - land, labour and money - are deemed worthy of protection in the first place.

What is it exactly that sets land, or nature, apart from other commodities? Which part of it benefits from special protection? Mancus (2007) hints at the answer when he says that “[t]o reduce bioregeneration to the status of a commodity is a theoretical fiction that conflates nature with a thing that can be bought and sold” (p. 16). As we have seen, capitalism is designed to handle commodities, discrete units of matter that can be separated from the context of their production, owned, bought and sold. Nature, on the other hand, operates through relationships, dynamic processes involving a diversity of agents. The capitalist machine can subsume farming one component at a time, the farmer's labour, the soil's composition, the genetic matter inside a seed, the transformation of the corn... What it cannot capture is the linkages between the soil, the plant, the farmer, the harvest. It can deal with pest control, but the books do not have columns for the balance of insects, microbes and fungi that underlie the farm ecosystem. Natural resistance to commodification is found in the spaces between the cogs.

Sociology of Flows

If we study nature and society as segregated entities, we subscribe to the same fiction as the economists and their unfettered market model. To understand the crisis of modern agriculture, we need a sociology that can account for relationality as well as

rationality, a fluid sociology. Something like the approach proposed by Oosterveer (2009), who studies environmental crises using flows as “the central units of analysis to establish the linkages between cause and effect.” (p. 34) While Oosterveer recognizes the importance of situating humans and nature in constant interaction, he is especially interested in how flows are managed – or squandered – by social institutions. His areas of interest are situated mainly on the social side of things, but his fluid perspective is really useful for understanding how nature asserts its own form of agency in the capitalist mode of production, especially when considered in tandem with the circulatory model proposed by Swyngedouw (2009) in the same book:

“Metabolism” and “circulation” embody what modernity has been and will always be about – that is, a series of interconnected heterogeneous (human and non-human) and dynamic, but contested and contestable, processes of continuous quantitative and qualitative transformations that rearrange humans and non-humans in new and often unexpected ways. (p. 62)

Once again, biology turns out to be a great source of metaphors and insight for the social sciences! The concept of circulation gives flows a purpose, a direction. Swyngedouw asks us to think of the city as the site where flows converge, a space designed specifically to facilitate the movement of material resources, people, and capital. In this perspective, the objective of urban design is not to create harmony between humans and nature, but to create a space for capitalism to operate and thrive. The metabolism of the city is adapted to the demands of the market, not the rhythm of nature.

The urbanization of nature led to a spiraling accumulation of unstable socio-natural assemblages; at the same time, the components of these assemblages became radically disassociated from their geographical origins as speed, movement and mobility – somewhat ironically – rendered the fields of vision and connections more opaque, transient, and partial. The city had turned into a metabolic vehicle, yet in the urban or modern imagination, the rift between nature and the social became deeper than ever. (Swyngedouw 2009, p. 71)

The same could be said of the rural landscape. Swyngedouw's writing echoes Marx's own musings on the metabolic relation between the city and the countryside, which we will explore next in order to link the processes of commodification with the all-important environmental question of sustainability.

The Metabolic Rift

The biological roots of the flows and metabolism models force us to think about human/nature relations in a more organic way, and the metaphor can easily be extended to include a dimension of health. After all, what is sustainability, if not the integrity and balance of flows within an ecosystem? As we saw, commodification operates through a series of artificial separations between the soil, the crop, the producer and the consumer. Complex flows are divided into chunks that fit the rationality of the market, but this causes disruptions in natural processes that can have serious consequences if they are not countered with appropriate protective measures. The concept of the metabolic rift can be used to theorize those disruptions and their consequences in the context of modern agriculture.

In the beginning of the section, I made a brief mention of the chapters in *Capital* that deal with the state of agriculture in the 19th century and the soil depletion crisis. Marx's observations were inspired by the work of Justus von Liebig, a German all-star scientist whose contributions to the field of organic chemistry include the invention of the bouillon cube and the discovery of the role of nitrogen in plant growth. Liebig posited

that the land was becoming barren because nutrients were channelled from soil to produce to the city, and never found their way back to renew the soil.

As he delicately put it:

In the large towns of England the produce both of English and foreign agriculture is largely consumed; elements of the soil indispensable to plants do not return to the fields, – contrivances resulting from the manners and customs of the English people, and peculiar to them, render it difficult, perhaps impossible, to collect the enormous quantity of phosphates which are daily, as solid and liquid excrements, carried into the river. (Liebig 1851, cited in Clark and Foster 2009, p. 9)

What Liebig was describing was a gross disruption in the natural flow of nutrients manifesting as losses in agricultural yield. Marx further developed this idea into the concept of the metabolic rift, which goes beyond questions of input and output to touch on the relations between nature and society, or in his words “to capture the material estrangement of human beings in capitalist society from the natural conditions of their existence.” (Foster 1999, p. 19) Marx’s observations on the soil depletion crisis echoed Liebig’s: the demands of industrial agriculture were not only exhausting the soil, they were ripping apart the constituent parts – land, labour and the interactions between them – that made renewal possible. This gulf followed the fault line of another division of special importance to Marx, the one between the city and the countryside. He was concerned with the manner in which labour was extracted along with natural resources and placed into new environments where it had to obey a different form of rationality that could not account for metabolic interactions. The capitalist city demands linear processes, while harmonious human/nature relations are more cyclical. One leads to waste, the other to renewal. The solution was obvious: bring feces back to the fields.

Industrial Metabolism

If Liebig’s theory on the role of nitrogen was right, all farmers had to do was to reintroduce that one crucial chemical element, nitrate, back in the soil. In the same year

Liebig made his discovery, Alexandre Cochet, a French scientist, found that nitrate could be extracted from bird and bat excrements (guano). Clark and Foster (2009) provide a succinct recap of the Peruvian guano trade and its repercussions on the environmental and political landscape:

This global metabolic rift involved the decline of soil fertility in Britain, the transfer of Chinese labor to Peru to work the guano islands, the export of natural fertilizer to core nations, the degradation of the Peruvian/Chilean environment, the creation of debt-laden economies, and the War of the Pacific as Chile (backed covertly by Britain) and Peru fought against each other to control resources desired by Britain. It also allowed Britain and other core powers to carry out an 'environmental overdraft' within their own countries by drawing imperialistically on natural resources from abroad. (Clark and Foster 2009, p. 4)

The same rationale that made massive imports of bonemeal and guano to 19th century farms necessary applies to today's superphosphates and Haber-Bosch inorganic nitrogenous fertilizers. Extensive corn monoculture has been judged and found unsustainable; let's briefly chart the flow of nutrients in modern agriculture and see why. Sustainability, as that term is used in environmental writings, is judged by how closely an industry replaces or mimics the interactions found in balanced ecosystems: how much waste is produced, what proportion is recycled, how much energy or fuel is used in the course of production... Modern fencerow-to-fencerow monoculture does not take into account the interplay of flora, fauna, climate and seasons that makes natural renewal possible; instead, it relies on external inputs. Nitrogen is, as Liebig discovered, the key element for soil fertility, but it cannot be utilized by living organisms until it is made reactive in a process called fixation. For centuries, agriculture depended on biological fixation, a slow conversion of nitrogen from decaying plants and animal waste by naturally-occurring microorganisms in the soil. The discovery of artificial fixation (also called the Haber-Bosch process) removed the constraint of time in the production of reactive nitrogen. This advance came at a cost that can be measured in barrels; the

production, transportation and application of nitrogenous fertilizers requires a staggering amount of fossil fuels.

This exposes another crevice in the modern metabolic rift: not only are nutrients consumed and wasted away from the site of production, but the production processes themselves involve massive waste. In terms of energy, if not currency, each calorie produced costs more in a capitalist industrial system than it would in traditional agriculture. Furthermore, because the energy consumed never finds its way back to the soil, ever increasing quantities of inputs are required to keep fertile land from turning to dust. The metabolic rift can never be bridged unless the flows of inputs and outputs can be realigned to better mimic the self-renewing balance of nature.

Ecological Imperialism: The Global Rift

Tracing the history of the fertilizer trade also brings to light how the rural/urban metabolic rift has been transposed on a global scale. On this topic, world-system analysis is a nice complement to Marx's ideas. The key to Wallerstein's (2004) perspective is the core-periphery division of production processes in the modern world-system (or, as it is more commonly known, the global economy). The division of industrial specializations between core, semi-peripheral and peripheral states is the mirror of their economic and political relations. To quickly recap Wallerstein's theory, core-like processes are those which operate under quasi-monopolies, as opposed to peripheral processes in which there is enormous competition. Finance is currently a core process, as are industries related to communications, pharmaceuticals and armament, heavily regulated commodities produced and sold by wealthier nations. Peripheral processes are industries which supposedly fuel the development of poorer nations: textiles, raw materials and food. The location of any given process in the core-periphery model can shift over time, of course, as can the position of any state in relation to another. The rapid growth of the tech industry in India is a perfect example of a production process shifting from a core to

a peripheral country; should India experience massive economic growth as a result, it may also be an example of a state shifting closer to the core. Peripheral processes tend to have higher associated costs, not only economically but socially and environmentally. The intense competition for markets in those industries only aggravate the situation by driving states to adopt very liberal regulations that allow core countries to accumulate capital while the periphery suffers the social and environmental consequences. Surplus value, like raw materials, flows from the periphery to the core.

The link between the core-periphery model and the urban/rural metabolic rift is quite evident. In the name of economic development, countries in the Third World are exhausting their soils growing cash crops, coffee, cocoa and exotic fruits for export while their own populations starve (FAO 2008C). Worse, the matter and energy that goes into producing these crops is also lost to the core, it never returns to renew the original soil. The more recent incarnations of the Farm Bill mentioned earlier play an important role in maintaining the position of the United States in the core-periphery hierarchy when it comes to commodity crops. The subsidies provided to corn producers by the US government allow them to sell their harvest below production cost, which promotes overproduction. A significant portion of the grain produced is exported, since cheap prices make the US very competitive on the commodity crop market. This dumping of cheap grain creates an unfair marketplace and has a direct impact on peripheral states (Ray, Ugarte and Tiller 2003, pp. 24-32). Countries which cannot afford to subsidize farmers cannot compete on the corn market. In fact, it makes more financial sense for them to abandon staple crops like wheat, corn and soy entirely, to import them from the US and free fertile land for profitable export crops. From this example, we see how capitalist agriculture is unsustainable on a planetary scale. The market system has expanded the metabolic rift beyond the rural/urban divide; it now rips renewing life force away from periphery countries to profit core nations.

Domination of Humans, Natures and Human Nature

In *The Ecology of Freedom*, Bookchin asks:

Does our “disembeddedness” from nature, our “ascent to civilization”, and our human fulfillment involve a penalty – the domination of human by human as a precondition for the domination of nature by humanity – that may well turn the “success” of this historic project into a grim mockery by yielding the dehumanization of humanity and the immolation of society? (Bookchin 2005, p. 134)

When he was developing the philosophy of social ecology, his concern was very much with hierarchies and patterns of power. Conventionally, the relationship between humans and nature is viewed as one of domination: Nature is out to get us, scarce, unpredictable and unforgiving, red in tooth and claw. The burden of civilization is to overcome, to tame, to kill or be killed. This ideological opposition between humans and their environment serves to justify the domination of humans by other humans. Labour has to be exploited for the land to give up its wealth, which we can then accumulate as a testimony of our fitness to survive. Bookchin flips that conventional thinking on its head when he suggests that human hierarchies predate the invention of the cruel Mother Nature figure. Dynamics that began with practical divisions of tasks along age lines, then gender, then class, were transposed into our relationship with nature as we shifted from hunting and gathering to a sedentary culture-based lifestyle, and remain with us now in the global agricultural landscape. The processes of commodification I reviewed help us understand how that transposition happens, how the natural world is made to fit the kind of hierarchies that made endless accumulation possible. I also showed that nature pushes back. The fluidity of the relations that make nature what it is cannot be encompassed in social hierarchies, and it resists those separations capitalism attempts to impose. However, that resistance is most often manifested in the form of environmental crises, which can be regarded as the consequences of disruptions in those metabolic flows. The metabolic rift can be felt locally in declining soil fertility and increasing

pollution and waste, and it can be seen at the macro level as a one-way flow of energy and resources from the dominated to the powerful.

As sociologists, we are used to articulating anti-capitalist critiques in economic and political terms. My goal in this section was to show how a more organic understanding of well-trod arguments about commodification and sustainability can serve to strengthen radical positions. I believe that recentering nature as an agent in economic transactions puts us in the right mindset to imagine solutions to environmental and social problems. In the next section, I will continue to explore the commodification of nature, the metabolic rift and related issues of exploitation and domination in a more nebulous area of the natural world: human nature.

SECTION III: THE PORNIIFICATION OF THE AMERICAN FOOD CULTURE

In some families, recipes are like cherished heirlooms. Yellowing index cards with grandma's handwritten instructions for canning jam or the formula for Mom's famous spaghetti sauce are jealously guarded and passed from generation to generation in a chain that reaches back unbroken through the ages. Not in my family. For dinner inspiration, my busy single mother relies on a junk drawer where, sandwiched between takeout menus, you find recipes taken from magazines and food packaging, the sort of recipes that tells you not only the ingredients needed, but which trusted brand to use. I suspect that the recipe drawer is a common fixture in many North American kitchens; it is also a sign of deep dysfunctions in our food culture. In this section, I will continue to talk about commodification and the metabolic rift, this time in terms of the relationship between consumers and the production of food. I will argue that the same processes that effect a separation between the farmers, the land and the fruits of their shared labour in the capitalist food chain are also at work in our food culture. In this case, the contours of the rift are less defined. Whereas the consequences of unhealthy metabolism in the land manifest in concrete ways as environmental degradation and widespread famine, disruptions in the cultural metabolism have more diffuse symptoms like loss of culinary traditions, cooking knowledge and practical skills.

To illustrate how the food industry and the media work hand in hand to shape and deepen the rift between us and the food we eat, I will take a long hard look at a very current trend: food porn. I will attempt to define the phenomenon by drawing from my own experience as a consumer and a creator of 'pornographic' images of food. Then, through Debord's (1967/2006) notions on the spectacle, I will show how this dominant visual form is shaping the way our food culture is evolving. I will argue that while the current enthusiasm in popular culture for all things food-related might seem like an

encouraging sign that people are rediscovering a passion for cooking, what it really reflects is the creation of a new market of cultural consumption, not just of food but of desires and images of food.

The Omnivore's Paradox

First, let us quickly review how the food culture is commonly understood by social scientists. It is a topic of great interest to anthropologists, whose task often involves describing and analyzing the systems of rules, taboos, techniques and rituals surrounding food in different cultures. Those systems are seen mainly as ways in which people bring cultural meaning and order to natural objects (see Counihan & Van Esterik 2008). When we domesticate, harvest, cook and eat living things, we are in essence socializing the natural world. The domestic sphere is thus a crucial ecological site, “the all-important phase where the biological is transmuted every day into the social and the natural into the cultural” (Bookchin 1990, p. 127).

Anthropologists have come up with different models to think about this metaphysical alchemy of the natural into the social. One famous example is the culinary triangle devised by Claude Lévi-Strauss (Fig. 4).

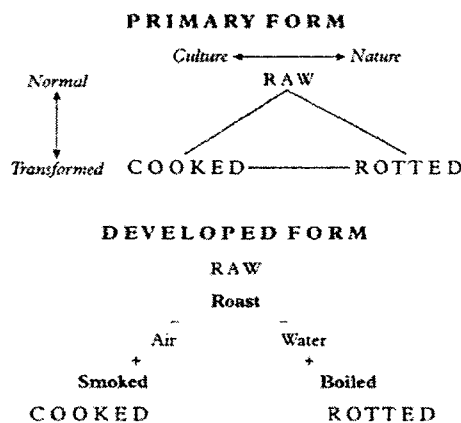


Figure 4: Lévi-Strauss' Culinary Triangle (in Counihan & Van Esterik 2008, p. 42-43)

The triangle is a semantic field on which to map human activities related to the transformation of food. The exact classification of food will depend on the culture. Think of the wildly varying cultural standards for what falls in the "rotted" category, for example, and the bafflement of Westerners when confronted with such delicacies as *hákarl* (Norwegian shark fermented for 4-5 months), Chinese century egg (preserved for months in clay and lime until translucent black), *natto* (gummy fermented soy beans) and *casu marzu* (also known as "maggot cheese"). The interesting thing about the triangle for the purpose of our discussion is that the categories are based on the level of transformation and the degree of separation from nature. The raw is the natural, untransformed state, the cooked is cultural and transformed by human hand, and the rotten has undergone a natural transformation. By mapping the culinary system of a given culture on the culture/nature continuum and comparing it to other organizing principles like gender dynamics or religious institutions, Lévi-Strauss believes we could understand "how the cooking of a society is a language in which it unconsciously translates its structure" (in Counihan & Van Esterik 2008, p. 43).

Another important voice in the anthropology of food is Mary Douglas (1966/2003), who proposed a similar way of understanding food in terms of semantic categories. Her main area of interest is the symbolic division between sacred and profane, pure and impure, clean and unclean. In *Purity and Danger*, she interprets the dietary laws enounced in Leviticus (*Kashrut*) not as a primitive form of health regulations or as arbitrary religious doctrine but as the codification of a link between the sacred altar and the body in the Jewish tradition. In Leviticus, holiness is equated with completeness, integrity and conformity with the categories of creation, and any mixing, hybridization or boundary transgression is prohibited. Animals that chew cud *and* have cloven hooves (cows, goats, sheep, gazelles) fall into the cattle category and can be eaten, but animals that *either* chew cud *or* have cloven hooves, pigs for example, are deemed

impure. Sea creatures with fins and scales are in, shellfish is out. When Douglas scours the Old Testament for other prescriptions, she finds that this pattern of classification and exclusion extends well beyond food rules. There is a time to work and a time to worship, different rights and duties for fathers and lovers, and failure to act in accordance with this categorization is an abomination unto God. Dietary restrictions are thus a way to remind the faithful of their commitment to categorical purity in other areas of life.

Drawing on insights from these authors as well as Rozin's work on the psychology of disgust (Rozin 1999 and 1996), Claude Fischler (1980 and 1988) anchors the categorization of foodstuff into more primal biophysical mechanisms. Whereas Lévi-Strauss and Douglas are mainly concerned with how food cultures are structured, Fischler wants to know why we feel the need to categorize at all. His claim is that the development of food categories is our primary tool for coping with what Rozin calls the omnivore's paradox. This concept was later used by Michael Pollan as the starting point for his best-seller, and thus the following explanation might be familiar to the reader. Unlike most species which are strictly vegetarian or carnivorous, humans – like dogs and rats– can metabolize nutrients from a wide range of plants and animals. This gives omnivores an evolutionary advantage over species with more restrictive diets, but flexibility comes at a cost. While specialized eaters get all they need from one type of food and therefore only have to worry about finding that one thing, omnivores have to grapple with a crucial question: what can I eat, and what can kill me? This, in the simplest terms, is the omnivore's dilemma.

Omnivorous species have evolved different adaptive mechanisms to handle the problem. Some are purely biological, like special digestive enzymes or a strong resistance to gastro-enteric diseases. However, the issue is so complex that genetics alone cannot fully address it; complementary behavioural or cognitive mechanisms are needed.

It is extremely difficult to compose a set of criteria that will, on the basis of sensory properties, determine the edibility of the wide range of objects in the environment that might be foods. For this reason, food identification for generalists is guided almost entirely by experience with the consequences of ingestion. Given the fundamental importance of food, there are surprisingly few genetically-based constraints and predispositions. In humans (and rats), genetic factors include: 1) biases to prefer sweet tastes and to avoid bitter tastes; 2) a tendency to be interested in new potential foods (neophilia), but at the same time to be cautious about trying them (neophobia); and 3) some special abilities that allow for learning the relationship between a food and the consequences of its ingestion, which may occur hours later. (Rozin 1999, p. 12)

Neophilia and neophobia form an interesting pair of adaptive mechanisms, one which parents of picky children are intimately familiar with. We have evolved to be cautiously curious, simultaneously intrigued and frightened by new foods (Fischler 1988, p. 282). The tension between these two paradoxical forces is what enables us to discover new food sources while avoiding pathogens and poisons. It is also what makes those “weird food” television shows so exciting to watch. The pull of neophobia and neophilia manifests in different ways in most omnivore species. Rats, for example, proceed by trial and error, test-tasting little bits of new foods for adverse effects before gorging (Fischler 1988, p. 278-279). This experimental spirit is coupled with a long memory: rats will forever avoid foods that make them sick. For humans, unsurprisingly, the omnivore’s dilemma is resolved mainly through culture and socialization, through the systems described by Douglas and Lévi-Strauss. Like rats, we can develop powerful aversions to certain foods, which can be purely based on culture but nonetheless expressed through physical symptoms similar to those caused by rotten or poisonous foods. Fischler (1988) illustrates this by relating the story of a Jewish man who became ill after being told he had just enjoyed a meal containing pork. This story is a perfect parallel to Douglas’ work on profane and sacred foods; what Fischler adds to her model is the biological and psychological factors that underlie our need to categorize food. Every culture brings

order to the world of edibles in a different way based on their own ideas about cleanliness, holiness and tastiness, but the motivation remains the same across cultures: to tell what is good to eat apart from what is bad. Cooking techniques, recipes, rituals and taboos are all cultural ways to reduce the chance of contracting pathogens from food, to minimize the risks inherent in culinary improvisation and to tip the balance in favour of neophilia.

A cuisine enables neophile innovation to be reconciled with neophobic “conservatism” or distrust. Novelty, the unknown, can be steeped in the sauce of tradition; originality is tempered by familiarity and monotony relieved by variety. (Fischler 1988, p. 287)

North American Gastro-anomie

Fischler's introduction of evolutionary psychology in the anthropology of food implies that culinary traditions do not arise as purely social constructs. They are enabled and constrained by biological and psychological features of the human species and serve certain adaptive purposes. They are also closely tied into the ecological context of the region where they evolve; local cuisines and recipes are constructed by generations of people who learned to make the most of what was edible nearby, so the traditional flavour profile of a region usually reflects the availability of ingredients, the diversity of the local fauna, the fertility of the soil and the rhythm of the seasons. On the flip side, food was perhaps the first truly globalized commodity. As people move around the globe, they bring with them some of the traditions, techniques and ingredients that give them a taste of home, and cuisines become a reflection of social and historical currents such as changing trade routes, conquests and colonization, scientific progress and economic development. Finally, culinary traditions are strongly linked to socioeconomic factors like class, ethnicity, income, identity and social capital. In *Distinction*, Bourdieu (1984) discusses gastronomy as a form of aesthetic appreciation in the same right as tastes for visual arts and music, and argues that those tastes are not developed through experience,

but learned in the process of social reproduction. Aesthetic experiences are categorized as low, middle or high brow, and appreciation is dictated in large part by one's class origins or aspirations. Bourdieu's seminal work on cultural consumption as a marker of social class has brought socioeconomic factors to the fore in the sociology of food, perhaps at the expense of other important dimensions. Before I move on to discuss visual representations of the North American food culture, let me sketch a quick portrait of its evolution and current state.

The North American diet was shaped in a major way by the waves of immigrants that settled the continent in rapid succession. The so-called American cuisine has always been fusion (see Kiple 2007 for an exhaustive account of ingredient migration over millennia of human civilization). Germans gave us hot dogs and hamburgers, the Dutch bologna, pretzels and root beer. French, Spanish and African influences came together to bring us Cajun cooking, and we have clasped Chinese and Italian foods so tightly to our hungry hearts that they are no longer recognizable in their culture of origins. It is true that no cuisine is exempt from "foreign" incursions; one could probably chart the history of wars and migrations in South-East Asia just by tasting and comparing local curry variations. However, in the Old Countries, new foods were layered on existing culinary canvasses over much longer periods of time. What makes the North American context unique is the timing of the evolution of local food cultures. Despite the beloved Thanksgiving pilgrim mythology, our settling ancestors did not really adopt aboriginal cuisines. There is no denying the widespread popularity of American products like tomatoes, potatoes and corn, but native preparations and food rituals did not have the same longevity. Rather than embrace pemmican, settlers substituted native ingredients for hard-to-find staples from home in familiar recipes, or simply relied on imports. This is the first peculiarity of the North American diet: it emerged, piece by piece, in an already well established global food web.

The modern North American diet was not only shaped by the traditions of our settlers, but also by the forces of industrialization and urbanization. As we saw in the previous section, advances in farming and processing technology enabled food production on a massive scale, but these leaps and bounds in productivity occurred at the expense of the diversified domestic ecosystem typical in traditional agriculture. Intensive monocultures all but put an end to rural subsistence farming. This paradigm shift had a seismic impact on the demographic composition of rural areas. Modern farms are heavily mechanized, and much less labour is needed to exploit much larger parcels of land. No longer able to scratch a living from their own land and made redundant as labourers, farmers left the country in droves to find work in the cities. The urbanization of the population and the shift from subsistence to wage employment, which began with the Industrial Revolution and continued well into the 1970s, transformed the household from a unit of production to a unit of labour and consumption.

This shift represented a golden business opportunity for agro-industrial corporations. Not content with seizing control over food production, they set their sights on the transformation, preparation and distribution processes. The timing could not have been better, as the newly urbanized households had to adapt their food habits to the demands of a new environment. With time and space at a premium in the city, growing your own food is much less practical. Coupled with the sense of technological utopianism that prevailed in the zeitgeist at the time, this created perfect market conditions for the commercialization of modern conveniences like refrigerators, freezers, small electric appliances and microwaves, along with frozen, canned and processed foods designed with them in mind.

The changing role of women in this new urban environment provided the food industry with a great marketing hook. Food preparation had certainly been a creative outlet and a source of pride for generations of women, but it also involved endless

drudgery that the elite few who could afford it eagerly delegated to hired cooks and maids. Advances in domestic technologies were sold to mothers like mine as freedom and emancipation. They promised quick, easy meals at the touch of a button in shiny self-cleaning kitchens available in 12 designer colours. Women did not immediately rush to embrace these shortcuts, and it took an all-out marketing assault over several decades to convince them to relinquish some of the control they held over the family meal. It is only after World War II, with the passing of a generation of farm-raised housewives and the increased presence of women in the work force, that the ideology of convenience truly won over old-fashioned ideals of domesticity (Neuhaus 1999).

The revolution on the home front had far-ranging consequences on the status of women, and far be it from me to express any romantic nostalgia for old gendered divisions of domestic labour. That said, as women left the kitchen for the workplace, an important cultural link was severed. We have seen that the constructs we build around food serve to "socialize" the natural, in a way, and that transformative process is our principal tool to cope with the omnivore's paradox. We cook things to make them recognizable as edibles in order to quiet our neophobic instincts. We are driven to seek the recipes, techniques, and prescriptive rituals and taboos through which we transmit information about what is good to eat. For centuries, in most cultures, mothers were the main vector of transmission, but here and now this responsibility is much more diffused.

We are left in a state Fischler (1979) calls "gastro-anomie", meaning that we do not have the information we need to make important decisions about what to eat. We seek dietary guidance, and instead find nothing but endless choice. I want to be clear that neither I nor Fischler are placing the blame for this generalized state of unease on the emancipation of women. As he points out, "instead of the situation being regarded as 'culture perverting nature', it ought to be analyzed as the breakdown of the fit between human biology and the environment, the latter having been radically modified by social

evolution.” (Fischler 1980, p. 942) The changing role of women in society only opened up cracks in the food culture which the industry could infiltrate. The cultural structures that helped us cope with the omnivore’s dilemma in an environment defined by scarcity are simply inadequate in a world of abundance and relative normlessness.

This is exacerbated by the deep gulf that has formed between producers and consumer and by the opacity of the production processes themselves, which were discussed in the previous section. You will recall that the identification and classification of food is a key component of the food culture, the number one way human beings deal with neophobia. The first question asked by unadventurous eaters encountering unfamiliar food is always "What's that?" (sneering optional). Before we even taste anything, we want to know what ingredients are in it, and descriptions will invariably relate to more familiar experiences: pungent cheeses never taste like they smell, strange meats taste like chicken, wines have floral or fruity undertones... When we delegate the responsibility for producing and preparing food to an unknown third-party, we lose some ability to identify, which upsets the delicate balance between neophobia and neophilia. Fischler summarizes this deep dysfunction into 5 defining features of the North American industrial diet:

1. The modern eater is a consumer, not a producer.
2. Food preparation occurs mainly out of sight of the consumer.
3. Modern food is processed out of the qualities that make it identifiable; flavour, texture, and smell are artificially altered and enhanced.
4. Food technologies have become more effective at mimicking natural products.
5. The sociocultural framework regulating food consumption has broken down.
(Fischler 1998, p. 289)

Even when we are provided with ingredients lists and nutritional contents, we are never quite sure what it is we are eating, and we have trouble categorizing new food products into the familiar categories. We turn to all kinds of experts, nutritionists, dieticians, doctors and celebrities, to tell us what is healthy and clean and pure, what to

avoid, what will make us look fat or unsophisticated, what will give us cancer. Categorical boundaries change from expert to expert depending on the special interests they represent, and important information is drowned out in the din of food advertisement, cookbooks, magazines and television shows. While it is not entirely accurate to say that food media are pawns of the food industry, the two work together maintain the separation between producers and consumers and perpetuate our gastro-anomie.

Food Porn

Over the past two decades, there has been a veritable explosion in food-centric media. Even with the recession taking a bite out of non-fiction sales (-9% in the first quarter of 2009), cookbook sales have risen 4% in four months (Miller 2009). *Saveur* and *Bon Appétit* report memberships at an all-time high, and when it is not busy launching sister cable channels, the Food Network is doubling the circulation for its own branded magazine (Associated Press 2009). The recent demise of *Gourmet* may seem like a sign that the trend is slowing down, but quite the opposite is true. The venerable publication simply could no longer compete in a market of print, television and internet niche media catering to every type of cook. As hinted previously, these media exist in symbiosis with the large corporations that grow, transform, and distribute our food. We will now explore this relationship through the lens of its dominant visual mode: food porn.

The term 'food porn' has been popping up on the Internet since the late '90s, usually in sarcastic reference to photography and writing that fetishize rich and decadent foods. Examples abound, from florid prose describing dinners at 5-star restaurants in newspapers to the super glossy and hyperreal photographic *natures mortes* that decorate cookbooks and magazines to Nigella Lawson's finger-licking Food Network show. There is no real consensus on the definition of the term; like sex porn, you know it when you see it. However, the term is not just a clever neologism; in its defining characteristics and

in its effects, food porn closely resembles sexual pornography. Like its sexy counterpart, food porn presents highly idealized images that are meant to arouse primal responses, and the action we are privy to as an observer is almost entirely removed from the real life context. Food porn is a spectacular visual display that is divorced from the realities of food production and presented as an object of consumption in its own right. Idealized appearance, separation from context of production, and arousal of desires for consumption; let us take each of these defining characteristics in turn.

Idealized Appearance and Lack of Context

Obviously, food porn has to look good, but that is less easily accomplished than it sounds. As a species, we are extremely skilled at appreciating the visual qualities of food. Markers of sweetness, freshness and ripeness stimulate that neophile fibre inside all of us. On the flip side, we are also keenly attuned to defects, and images of food have to be very close to life in order to be appetizing. Artists are well aware of the difficulties of representing food in a realistic and satisfying way, which is why the *nature morte* remains a perennial exercise in art classes. This is why food porn could not really exist until the advent of colour photography. In an article aptly entitled "Technicolor Confections", Higgins relates this telling anecdote:

Buster Keaton hit upon a little remarked trend in early three-color filmmaking; films that joined the passing pleasures of color to the perhaps even more ephemeral delights of taste. For Keaton, Technicolor plus food was a comestible mixture that diegesis could not contain. Writing in 1939, he remembered *Adventures of Robin Hood* (1938) not for its tale of derring-do, but for 'that orgy of roast meats in the forest banquet'. Because narrative could not sate his hunger, he would bring sandwiches to the theater. As a synesthetic spectator, he ruminated that Robin Hood's 'suckling pig turning on the spit still rises before my eyes in insomniac hours'. As a performer, he swore never to appear with Technicolor food 'because I'm not going to have a scene stolen from me by a turkey wing' (Higgins 2007, p. 275)

What looks appetizing is to a certain degree determined by the cultural background of the viewer, but there are some universal aesthetic touchstones. We look for foods that are colourful, fresh produce free of blemishes, prepared meals that appear hearty and steaming hot. At the market, our food choices can be swayed by enticing smells or free samples, but food porn is an ocular-centric experience, and all those visual indicators of freshness and taste have to be hyper-saturated to appeal to the eye alone. To get us drooling, food stylists and photographers routinely use digital retouching, as well as some more practical special effects. Those fresh-picked tomatoes covered in dew? Sprayed with glycerine. That mouth-watering ice cream cone? Tinted vegetable shortening sculpted into perfect unmelting scoops. The steaming bowl of stew? Cigarette smoke blown over a thin layer of individually selected chunks placed in a special convex bowl.

In preparing this thesis, I consumed a lot of food porn online, on television and in print, but I also wanted to gain a hands-on understanding of what makes food images pornographic. I began taking pictures of some of my prettier meals and comparing my results with the images I see in food media. You can see the fruit of my creative efforts in the appendix, but I would like to attract your attention to Figure 5 below, where you can see two images of the same product, one a simple snapshot and the other a more pornographic rendition.



Figure 5: Brownies Two Ways

In the first, the eye is distracted by all the different elements, and the packaging and cooking utensils provide hints about the quality of the food, the messiness of the preparation process, the time and labour involved. The pornographic version is clearly more appetizing because there is no extraneous information to get in the way of the direct experience of the image. Without context, the brownie stands as a stylized

template on which the viewer can project personal recollections of great brownies past, the Platonic ideal of chocolate desserts. The fact that I bought a mix from the dollar store, baked it in a pie pan and burned the sides is completely irrelevant to the enjoyment derived from the second picture. The lack of representative context is a telltale feature of food porn. Food will be photographed in a white lightbox with a neutral background and optimal lighting conditions, or else will be posed in highly contrived settings in order to create a certain atmosphere. Abstraction is so crucial to the effectiveness of food porn that photographers will go to great lengths to achieve it, leading some restaurants to ban flash photography in the hope of discouraging eager bloggers from intruding on their tablemates eating experience (Bonné 2006).

The disconnection between the image and the context of its production creates a space for the projection of need and desire. The abstraction of the brownie from the grim setting of my kitchen grants the image a strange power; it imbues it with value that has no link to the material and labour that went into taking the picture. The image is a fetish in the Marxian sense, which Carrier (2010) neatly sums as:

how commodities tend to be presented and perceived in a peculiar way under capitalism, one that ignores or denies the labour time entailed in the processes involved in their production and their presentation to the would-be purchaser. (p. 674)

Commodity fetishism, a cornerstone of Marx's theory on the attribution of value in the capitalist system, is relevant to this discussion of food porn in a few different ways. We will see later, with Debord's development of the concept of fetish into the spectacle, the cultural implications of the division between consumers and the processes of production. The concept is also interesting here for its sexual connotations; both food and foot fetishes represent the attribution of "unnatural" desires to an object. Value is assigned to the fetish object based on the desires it elicits in the viewer/consumer irrespective of the object's intrinsic value.

Arousal of Desire for Consumption

As one cookbook author aptly sums, food porn is “prose and recipes so removed from real life that they cannot be used except as vicarious experience” (O’Neill 2003, p. 39). The unreality of pornographic visual displays underscores their function, or lack thereof. Food porn can be distinguished from commercial photography, artistic depictions or educational illustration by its purpose as a mere object of consumption. Food ads exist to sell products and the use of food in art is meant to evoke certain emotions or make a statement. Food porn exists simply to be seen and desired. Like sexual pornography, the utility of food porn begins and ends with the consumption of the image. The image is not meant to teach technique, or to stimulate a need to consume the product or act depicted. What porn sells is itself and the desire that consuming the image arouses.

This becomes clearer if we look at the evolution of cookbooks over the years (see Le Dantec-Lowry 2008 for a more in-depth overview). The first cookbooks were repositories of practical knowledge, advanced cooking techniques and presentation suggestions written by and for male professional chefs. In the 17th century, women began to publish plain language recipes in books like *The Cook’s Guide* (1664), *The Queen-like Closet* (1670) and *The Compleat Housewife* (1727) aimed at an audience of literate middle and upper-class ladies. The content of these books went beyond cooking instructions to include advice on other domestic matters like dining etiquette and servant management. As the household transformed with the Industrial Revolution, so did the domestic advice dispensed in culinary texts. Cookbooks published in America in the early 20th century, for example, included fewer rules of etiquette and more practice housework tips, as they assumed that the reader played an active role in managing the household and was less likely to have hired help. Even so, cookbooks remained the medium of choice in which to set out norms on gender roles and the general conduct of

life (see also Neuhaus 1999). In parallel, the cookbook caught a bit of wanderlust and emerged as a form of travel memoir. To this day, the lure of exoticism draws audiences to cookbooks that combine recipes with literary descriptions of the sights, smells and tastes of far-flung food cultures. The practical parts take a backseat to the reading experience, and recipes full of unfamiliar ingredients and preparations become a way to consume the Other without leaving home.

Due to obvious technical limitations, illustrations in early cookbooks tended to be sparse and utilitarian, like hand-drawn sketches showing how to filet a fish or to present an artichoke. With advances in imaging and publishing technologies, photographs became a common and expected feature of cookbooks, but black and white did not lend itself well to spectacular displays and text remained the primary focus. That is no longer the case today; with the technology to produce high-definition, hyperreal images now within the reach of even novice photographers, visuals have overtaken written content in the ever-expanding cooking section of your favourite bookstore. This development had much the same effect on readership as the advent of Technicolor foods had on Buster Keaton. Nowadays, cookbooks double as coffee table books, they are objects to be consumed rather than consulted. As one cookbook author laments:

[T]he people lining up to buy my book didn't see me as an interpreter of everyday life. They saw me as the high priestess of a world that exists almost exclusively in the imagination, the ambitions, and the nostalgic underpinnings of American culture.

And they were not mistaken. (O'Neill 2003, p. 39)

Food television has followed a similar path (see Kaufman 2005). In its early days, the Food Network featured a genre now derisively called "dump and stir", shows in which chefs taught viewers all the steps involved in making a given recipe. It is true that early celebrity chefs like Julia Child and Graham Kerr the Galloping Gourmet were cherished for their qualities as entertainers, but they were chosen for their reputation

and pedagogical qualities rather than camera-friendliness and their stated mission was educational. They gave precise measures, explained techniques, and showed how the final product came together. The current line-up of the Food Network has undergone a dramatic face-lift. The personalities are much sexier, and the shows themselves are less about technique than the spectacle of cooking and eating. Dump and stir shows have given way to cooking competitions like *Iron Chef* and *Top Chef*, behind-the-scenes shows like *How It's Made*, *Unwrapped* or *Ace of Cakes*, and restaurant-centric series in which we watch celebrity chefs travel the world to eat out in nice restaurants.

Even when recipes are shown, it is done in a way that emphasizes entertainment value over practical concerns. The formula for Rachel Ray's *30 Minute Meals* show is a great example. The episodes all follow a similar structure. In the first segment, Rachel chitchats with the viewer while she picks up ingredients from the pantry, sharing anecdotes about her personal connection to the dishes she is about to prepare. Once she has gathered everything she needs, she goes to the cutting board and leads into the commercial by saying something like "I'll cut all these vegetables and put them in the pan while we go to break." After the commercial, the most active parts of cooking are over, vegetables have been cut, pots and pans are set on the stove, leaving her free to chat some more. The tone is very friendly and approachable, and she frequently encourages the viewer to try these recipes at home. The hook of the show is that she can prepare a full meal in the time it takes to watch the show, however because the technical parts of cooking happen off-screen, the whole endeavour seems like *deus ex machina*. If the viewer starts watching the show not knowing how to dice an onion, Rachel Ray will not do a whole lot to help, friendly encouragements notwithstanding. Thankfully, all kinds of convenient alternatives and shortcuts are presented to that hapless viewer during the break.

This is what I mean when I say that food porn has no purpose other than to arouse a desire for its own consumption. When we enjoy porn, be it food- or sex-related, it is rarely with the perspective of replicating what we saw in practice. The experience of watching is in many ways its own reward. Even when it is cloaked in educational language and accompanied by measures and recipes, the visual information conveyed in food porn rarely makes the necessary connections to the skills and tools consumers need to make better nutritional choices, let alone to take control over the production of their own food. The overall message is less “you can do it at home,” and more “keep watching.”

Food Spectacle

I said earlier that food porn is not commercial. That is not to say that we are not sold something when we consume it. By employing a similar visual vocabulary as commercial photography, food porn blurs the line between entertainment and advertisement and thus reproduces the gap between processes production and consumption. Ultimately, the consumption habits food porn stimulates reinforce our dependence on the food industry. Michael Pollan gets to the essence of the problem when he says:

On a commercial network, a program that actually inspired viewers to get off the couch and spend an hour cooking a meal would be a commercial disaster, for it would mean they were turning off the television to do something else.
(Pollan 2009)

In *Society of the Spectacle*, Guy Debord (1967/2006) argues that the alienation of workers from the means of production has culminated, in our times, in a society in which nothing is truly lived but reflected back to us in the form of spectacles, experienced visual representations of capitalist processes. Food porn is the spectacle *par excellence*:

Le spectacle, compris dans sa totalité, est à la fois le résultat et le projet du mode de production existant. Il n'est pas un supplément au monde réel, sa décoration surajoutée. Il est le cœur de l'irréalisme de la société réelle. Sous toutes ses formes particulières, information ou propagande, publicité ou consommation directe de divertissements, le spectacle constitue le modèle présent de la vie socialement dominante. Il est l'affirmation omniprésente du choix déjà fait dans la production, et sa consommation corollaire. Forme et contenu du spectacle sont identiquement la justification totale des conditions et des fins du système existant. Le spectacle est aussi la présence permanente de cette justification, en tant qu'occupation de la part principale du temps vécu hors de la production moderne. (Debord 1967/2006, p. 767)¹

In setting out the defining characteristics of the spectacle, Debord highlights the productive role it serves as an affirmation of existing relations of production. Food porn does not have to be directly produced by food manufacturers to serve their interests; it delivers customers to food advertisers in a striking example of the mutually reinforcing and justifying relation between the dominant mode of production and its visual representations. It is the imagery that emerges from a system in which the processes of growing and preparing food are fully undertaken by corporations. The assumption is that we watch the Food Network to learn how to prepare food. What we learn instead is that there are people who cook, and people who watch. This separation is the alpha and omega of the spectacle, in Debord's words. It simultaneously divides and unites producers and consumers by legitimizing the division of labour as the dominant and unquestioned way things are.

Food porn tells us we can cook without giving us the means to put that will in action. We could cook, but we do not have to, a message the commercials bring home by reminding us how busy we are. With the familiar image of harried moms with children

¹ There is an excellent translation of Debord's *Society of the Spectacle* by Ken Knabb (1983, Rebel Press). I cite the original French here out of respect for the nuances of the prose, with apologies to Anglophone readers.

rushing in and out of the kitchen, close-ups of microwave clocks promising a meal in minutes, and constant mentions of “active lifestyles” and “busy families”, advertisers present food preparation as a low-priority activity, a chore to be avoided in favour of more productive or pleasant activities. This does not escape Debord's notice:

Le temps de la consommation des images, médium de toutes les marchandises, est inséparablement le champ où s'exercent pleinement les instruments du spectacle, et le but que ceux-ci présentent globalement, comme lieu et comme figure centrale de toutes les consommations particulières : on sait que les gains de temps constamment recherchés par la société moderne – qu'il s'agisse de la vitesse des transports ou de l'usage des potages en sachet – se traduisent positivement pour la population des États-Unis dans ce fait que la seule contemplation de la télévision l'occupe en moyenne entre trois et six heures par jour. (Debord 1967/2006, p. 833)

My mom learned how to cook from the good folks at Kraft. As for me, I have watched untold hours of Food Network programming, but I never really learned anything until I started actually *doing* something. Hands-on experimentation is, and has always been, the best way to acquire practical skills.

Food Erotica

It is perhaps no surprise that corporate media serve as vehicles for corporate messages. What of amateur food porn? The wide availability and user-friendliness of digital photography have democratized imaging techniques that were once the province of experts. A search for the term “food porn” online will yield thousands of blogs and photo-sharing sites featuring mouth-watering photography that could be confused with the work of professional image-makers. Most of these online ‘pornographers’ are foodies who make a hobby of sharing pictures of memorable restaurant meals or their own signature dishes. There are also many who deploy food porn to promote more ethical or sustainable dietary choices. Food media have caught on to this trend, and eco-friendly labels like ‘local’, ‘organic’, ‘fair trade’, ‘seasonal’, and ‘heirloom’ have acquired a distinct

aesthetic cachet. Can this more 'softcore' food erotica really transcend the spectacular to effectively promote alternatives to the corporate food chain?

When social movements take on the same tactics as the dominant system, they are threading on shifting sands. The current state of the Slow Food organization is a great example of what can happen when an ideologically-motivated movement shifts to emphasize style over substance. Led by Carlo Petrini (2003), the Slow Food movement has its roots in the Italian Communist party. It was conceived as a form of resistance against the encroachment of international – namely American – corporations in the culinary traditions of Italy. The first widely publicized action orchestrated by the nascent movement was a protest against the opening of a McDonalds franchise on Piazza di Spagna in Rome in 1986. Early proponents believed that the Italians' love of food could serve as a conduit to achieve loftier political goals related to workers' rights, conservation of agricultural biodiversity and the protection of local economic markets. Along the way, Slow Food evolved into a full blown philosophy of eco-gastronomy, epicurean pleasure-seeking with an ethical conscience. It became a tasty way to make the personal more political.

With growing concerns over food safety, security and sovereignty worldwide, the movement soon attracted international attention. Slow Food crossed the borders of Italy with the opening of branches in Germany and Switzerland in the early '90s, an international office in 1996, and finally an American office in 2000. The movement now counts 9 national branches and over 100,000 members belonging to 1,000 local chapters called *convivial* (Slow Food International 2010). The Slow philosophy can be summed in three principles: Good, Clean, Fair.

Eating is an agricultural act and informed, discriminating consumers become co-producers. For them, food should be good, clean and fair.

Good ... tasty and flavorful, fresh, capable of stimulating and satisfying the senses.

Clean ... produced without straining the earth's resources, its ecosystems and its environments and without harming human health.

Fair ... respectful of social justice, meaning fair pay and conditions for all concerned — from production to commercialization to consumption. (Irving 2008, p. 4)

Note how those categories relate directly to the notions of purity and pollution that Douglas (2003) describes. As far as prescriptions go, Slow Food provides just what we look for, guidelines to tell edibles from poison. Those principles translate directly into the international organization's three main areas of praxis. Under the banner of Good Food, events are held to promote taste education. These include school gardening programs, food and wine tastings, workshops on artisanal fabrication methods, and other activities meant to make members into more savvy consumers while stimulating their taste buds. To promote the production of Clean Food, the organization has launched the Slow Food Foundation for Biodiversity, which supports the Ark of Taste (a catalog of heirloom seeds and endangered agricultural species), Presidia (over 270 small-scale projects to assist individual artisan food producers), and Terra Madre (a network of sustainable food communities). Finally, events and markets are held to create links between food producers and consumers. The latter are encouraged to become "co-producers" by taking an active interest in who produces their food and how, in the hopes of creating better conditions for farmers and Fair Food practices in the whole production chain (Irving 2008).

The ideals of the Italian founders and the international umbrella organization translated somewhat imperfectly over the pond, however. We eagerly caught on to the hedonism angle, but the ideological parts fell a bit by the wayside. Belasco (2007) charts

the evolution of the countercultural cuisine that emerged in the 1960s, and in doing so provides some telling insights about the first adopters of Slow Food in the United States. The food choices of young revolutionaries in the Flower Power era stood in opposition to the dominant food culture of the time. When mainstream Americans feasted on diets heavy in meats and processed foods, the counterculture was embracing vegetarianism, macrobiotics, natural, unprocessed, homegrown and homemade foods. Belasco (2007) describes the concept of natural food in the American counter-cuisine thusly:

Natural had three reference points: content, time and attitude. Applied to content, natural food lacked certain ingredients and qualities: preservatives, pesticides, chemicals, packaging. Applied to time, it suggested old-fashioned cooking, whether homespun American, European immigrant, or Third World – anything not postwar suburban, standardized, too convenient or too sophisticated. As a state of mind, it suggested an enchantment with anything that was not too rationalized, predictable, standardized. (p. 41)

The counter-cuisine was oppositional in nature, a rejection of bourgeois and corporate values and practices. However, as the hippies grew up, moved out of the communes and became more affluent, they were faced with a conundrum: how to enjoy a middle-upper-class lifestyle without completely selling out to the Establishment? Food, as Petrini had discovered, was one answer. Slow Food presented a way to retain the principles of the counter-cuisine in a fashion more hedonistic than rebellious, a way to build progressive social capital while enjoying the finest wines and artisanal foods. The politics of food touch on many issues that resonate with that particular demographic, such as worker's and women's rights, environmental conservation, global capitalism, local economies, health and spirituality, issues which Slow Food makes even more palatable with a sugary coating of conviviality, romanticism, and high gastronomy. Because the goal is ostensibly to promote alternatives to the corporate dominated food system, foodies can feel good about dining in high end, pristinely organic and locally

sourced restaurants like Alice Waters' Chez Panisse or shelling out \$65 plus the price of food to attend the Slow Food Nation convention. We even adapted the eco-gastronomy philosophy into one efficient rule: local eating, a practice popularized in the 2007 non-fiction phenomenon *The 100-Mile Diet* based on the experience of two Vancouverites who ate only locally grown food for an entire year. The exact geographic radius that defines "local" may vary from one adept to another, but the core principle remains the same: to bring food webs down to more sustainable, more human scale. Certainly, the ideals of Slow Food figure in the concerns of locavores (the term for those who eat local, chosen 2007 New Oxford American Dictionary Word of the Year), but the approach used to address those issues is much more linear than holistic. The implied assumption is that by eating local, proponents automatically stimulate local economies, promote sustainable production practices, reduce the impact of their diets on the environment, limit their carbon footprint or contribute to the development of alternative food webs.

It is interesting that locavores have distilled the essence of the Slow philosophy to a question of sourcing and procurement over and above all those other criteria that enter into Good, Clean, and Fair Food. I believe it reflects a very North American approach to political engagement, the "voting with your dollar" strategy. Whether it takes the form of boycotts, charity merchandising (like the once-ubiquitous Livestrong bracelets) or movements like local eating that aim to change the world through more ethical day-to-day consumption behaviours, this form of political agency is expressed mainly in relation to our role as consumers. It is all about where you shop and what you buy.

The reduction of complex social, economic, environmental and political issues to a simple matter of consumer choice has received considerable academic attention in recent years, ranging from the hopeful like Andrews (2008) who believe that "ethical and critical consumption has often challenged the moral basis of contemporary capitalism, in respect of fair trade and environmental sustainability, and has stimulated innovative

forms of political engagement” (p. 86, see also Stolle, Hooghe & Micheletti 2005, and Trentmann 2007) to the cynical like Heath and Potter (2004) who argue that, in many case, ethical consumption “buys nothing more than distinction and an unfounded sense of moral superiority” (p. 338). Johnston’s (2007) introduces the concept of the consumer-citizen hybrid as the ideal type of ethical consumer. This hybrid agent incorporates two divergent ideologies. On one side, it embraces consumerism, a way of life rooted in the acquisition and consumption of goods that privileges customer satisfaction as a primary value. On the flip side, it allows for expressions of citizenship, democratic participation and dissent, and promotes the embeddedness of economic processes in broader socio-political structures (p. 242-243). This poses a paradox. Consumerism is anchored in individual consumer choice, while the exercise of citizenship requires that individual satisfaction take a backseat to the common good, yet ethical consumerism optimistically assumes that self-interest and the public good can both be satisfied in one purchase. This is dubious, given the agility that corporations have demonstrated in co-opting the concerns of their consumers and integrating them within their existing practices. As Johnston (2007) observes:

From a critical perspective, ethical consumer strategies seem more like niche marketing opportunities allowing corporations to target privileged, conscientious consumers, than a substantive program for health, sustainability, and social justice at a global scale. (p. 240)

This gets to the root of Slow Food’s biggest stumbling block – its image problem. From the beginning, the romanticization of Italian peasant life was problematic. As Jeffrey Pilcher notes in Wilk (2006), research shows that many of the traditions and practices exalted by Slow Food were largely invented, or at the very least taken out of their historical and material context. “Authentic” Italian cuisine is truly an amalgam of old recipes and new techniques and ingredients, and the deliciously rich meats, pastas and sauces we associate with the culinary tradition were originally reserved for festive

occasions or the tables of the very rich and have little to do with the monotonous, grain-heavy diet of actual peasant farmers (Wilk 2006, p. 70). The hard labour required to prepare these foods the traditional way is also often glossed over. We delight in the care artisans take to create prosciutto and hand-rolled pasta, but very few foodies would be willing to clean, salt and cure raw ham for months in their walk-in closets. Idealization, romanticization, disconnection from context... Slow Food would seem to meet all the requirements to qualify as food porn. The visual imagery it employs is further evidence of the political taking a backseat to the pornographic spectacle. Publications filled with pictures of happy cows in green pastures tended by clean, culturally diverse farmers, cornucopias of glistening almost GMO-perfect produce, and smiling groups of friends gathered around tables laden with good food and wine all paint a romantic picture, one that elides all the messiness of actually producing Slow Food, the labour of farmers, migrant workers and women in fields and kitchens, all those socio-political processes that motivated the founders of the movement.

Carrier (2010) looks at ethical consumption under the lens of commodity fetishism, and finds that it entails three different levels of fetishization. The ethical product itself is a fetish, it is imbued with symbolism that may be completely detached from the context of production of the object. The purchase of the product is fetishized in turn. When locavores buy a head of lettuce from a local farmer, they are also buying messages like 'encouraging the local economy', a good conscience and a certain social cachet, things that have nothing to do with the product itself. Finally, nature, the environment that ethical consumerism is often meant to protect, is fetishized. The focus is on the added value of the ethical lettuce and the assumed impact of its purchase. Those symbolic concerns take precedence over the actual context of the production of the food and the commercial exchange at the market. Like the 'pornographic' images they often

accompany, labels like “local”, “fair trade”, “organic”, “Slow Food” are meant to highlight certain features of a product over others to grant it added monetary and symbolic value.

This hides the way that the expressions of that concern are shaped by commercial pressure, as well as the way that ethical consumers are a market that organisations seek to attract, even though many of the values of those consumers seem opposed to capitalist market rationality. (Carrier 2010, p. 682)

The imagery deployed to promote Slow Food is undoubtedly appealing, but the movement is doomed to remain aspirational unless it can provide concrete ways to put principles in practice that go beyond changes in consumption behaviours. Petrini himself remarked on this following a visit to the Ferry Plaza Market in San Francisco in 2007:

I soon realized I was in an extremely exclusive place (bear in mind that this is one of the oldest and most important farmers’ markets in town, la crème de la crème). The amiable ex-hippies and young dropouts-turned-farmers greeted their customers with a smile and offered generous samples of their products to a clientele whose social status was pretty clear: either wealthy or very wealthy.

Alice Waters introduced me to dozens of farmers: they were all well-to-do college graduates, former employees of Silicon Valley, many of them young. Meanwhile their customers, most of whom seemed to be actresses, went home clutching their peppers, marrows and apples, showing them off like jewels, status symbols. (in Schneider 2008, p. 395)

To live a truly Slow lifestyle obviously requires a certain amount of disposable income. It is the sad truth that, thanks in great part to the subsidy system reviewed in Section II, retail prices do not reflect the true cost of food. The corn derivatives at the top of processed foods ingredients lists pack in more calories per dollar spent than fresh produce. This alone might make an industrial diet the only rational choice for struggling households, especially in these trying economic times. For many, eating healthy is not as simple as making a sacrifice “on the cellphone or the third pair of Nike shoes”, as Alice Waters suggested in a *New York Times* article on the rising price of food (Severson

2008). The barriers are not just economic. Becoming a co-producer, in the concrete sense of the word, also involves time and cooking skills that for many are in short supply. Such things cannot be developed through awareness-raising efforts, nor can they be purchased from the farmers' market. They require hands-on education, refocused priorities, a revaluation of domestic activities. A whole new mindset has to take hold in a population that revels in a food culture that prioritizes convenience, ease, novelty and immediate gratification over the less obvious rewards of labour and competence that come with cooking from scratch.

The will to adopt healthier and more sustainable food habits is there, but so is the need for the kind of practical, hands-on experience that used to be passed down in the home kitchen. The best example of this is a pattern I have observed time and time again in Community Supported Agriculture programs. People filled with good intentions sign up to receive baskets of fresh produce directly from farmers, but abandon after a year of watching box after box of turnips and kale rot in the fridge because they have no practical idea what to do with such a bounty. Food needs to be unfetishized, unglamourized, refamiliarized. Reskilling should be our first priority if we want to seize back the reins of our food chain and close the gap between consumers and producers. Granted, teaching people how to boil water is not as picturesque as saving ancient cheesemaking methods, but it will go a lot further in making eco-gastronomy accessible to all. Freed of the duty to berate the masses on their consumption habits, those with the clout and access to effect change from within could finally turn their efforts in more productive directions, like lobbying for new agricultural policies that promote sustainable practices, and thus contribute in a real and concrete way to a better, cleaner, and fairer food landscape for future generations.

Mainstream food lovers will likely not be swayed by the elitist pronouncements of Waters and her ilk, and might even revolt by embracing the worst excesses of the food industry (exhibit 1: Hardee's 1,420-calories Monster Thickburger, a hit with men 18-34). For Slow Food to position itself as a movement for the people, there needs to be a shift in goals and priorities towards the revaluation of basic cooking competence. Food porn might be an effective tool to raise awareness about alternatives to the industrial food chain; however, in order to truly oppose the domination of corporate interests, we have to be taught where we go from here, step by step, from scratch.

Debord said it best: "pour détruire effectivement la société du spectacle, il faut des hommes mettant en action une force pratique." (p. 852)

CONCLUSION

In light of this express journey through the modern food chain, let us take a new look at Jamie Oliver's TED tirade:

OK, I see it as a triangle, OK? This is our landscape of food. I need you to understand it. You've probably heard all this before, but let's just go back over it. Over the last 30 years, what's happened that's ripped the heart out of this country? Let's be frank and honest. Well. Modern-day life.

Let's start with the Main Street. Fast food has taken over the whole country. We know that. The big brands are some of the most important powers, powerful powers in this country. Supermarkets as well. Big companies. Big companies. 30 years ago, most of the food was largely local and largely fresh. Now it's largely processed and full of all sorts of additives, extra ingredients, and you know the rest of the story. Portion size is obviously a massive, massive problem. Labeling is a massive problem. The labeling in this country is a disgrace. They want to be self ... They want to self-police themselves. The industry wants to self-police themselves. What, in this kind of climate? They don't deserve it. How can you say something is low-fat when it's full of so much sugar?

Home. The biggest problem with the home is that used to be the heart of passing on food and food culture, what made our society. That isn't happening anymore. And you know, as we go to work and as life changes, and as life always evolves, we kind of have to look at it holistically -- step back for a moment, and re-address the balance. It ain't happening. Hasn't happened for 30 years. (Oliver 2010)

In my view, each of these seemingly tangential exclamations represents a rupture, a tear in social relations, a disruption of natural flows. What I wanted to accomplish in this thesis was to highlight those multiplying rifts, the recurring motif of disconnections and reconnections. I have shown how the relationship between the farmer, the plant and the soil is broken down in modern agriculture. I have explored the metabolic rift, the separation of nutrients from the soil which is reproduced locally in the rift between the city and the country and internationally in uneven power relations between core and periphery nations. Finally, I have deconstructed the dominant visual

mode of representation of food in North American popular culture to show how it is a reflection of the gulf that separates consumers from the processes of food production.

I have also shown how the corporate interests that dominate our modern food chain act to create and maintain those rifts in their quest for profit, from Monsanto wedging itself between farmers and their land, to multinationals importing food from starving countries to satisfy our taste for cheap and exotic food, to the Food Network bringing in viewers for their advertisers. Throughout this thesis, my aim was to link different bodies of work in order to strengthen anticorporate critiques. It would be possible to argue against industrial agriculture using straightforward economic logic, as Polanyi and Marx are often deployed, but the addition of the ecological perspective from geographers like Castree brings the critique to life by rooting it in a whole web of natural interrelations. Debord serves up a passionate indictment of our spectacle-hungry culture, but his critique leaves us all outraged with nowhere to go and no idea where we came from. Layering it over the evolutionary psychology of Rozin and Fischler gives us a better understanding of the mechanisms that make the spectacle so appealing.

The case of Slow Food ties all these issues together in the promise of a solution. The philosophy of eco-gastronomy is all about reconnection with food, its origins, its producers. It asks consumers to take notice of the dysfunctions in the industrial mode of production in the hope of inciting them to take action and change the system. The movement has been somewhat successful in its first mandate, awareness was indeed raised. With the Good, Clean and Fair principles, Slow Food devised a compellingly simple system to categorize food, resolving the omnivore's paradox in a way that accounts for the social, political and environmental implications of food choices. However, by failing to provide concrete tools to put that will to praxis aside from changes in consumption behaviours, Slow Food has opened itself up to encroaching commercial interests. To build a true alternative food chain, we will need to get our hands dirty. It is

not enough to link consumers to producers; to really challenge the excesses of capitalism, we must first refamiliarize ourselves with the means of production and the true potential and limitations of the natural world.

I believe that should be a priority for academics as well. If we are to avoid the ontological pitfalls underlying all those flawed logic models that prop up the capitalist system, the theoretical abstractions through which we justify abusive relations with the world around us, we need a sociology that acknowledges the existence and agency of a reality outside of our language games. I have tried here to bring together threads from sociology, anthropology, economics, psychology and biology into a coherent theoretical and methodological framework upon which we can build a stronger critique of modern North American foodways. For the purpose of this project, I supplemented my readings with hands-on experience as a gardener and as a consumer and producer of 'food porn'. You can see some visual evidence of this work annotated in appendix. While the pictures are not strictly speaking empirical evidence, the act of producing them was a great source of insight during the writing process. Working in my garden and literally consuming the fruits of my labour clarified my understanding of ecological relations in a way no book ever could. Similarly, I only really grasped the fetishistic qualities of 'food porn' when I started manipulating my own images to achieve the ideal level of abstraction I saw in magazines and cookbooks.

My understanding of the many rifts that scar our food landscape was greatly influenced by the works of Barkow, Bhaskar, Bookchin and Latour. These authors all express a sense of deep connection with the natural world and respect for the scientific methods used to apprehend and understand it in different disciplines. Their critical arguments emerge from a space in between the poles of Nature and Culture, in the world of hybrids and interactions.

That seems to me like the perfect place to start building bridges.

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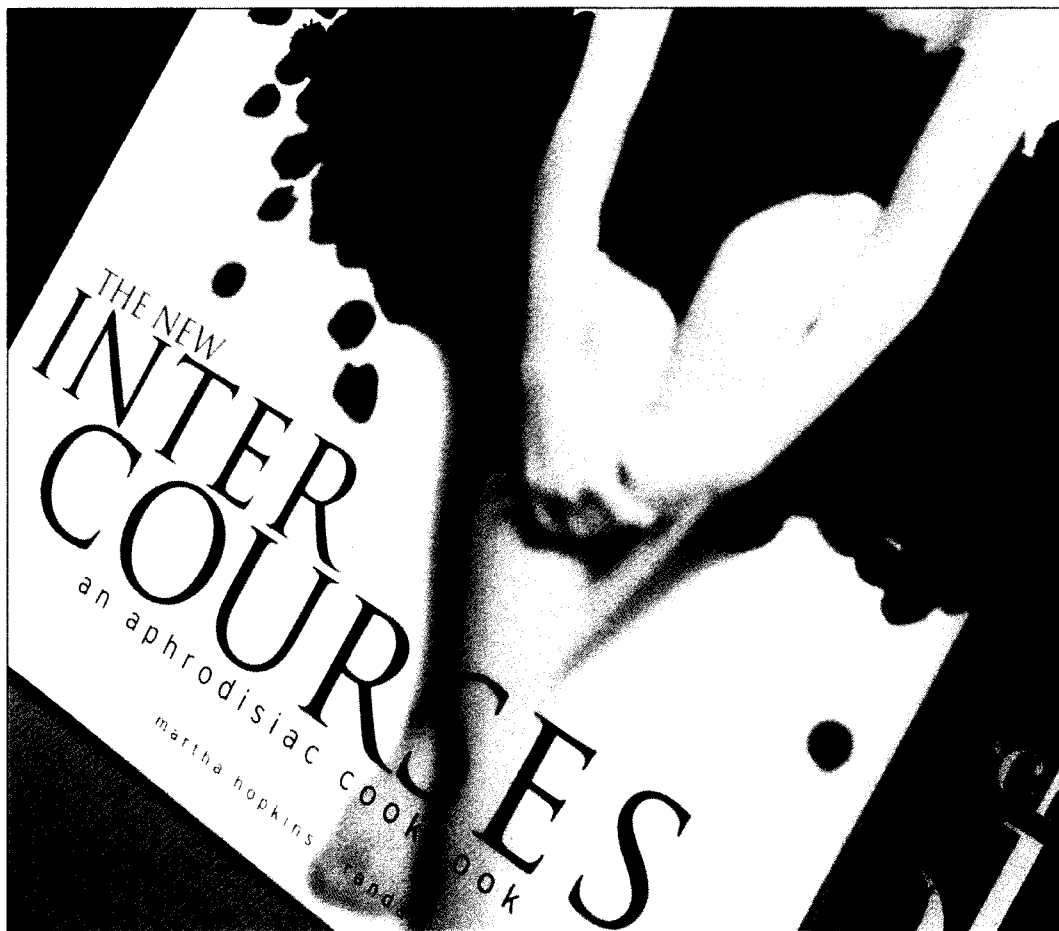
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APPENDIX

These pictures are the result of a visual sociology project meant to supplement the research for this thesis. They document my hands-on experience as a consumer and producer of 'food porn' and as a gardener. They can also be found online with annotations at: <http://picasaweb.google.ca/105367255167258369564/FoodPorn#>



Although the term 'food porn' carries obvious sexual connotations, the definition extends to images that aren't explicitly sexual in nature.

(Pictured: Hopkins, M. (2007). *The New Intercourses: An Aphrodisiac Cookbook*. Terrace Publishing.)



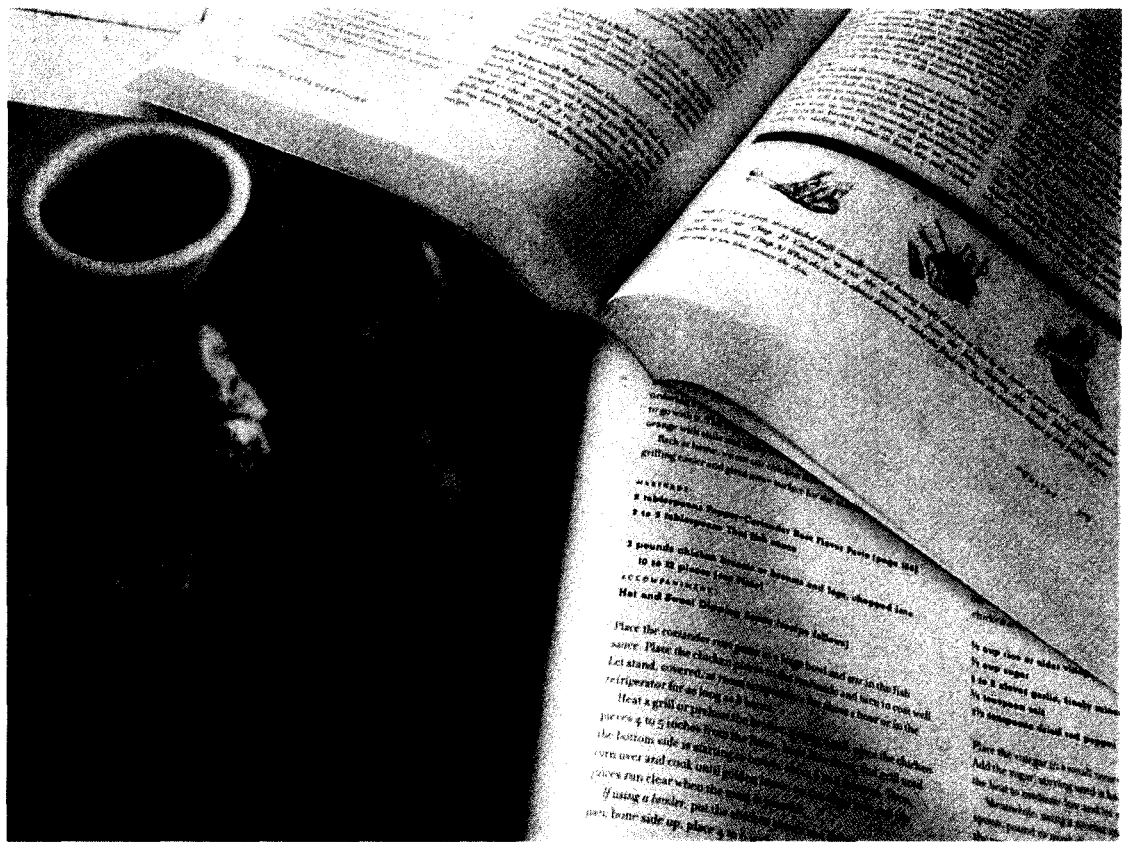
'Food porn' is any spectacular visual display divorced from the realities of food production and presented as an object of consumption in its own right.

(Pictured: Mikanowski, L., Mikanowski, P. and Symon, G. (2007). *Egg*. Flammarion Editions.)



'Food porn' and good old sexual pornography share a visual vocabulary and fulfill a similar purpose.

(Pictured: Murrills, A. (2007). *Balls! Round the World Fare for All Occasions*. Vancouver, BC: Whitecap Books.)



Traditionally, cookbooks provided practical instructions for executing recipes. Illustrations were sparse and utilitarian. New 'pornographic' cookbooks puts the emphasis on spectacular visuals. The image is a beautiful abstraction of the recipe, rather than a useful illustration.

(Pictured: Variations on a simple grilled chicken recipe.

Top: Bittman, M. (1998) *How to Cook Everything: Simple Recipes for Great Food*. New York, NY:

Hungry Minds Inc.

Bottom: Alford, J., Duguid, N. (2000). *Hot Sour Salty Sweet: A Culinary Journey Through Southeast Asia*.

Toronto, On: Random House Canada)



Visually, food porn and food advertisements are strikingly similar. The imagery is glossy and perfect, and has very little relation to the actual product. However, the two differ in function: while food advertisement is designed to provoke consumption of a product, 'food porn' is a product in itself.

(Pictured: Burger King Croustipoulet sandwich fact and fiction.)

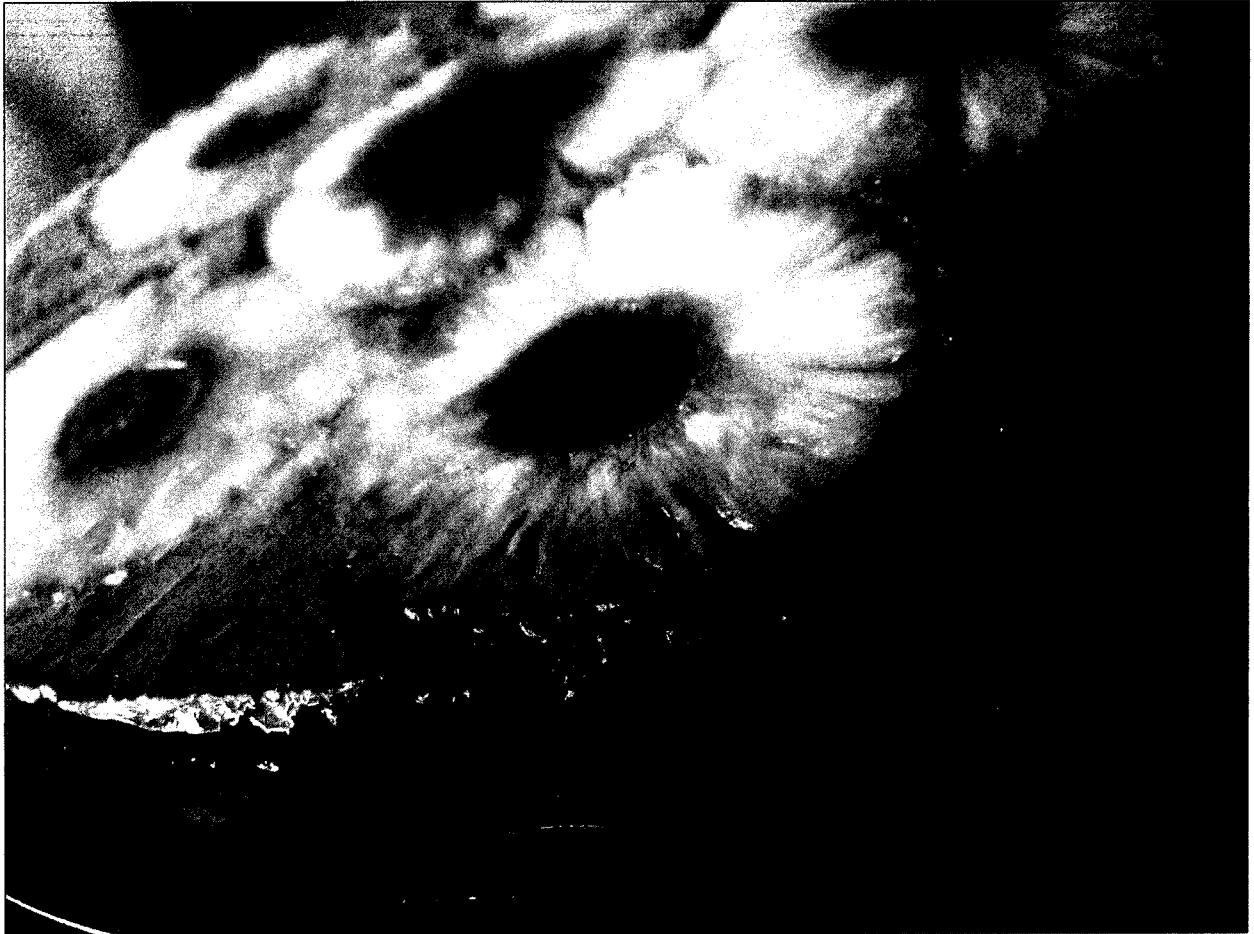


Abstraction is a principal feature of 'food porn', as we can see when we compare this picture with the next. Here, the brownie is photographed as it came out of the oven, surrounded by evidence of its production. You can see the low quality of the ingredients, the messiness of the process, the burnt parts around the edges...



Here is the same brownie, pornified.

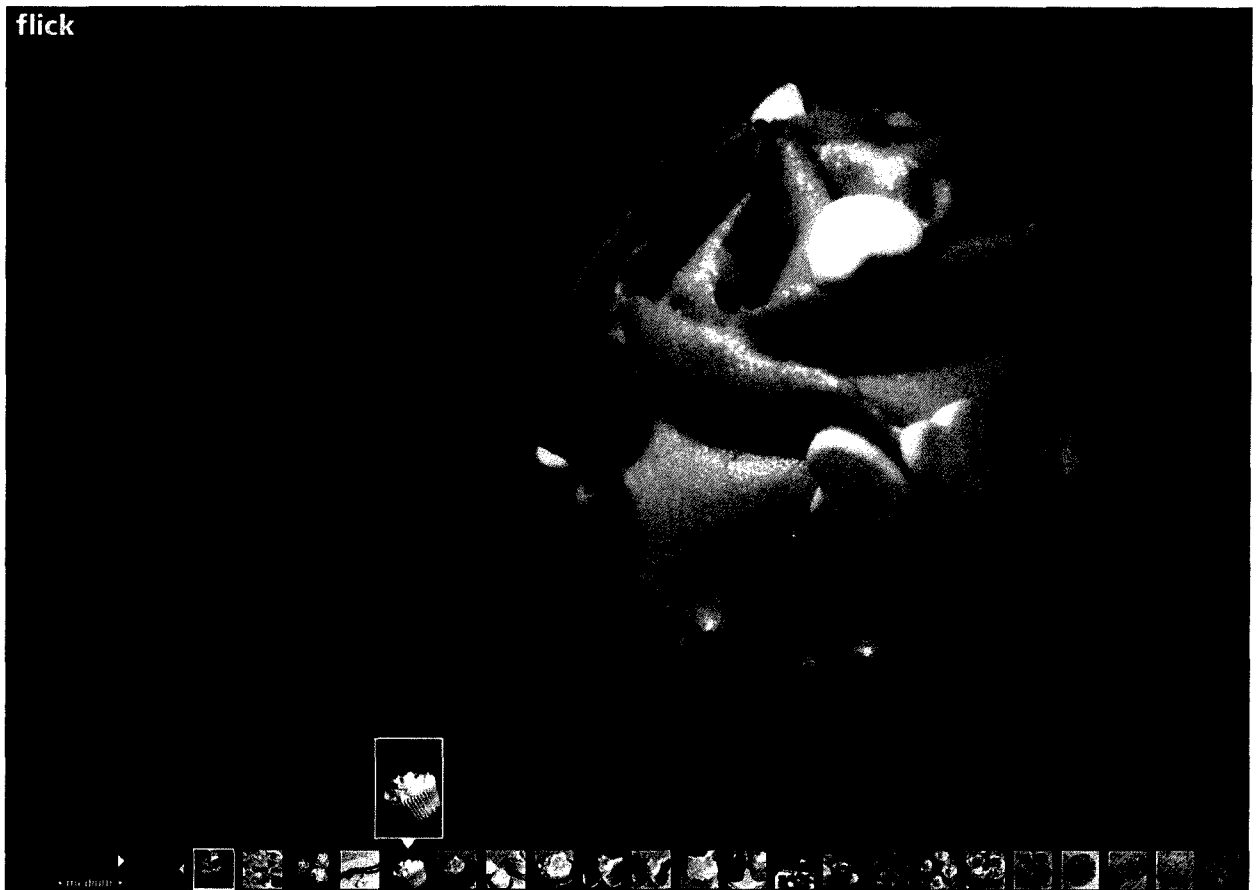
It is an abstract version of the previous picture. All traces of the context of production have been removed. The presentation disguises defects, and the brownie can stand as an idealized representation of the viewer's experiences of chocolate desserts.



Food photography is a tricky business. The human eye is keen at recognizing signs of freshness, ripeness and sweetness. Lighting, colour and focus have to be just right to maximize the appetizing features of the food.

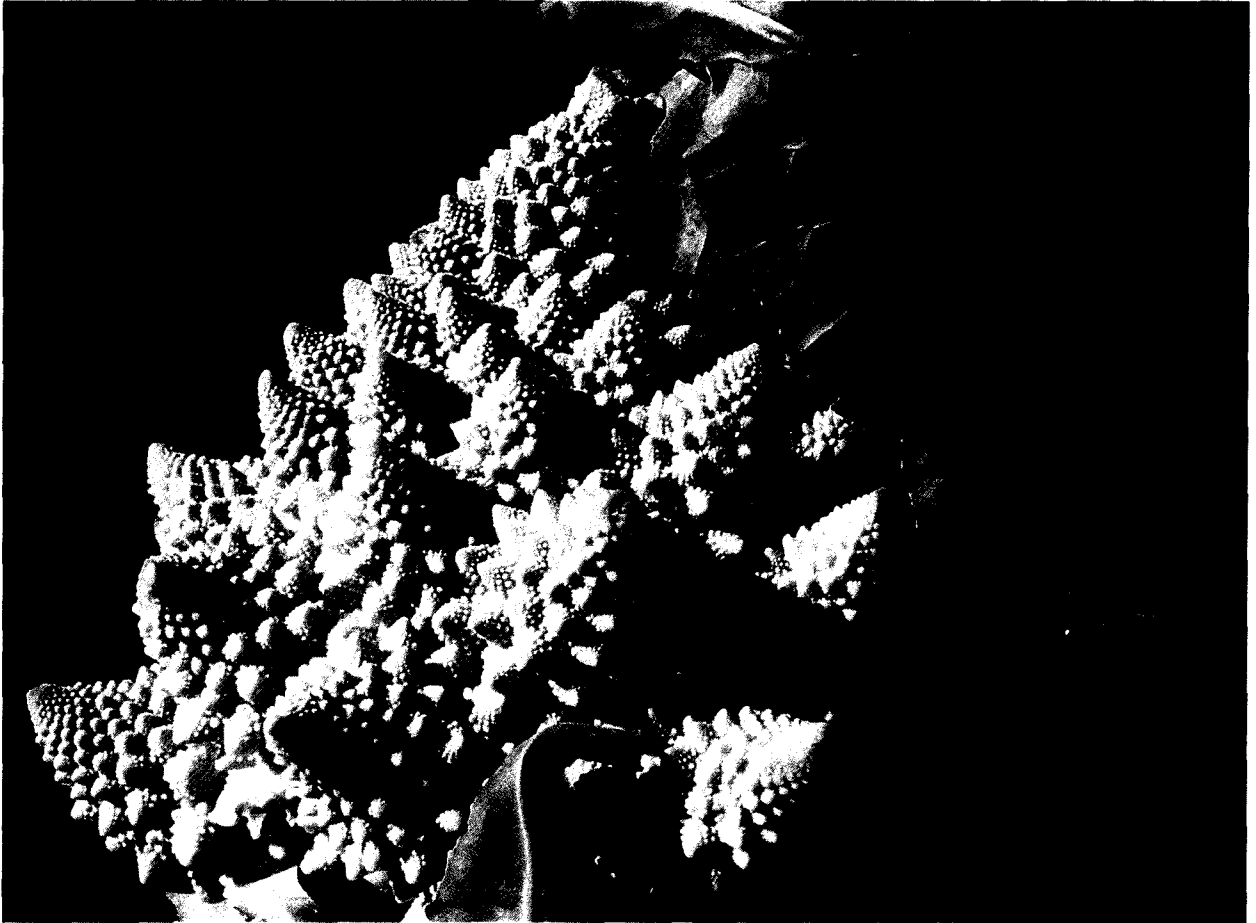


Food stylists and photographers go to great lengths to create the perfect image. This crème brûlée was photographed in a white box to allow for greater control over lighting. The image is zoomed in to make the portion appear larger, but the lime and blueberry give you a clue as to the tininess of the ramequin.



Amateur 'food pornographers' come together in online communities to share their love of spectacular food images. I posted this image on the World of Muffins and Cupcakes Flickr pool (<http://www.flickr.com/groups/muffinscupcakes/pool/>), where it joined 18,490 equally mouth-watering pictures.

The cupcake was purchased half-price from a corner store the day after Valentine's Day, but its origins are irrelevant to the enjoyment derived from the picture.

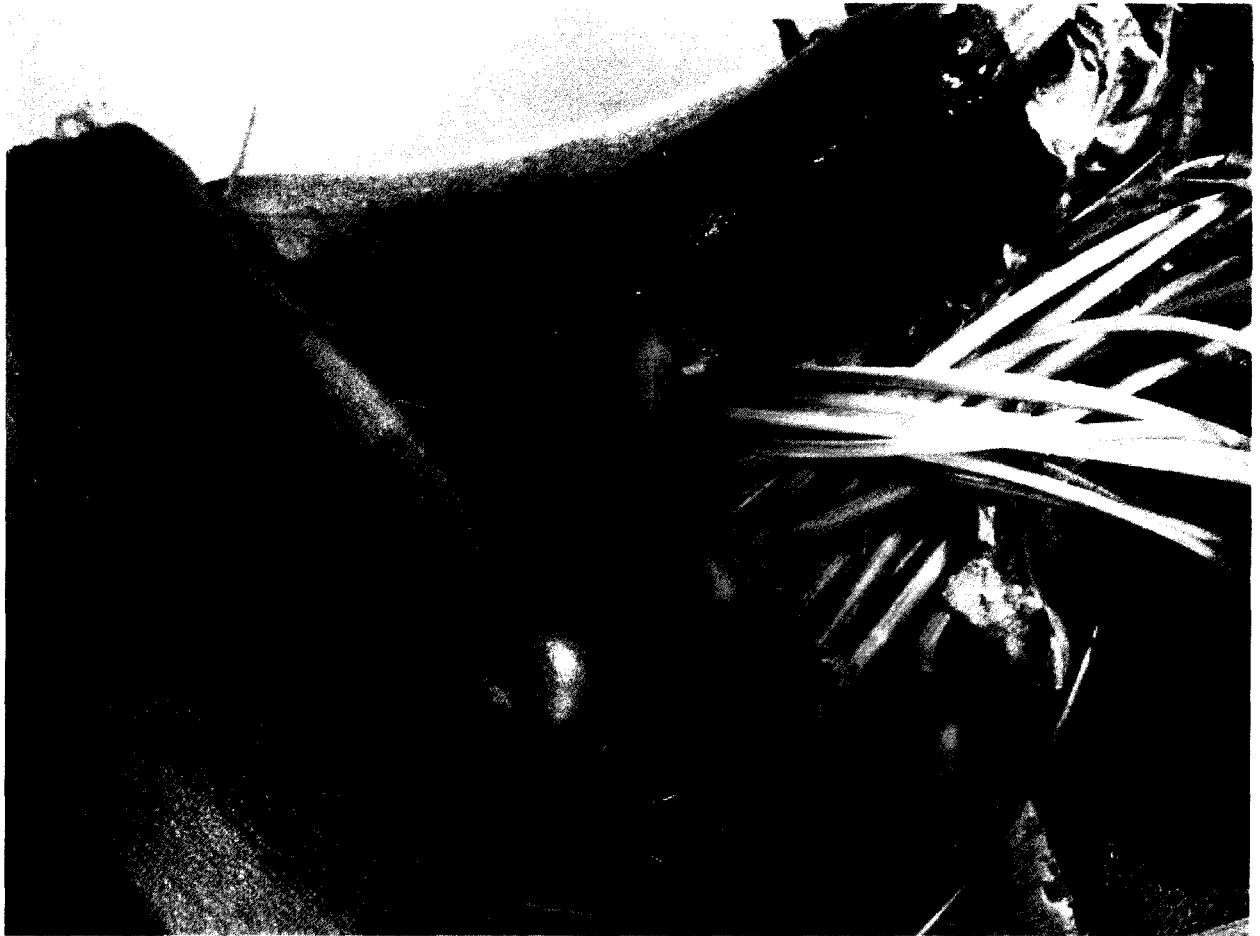


'Food porn' is pure entertainment, even when the products depicted are healthy, organic, good, clean, fair food.

This Romanesco broccoli is a spectacular testament to the work of local farmers, but the image tells me nothing about what it tastes like or how to prepare it. The disconnection between image and practice is a well-known source of frustration for Community Supported Agriculture members facing boxes full of unfamiliar ingredients.



To better understand the disconnection between consumers and producers of food, I joined a community garden. This is truly gardening at its most urban. Pictured is my plot, located between the Bell Center, the Welcome Hall's Mission for homeless men and the off ramp to Autoroute Ville-Marie.



My first harvest. Actively producing some of my food helped me reflect on the many layers of interaction that link the soil, the food, the producer and the eater.

The most interesting impact it had on me was a new respect for the plant as a whole. I never hesitated to throw away the leaves of the beets and carrots I purchased, but I could not bring myself to waste produce from my own garden. I knew all too well the time and labour that went into each vegetable. This led to the discovery that beet greens can be eaten just like chard or spinach, and that carrot leaves packed in salt make a delicious herbal seasoning.