

Conceptualising Food as Death: A Radical Environmentalist Politics of Food

by Julie van Kemenade University of Aberystwyth

Sociological Research Online, 16 (2) 4 <http://www.socresonline.org.uk/16/2/4.html> 10.5153/sro.2338

Received: 1 Apr 2011 Accepted: 1 Jan 1970 Published: 31 May 2011

Abstract

Research into the politics of food cannot assume universal acceptance of what is meant by the term 'food' which has multiple meanings and significantly different associations. A semiotic approach demonstrates the meaning and value of this point.

Food has variously been conceptualised as process and as commodity, nature or culture. None of these tropes are value neutral, but are associated with opposing priorities and conflicts of interest.

Drawing from ecocentric and anthropocentric environmental philosophies, an alternative trope, that of foodas-death, can be developed, which challenges other, more dominant, tropes. Semiotics denies the notion that language 'mirrors' reality. Rather, language creates reality. Semiotics, then, can be useful in developing alternative realities.

To conceptualise food as death is more than using death as a metaphor. Where food is prioritised as commodity, commercial/industrial food practices promote death: death of the body through malnutrition or over-consumption; death of communities through the power of transnationals and commercial interests; death of the natural world through the prioritisation of these human food provision systems. Food-as-death is a trope which privileges the destructive aspect of food over others such as pleasure, identity and nurturing.

Power is invested in those whose trope gains the greatest acceptance. The challenge for environmentalism is to demonstrate the validity of food-as-death. The essential task therefore, is to demonstrate that food for humans can be organised in a way which affirms the well being of humans, communities and nature. This trope will be food-as-life.

Keywords: Food, Death, Conceptualisation, Semiotics, Environmental Philosophies

Introduction

The most political act we engage in daily is to eat. We vote every few years but we eat every day, and those choices can make a difference to farms, communities and landscapes near and far.' (Jules Pretty 2005)

1.1 In order to engage with the politics of food it is important to explore what is meant by the term 'food'. This may initially appear to be obvious: food is what is eaten, it is what sustains life. In actuality, however, 'food' has multiple meanings, with significantly different associations. It is the underlying premise of this paper that the way in which food is conceptualised is directly related to the ways in which food is politicised.

1.2 The predominant industrial agricultural systems of today, heavily dependent on fossil fuels and cheap labour, have evolved out of the acceptance that food is a commodity. But food produced in this way has devastating environmental and human consequences.

1.3 Taking a semiotic approach and drawing upon ecocentric and anthropocentric radical environmentalism, the connotative field of food-as-death is developed, which challenges industrial agriculture systems and the values behind them, including hierarchical and oppressive relationships between humans and other

humans and between humans and non-human nature. This conceptualisation is not value neutral; it has been developed in order to support radical environmentalism. In keeping with this aim, a further connotative field – that of food-as-life - is indicated. This prioritises food provision for humans in a way which contests the dualistic nature (human/nature; society/ecology) inherent in global agri-industries.

Semiotics as an Instrument of Change

2.1 Semiotics is described by Chandler (2002) as 'the study of signs'. Drawing on the work of Saussure and Peirce, Chandler defines a sign as being composed of a signifier which refers through sound or image to the signified, which is a thing, concept or idea. The two cannot be separated; either is meaningless without the other. A signifier cannot exist if it doesn't signify *something*; in the same way, the signified does not pre-exist language, the one creates the other.

2.2 Given its linguistic background, semiotics is often assumed to be a form of analysis that is limited to written texts. However, it is now recognised that anything can be a sign, provided it is capable of standing for something other than itself. Leeds-Hurwitz (1993) draws upon Roland Barthes (1979), who, she considers, is a major contributor to the semiotic possibilities of food. For Barthes, food is:

'a system of communication, a body of images, a protocol of usages, situations and behaviour..... food sums up and transmits a situation; it constitutes an information; it signifies.' (Barthes 1979 pp167 – 168, quoted in Leeds-Hurwitz 1993p86)

2.3 Food has a signifier - the material substance of food. Its signified, however can be almost anything, dependent upon what one means by the term 'food'.

2.4 The significance of this concept is that everything exists through the process of interpretation. Whilst this is not entirely literal; this physical Earth would exist without any humans or other life forms to interpret it at all. The point is, that all we can *know* of it, is through interpretation.

2.5 There are however, different levels of interpretation. The first level, denotation, is described by Chandler as:

'....the relationship between the signifier and its signified. *Denotation* is routinely treated as the definitional, 'literal', 'obvious' or 'commonsense' meaning of a sign, but semioticians tend to treat it as a signified about which there is a relatively broad *consensus.'* (Chandler 2002 p227)

2.6 It is at the denotational level where food is understood as 'merely' what is eaten in order to sustain life. In contrast, connotation, the '2nd level of signification', Chandler explains, refers to the socio-cultural and political implications. This is clearly not value neutral, even with something as seemingly universal as food.

2.7 The acceptance of food as understood at the denotational level can do little to challenge different connotations, as it can only do so in its own terms i.e., does it nourish or does it not? To be political about food involves the recognition of opposing connotations of food.

'Different definitions of food are associated with specific rhetorical repertoires, and hence different questions, risks, roles and conflicts of interest. Distinct tropes imply differing degrees of influence for groups and individuals, as different sets of interests and points of view are made relevant and legitimate. *If one can make one's own interpretations and constructions of reality hegemonic, then one's power and influence is increased.* '(Jacobsen 2004p59; my italics.)

2.8 Whilst this last sentence may read like an invitation to world dominance, it is helpful to recognise that such a state already exists under the guise of agricultural efficiency and global trading laws. In order to challenge this, other tropes need to be developed, which can be seen to be more appealing, of much less harm, and much greater benefit.

2.9 But before continuing with this point, it is important to look at other ways in which food has been conceptualised.

Sociology and Food

3.1 It is not possible here to give a comprehensive analysis of the sociology of food. However, even a brief overview yields some valuable observations.

'Of course, at its most basic, the modern human food system can be conceptualised as an immensely complicated set of biological relationships between human beings and symbiotically linked domesticated plants and animals, not forgetting the myriads of microorganisms upon which the system depends and the hosts of pests and parasites which colonize it at all its tropic levels' (Beardsworth & Keil 1997 p47)

3.2 This is, of course, an excellent description of food at the denotational level (denotational is not equivalent to simple!). However, Beardsworth & Keil suggest that it is not the biological, but the social and cultural that engage sociologists, and which are understood as aspects of a system or process. They discuss two depictions of the food system: that of Goody (1982), who suggests that food can be conceptualised in terms of five phases, (production, distribution, preparation, consumption and disposal); and of Freckleton et al (1989), who propose a more complicated schema, detailing the manifold linkages of

the food system, which nonetheless starts with agriculture and finishes with consumption, although the routes between them are many and varied. Their conclusions are that although the system can be represented in various ways, still, all aspects of the system are amenable to sociological analysis. In practice, however, sociologists have tended to concentrate on the production (including agriculture) and consumption phases of the system.

3.3 The question is therefore, 'does the concept of food as a system relate to the connotative level of food?' My argument is that is does not. Sociologists are certainly looking at the socio/political activities surrounding food at its different stages. However, there is a significant difference between researching food, and using food as a focus to research other issues. That these issues are social or political, does not in itself mean that it is the social or political nature of food that is being explored.

3.4 It is undeniable that there is a food provision system, which starts with agriculture, before processing through a number of interconnected social phases, and finally consumption and/or other forms of dispersal. However if it is food at the connotative level that is being explored, then this connotation will necessarily incorporate all the phases of its existence. This has been achieved by the semiotic approach put forward by Jacobsen (2004).

3.5 Jacobsen identifies 3 distinct connotative fields, or tropes, by which food can be understood, and thereby promoted. The dominant industrial mode of food production today - is identified as food-as-commodity. Food is not seen as something that is alive, that provides nourishment; rather it is understood in terms of its economic value and trading opportunities, its relationship with the capitalist economy and its role in global trade. It is antipathetic to the trope of 'food-as-nature'.

3.6 There are three aspects to the second trope of food-as-nature. The first aspect is seen in terms of the damage caused to nature by the production of food for humans. It is 'food-as-commodity' as seen from the point of view of its opponents. The second aspect is the view of nature as promoted by farmers and farming organizations, - nature is synonymous with the countryside, where food is grown. The third aspect again is highly related to food-as-commodity, where 'nature' is used in advertising, in order to stress the 'natural', 'healthy' benefits of a food product.

3.7 The third conceptualisation offered by Jacobsen is 'food as culture'. It is associated with ideas of pleasure, nurturing, identity and belonging. Food is utilised to draw up lines between 'us' and 'them', via food taboos or merely different food styles.

Conceptualising Food as Death

4.1 Jacobsen (2004) stresses that food is political, and that part of the process of food politics is to establish one conceptualisation or another as dominant, but does not attempt to prioritize or promote any particular trope. Rather, he demonstrates how the different tropes function to serve the interests of different actors and interests. My aim is to go one stage further, and develop an actively political conceptual field.

4.2 The connotative field of food-as-death draws upon radical environmentalism in order to challenge the trope of food-as-commodity.

Sociology, the Environment, and Radical Environmentalism

4.3 As Dickens (1992); Redclift & Woodgate (1995) and Hannigan (1995) have discussed, growing concerns about the environment have presented a challenge for traditional sociology. This challenge has been accepted via two significantly different modes of analysis: sociology of the environment, which situates the environment as a discrete object of sociological analysis; and environmental sociology, where the environment is embodied within sociological research. Whilst it is stretching a point to state that this distinction is directly reflected in the schism between reformist and radical environmentalism, the comparison is nonetheless useful.

4.4 Mainstream political movements have added environmental issues onto their existing agendas, rather than challenge the existing socio/political/economic systems responsible for these same issues. This has been termed 'reformism'. Reformist positions:

'hold that environmental protection can be effectively incorporated with modern industrial society, without fundamentally threatening economic growth and material prosperity.....' (Garner 1996p3)

4.5 The environment is a resource for humans, which simply needs to be managed more responsibly. In a similar way, the sociology of the environment has added the environment onto an existing sociological agenda. But this agenda does not itself necessarily accept the 'business as usual' ethos of modern industrial society. As Dickens (1992) explains, left-wing sociology sees environmental issues in terms of power relations between those who control environmental resources and those who do not.

4.6 Clearly, reformist environmentalism and the sociology of the environment have major areas of dissent. What they particularly have in common, however, is that the environment (or nature) is seen as being a quite different entity to society. In contrast, environmental sociology and radical environmentalism both (whilst not identical themselves), have a very different approach which engages directly with the relationship of humans/society and nature.

4.7 Although there are significant differences between radical environmentalists, nonetheless, they all represent a fundamental challenge to the dominant socio/political/economic systems of today, envisaging ways of life which are completely different to life as lived in contemporary affluent societies. Shared values

include a commitment to zero (or almost zero) growth, and the rejection of centralisation in favour of self sustaining communities (Garner 1996; Eckersley 1992).

4.8 Radical environmentalism can be divided into ecocentric environmentalism and anthropocentric environmentalism. This difference is based on opposing positions on the relationship between humans and nature, which in turn leads to opposing priorities as to how socio/political/economic changes should be enacted. Ecocentric positions, particularly deep ecology (see Naess 1997), prioritise the termination of human exploitation of nature before all else. Ecocentrism does not privilege humans, and sees non-human nature as having intrinsic value, that is, value in itself, irrespective of actual or potential value to humans. Humans are one species amongst many, and no more important than any other.

4.9 In contrast, anthropocentric positions, in particular, social ecology (Bookchin 1991a & b, 1998), see humans as being part of nature, but also argue that humans occupy a privileged position within nature by virtue of the greater abilities that humans have, which in turn leads to greater responsibilities to non-human species. Bookchin argues that the hierarchical relationships of humans lead to the domination of nature, and the way to end human exploitation of nature, is to resolve these hierarchical relationships. Ecosocialism is also anthropocentric in privileging humans over other species. Environmental degradation is seen as a direct result of capitalism, and the degraded environment as a major factor in the oppressive relations between human societies (Pepper 1993). Whilst eco-socialism makes a clearer distinction between humans and nature than does social ecology, the importance of nature and the environment to the resolution of human inequalities produced through capitalism is stressed.

4.10 Again, there is not a direct parallel between environmental sociology and any particular version of radical environmentalism. Nonetheless there is clearly an engagement with some of the same issues.

4.11 As Dickens (1992) argues, sociologists, by definition, have concentrated on the social, and problems for societies have been seen to be social problems. But sociologists have begun to engage with ecological and environmental issues, which in turn has brought into question the accepted distinction between society and nature.

4.12 One response was the 'New Ecological Paradigm', proposed by Catton & Dunlap (1980), in order to incorporate nature and the environment into sociology. Dickens describes the NEP:

'Human beings would certainly be regarded as having special characteristics but they would be linked to other species with which they are competing for food, space, water and so forth. Again, humans would still be seen as influenced by social or cultural forces and relations but they would also be envisaged as affected by the biophysical environment; pollution, changing climate and so on.' (Dickens 1992 pxii)

4.13 The New Ecological Paradigm is an anthropocentric construct, which clearly sees humans as distinct from nature, but also as interdependent with their environments. This approach is compatible with, although not the same as, eco-socialism; less so with social ecology, and not at all with deep ecology.

4.14 An alternative exposition of the relationship of social and ecological systems is proposed by Redclift & Woodgate (1994) who argue that both these systems evolve and that they do so together. They draw upon Gidden's structuration framework (1979), which demonstrates the interrelatedness of agency and structure, in order to develop the concept of co-evolution. For Redclift & Woodgate, the environment itself both contains and facilitates human endeavours, whilst is itself changed by human activities.

"Co-evolution, then, can be thought of as a set of equilibrating mechanisms between society and nature. Changes in nature occur through processes of evolution, while changes in society are the result of process of structuration. In this sense co-evolution can be understood as an interactive synthesis of both natural and social mechanisms of change." (Redclift & Woodgate 1994p58)

4.15 This perspective is also anthropocentric, but where the interdependence of nature and society is emphasised. Again there is a clear distinction between what is human and society, and what is nature and ecology. And again, whilst co-evolution can be compatible with eco-socialism it is less so with social ecology, and has little to say to deep ecology. Dualism is still an essential feature.

4.16 Bookchin, the founder of social ecology, argues that the dualist notion that humans (society) and nature are fundamentally separated and opposed is a false one. The disdaining of nature as something alien and threatening meant that it became something that must be controlled and dominated. Domination became a way of life, leading to hierarchies – not only between humans and nature, but between humans, where massive inequalities are perpetuated on a gender, class, religion and national basis. Environmental degradation and the threat to all life on the planet arise out of these oppressive hierarchical relationships (Bookchin 1998).

4.17 Deep ecology is even more opposed to dualism. It is a holistic approach, which looks at the interrelationships between humans and non-human nature (Eckersley 1992), and advocates a complete re-evaluation of the assumptions underlying civilization. The natural world needs to be valued both for itself and also recognised and valued as being part of human identity. This perspective, therefore, allows environmental solutions to be judged according to whether they address the causes as well as consequences of environmental problems; and out of this philosophy comes a movement which sees fundamental social and ethical change as the only way to avert environmental catastrophe.

4.18 It is hardly surprising that environmental sociology operates in a completely different plane to deep ecology. The idea of an eco-centric sociology is startling to say the least. Eco-socialism is not noticeably

different in terms of its understanding of the interrelationships between social and ecological systems, although of course, there is no reason whatsoever why environmental sociology need also be socialist. Social ecology goes a stage further in its insistence that humans are still part of nature, albeit a special part, involving special responsibilities (Bookchin 1991b). Unlike deep ecology, which is concerned with change at the level of individual consciousness (Pepper 1996), social ecology and ecosocialism both aim to effect change through human social relationships. Environmental sociology then is different in degree rather than kind to anthropocentric environmentalism.

4.19 The concept of food-as-death does not privilege either anthropocentric or ecocentric environmentalism. In this instance what these approaches have in common is far more important than what they have not. Both are opposed to dualistic, hierarchical and exploitive relationships with nature and with humans, and it is these relationships that this trope highlights.

Food-as-Death

5.1 Semiotics stands against the idea that language merely mirrors 'reality'. Rather, language makes reality.

'.....rhetorical forms are deeply and unavoidably involved in the shaping of realities. Language is not a neutral medium.' (Chandler 2002p123)

5.2 Concepts are understood in terms of other concepts, and these concepts are all value laden.

'Semiotics helps us not to take representations for granted as 'reflections of reality', enabling us to take them apart and consider whose realities they represent.' (Chandler 2002p78)

If we can do this, we can consider our own realities, and how best to represent them.

5.3 The conceptual field of food-as-death is based on, but develops, Jacobsen's trope of food-ascommodity and emphasises the destructiveness of food when understood in this particular way. It is a trope which privileges the destructive aspects of food over other aspects, for example, that humans get fed and survive, at least for a time, that pleasure, identity, power and wealth are all associated with food. These aspects are undeniable, but the significance is in the importance or value assigned to them. From a radical environmentalist perspective, the damaging relationship between humans and non-human life is illustrated by today's industrial food production practices, and therefore, food is death. This is identified at a number of different levels.

5.4 At its most fundamental level, food necessarily involves death: decomposition of previously alive matter is essential for the existence of plants, which support herbivores, which in turn support carnivores. All animal and vegetable species are dependent upon the death of other life forms in order to live. This is necessarily true of any type of food provision for humans, from hunting/gathering to industrial food practices – something which was once alive must now be dead, however this state is to be achieved.

5.5 The following levels however, are directly related to industrialised food production. Each level leads to, and is contained, within the next.

5.6 Corporeal. This relates both to the bodies of animals and humans. However, the deaths concerned are quite different, as for humans, death occurs through being consumers or non-consumers of food, whereas animal deaths result as a direct result of being defined as food by humans.

5.7 Animal Bodies. Whilst it is true of non-human food relationships that some species of animal are defined as food by others, nonetheless prey creatures are at least free to refute this definition if they are able, and this interaction is replicated where humans are hunter-gathers. However, once animals become farmed, the difference is significant. Even free-range farming denies the balance whereby sometimes it is the prey that is successful and sometimes the predator. But food which has been factory farmed demonstrates a far more oppressive relationship between prospective eaters and the eaten. The lives of factory farmed animals have been detailed extensively (e.g. Penman 1996), therefore one example is sufficient. A factory farmed meat chicken's short life of 39 days (an organic free range chicken's life expectancy is 80 days) is spent in a space approximately the size of a piece of A4 paper, where it experiences anxiety and distress, relieved to some extent by the plucking of its own and others' feathers. It also suffers severe pain through leg deformities since the chickens are bred to gain weight rapidly, but their leg bones grow at a much slower rate and cannot support their bodies effectively (Hickman 2008; Lawrence 2004).

5.8 Animals reared in this way can reasonably be said to experience a living death. This term is obviously a metaphor (in this instance) and yet there is clearly a complete absence of any meaningful life in the way that some animals are reared for consumption. But there is also an actual death, beyond that of becoming food, and that is death of the integrity of the creature. Whilst nominally still a chicken, there is no sense of 'chicken-ness'; the nature of the chicken has been destroyed.

5.9 Human Bodies. Humans no longer (except in rare instances) occupy the position of 'food' in the food chain; we have contained or eliminated our predators. For humans, the bodily relationship between food and death is understood in terms of what is, or is not, being eaten, and the health effects thereof. It is almost a truism that affluent societies of the North are suffering the results of food excesses and inappropriate diet, where many of their members suffer from obesity, and dietary related illnesses such as diabetes, heart disease and cancers. In 2001, 300,000 deaths were attributed to obesity in the US alone (Lang & Heasman 2004). At the same time, underdeveloped and developing countries of the South are seen to have the problem of food poverty, where members suffer from consequent deficiency diseases and

malnutrition. In 2010, the United Nations Food and Agriculture Organisation stated that 925 million people were undernourished, yet UNFAO 2002 figures show that increases in agricultural yields in the last 30 years have produced a 17% increase in calories per person (now 2,720) despite an increase in the population of 70% (See World Hunger Education Service 2010). There is not a shortage of food then, but rather, unequal access to food. Neither is it simply a matter of inequality between developed and developing nations, as this also occurs within nations – whilst much of the population of China, India and Brazil suffer severe food poverty, these countries are also suffering the burden of food related degenerative diseases (Lang & Heasman 2004).

5.10 A further problem in (over)fed countries is that of the rising numbers of people suffering from severe eating disorders. There is not the scope to explore the causes of eating disorders here; however, it does not seem surprising that societies which simultaneously promote excess consumption of unhealthy food products and idealised body images should develop such a problem. Statistics clearly demonstrate that eating disorders only feature in societies or countries which have an overabundance of (unsuitable) food (Nationmaster 2010).

5.11 Communities. There is a considerable amount of research and argument that death and illness caused by insufficient access to food is the result of unfair and oppressive political/economic systems (e.g. Moore Lappe 1971; Rossett 2006). This is the basis of the second level of food as death.

5.12 Industrialised food production, which sees food as a commodity, leads to the actual, or symbolic death of family farms, of communities and, in terms of loss of autonomy, even of nations. It is this level which shows the greater success of food-as-commodity in opposition to food-as-culture, as defined by Jacobsen.

5.13 Porritt (1990) details the different role of farmers in the UK which has developed since World War II:

'At its simplest, farmers have two fundamental responsibilities: firstly, to produce food; secondly to protect and nurture the land. Before the Second World War they were pretty much one and the same thing, but in the headlong pursuit of agricultural self-sufficiency after the war the business of producing food increasingly came into conflict with the business of nurturing the land.' (Porritt 1990 p59)

5.14 The war forced the intensification of farming, which then continued long after the need was over, and shows no real sign of ceasing despite widespread support for the organic movement. The consequences for farmers and farming traditions include: 250,000 small (less than 40 hectares) family owned farms halved in number, whilst the average size of farms more than doubled between 1964 & 1990; the number of farm workers was reduced from 750,000 to approximately 110,000 (Porritt 1990). But it is not only the death of traditional small scale farming that occurs, but the consequent deaths of rural communities, where a living cannot be earned and migration to towns and cities becomes necessary.

5.15 Cook (2004) tells a similar story of the loss of farms in the USA. He is concerned with the power and control that agri-businesses – both within production and manufacturing – have over the food supply, and consequently over the diet and health of food consumers and the health of the environment.

'It is about power and control over food: how it is produced, by whom and for whom.' (Cook 2004 p10)

It is a power struggle between large corporations and small scale producers, where small scale producers cannot compete and are forced out of business^[1]

5.16 A similar struggle takes place at an international level, where subsidies lead to surpluses, which are then 'dumped' at below cost of production on other nations, whose farmers are unable to compete and are forced off the land. This is exemplified by the story of Lee Kyung Hae, a Korean peasant farmer and Via Campesina *activist*^[2], who took his own life in protest against the World Trade Organisation during the 2003 negotiations in Cancun, Mexico.

'...Our fears became reality in the marketplace. We soon realized that despite our best efforts we could never match the prices of cheap imports...

...Sometimes, prices would drop four times over, all of a sudden. What would be your emotional reaction if your salary drops suddenly to a half without knowing clearly the reason? The farmers who gave up early went to urban slums. Others who have tried to escape from the vicious cycle have met with bankruptcy due to accumulated debts ...

...The lands being paved now were mostly rice paddies built by generations over thousands of years...

... Who will protect our rural vitality, community traditions, amenities and environment?'

(Lee Kyung Hae 2003 from the statement he distributed immediately before his suicide, reproduced in full in Rossett 2006p xii-xiii.)

This very poignant quotation illustrates the death of community at a national level.

5.17 Biodiversity and Ecosystems. Throughout the 4.5 billion year history of the Earth, species have evolved and subsequently become extinct. This process is normal to life on Earth. However, as humans have progressed the rate of extinction has increased dramatically; experts are now suggesting that 100

species a day are becoming extinct (Balouet & Alibert 1990). Whilst agriculture is not the sole culprit, it is heavily implicated. The process of expansion, (including deforestation) has meant that there is less and less of the physical surface available for other species. Agricultural pollution has also been a significant contributor.

5.18 Another factor in the death of ecosystems arises from the nature of today's agri-industries. The Green Revolution transformed agricultural practices which had previously – and necessarily – been organic. In the 1940's in Mexico, scientist Norman Borlaug's research into disease resistant wheat strains, combined with mechanised agricultural technologies (the extensive use of herbicides, pesticides and oil-based fertilisers) led to such major gains in yield that Mexico became an exporter of wheat. This success led to great enthusiasm for these technologies and the Green Revolution spread worldwide in the 1950's and 1960's (Briney 2010). However, these technologies inevitably produce monocultures (Pretty 2002). A field of grain will contain virtually nothing but that grain. Before the Green Revolution, a field created for the purpose of growing food for humans would nonetheless be an ecosystem in itself, with many other species sharing the space for purposes of their own.

5.19 Borlaug was a 1970 Nobel Laureate; his work having saved millions of lives. It seems outrageous to challenge this achievement. And yet these human lives have been saved at great costs to other species. The question must be asked 'are these technologies the only way to prevent human starvation?' Given the disparity between the increasing yields produced and the numbers of those in food poverty as detailed above, my argument is that overall the Green Revolution has not been successful, and there does, indeed, have to be a better way.

5.20 Rivers and Soil. There are many examples where pollution from agriculture has led to land and water being unable to sustain life. Fertilisers on land 'run off' into streams and rivers, which then become subject to the process of eutrophication. This occurs when excessive amounts of nutrients cause phytoplankton to reproduce very rapidly and the resulting algal bloom covers the surface of the stream, river or lake. This leads to the near death (algal bloom excepted) of life in that water course through a number of factors. The algae may use all the oxygen in the water leaving none for other species; the shielding of sunlight from underwater aquatic plants preventing them from photosynthesising; finally some species of algae produce toxins which are fatal to other life forms (Water Pollution Guide 2010).

5.21 The process whereby industrial agriculture causes death to the land it is built upon is rather different. Monocultures use continued applications of pesticides, herbicides and fertilisers (which do not remain within the soil), but do not put any organic materials (decomposed vegetation, manure etc.) back. This, combined with repeated ploughing, means that land which should be alive with organisms becomes almost sterile. Soil should not just be dirt, micro organisms are an essential component (Stewart 2004). Instead it becomes only a space where crops are grown, but does not itself contribute to their growth. Like the algae, the crops are living on artificial fertilisers only.

5.22 Industrial agriculture creates situations whereby water and land systems which are fundamental to life, are unable to support life themselves. Effectively they are dead.

5.23 The Earth. Although it would be unjustified to claim that food is the main cause of climate change, it is arguable that it is the one of the main contributors. Agriculture is the single greatest source of atmospheric methane and nitrous oxide in the UK (DEFRA 2005), and produces 14% of UK carbon dioxide emissions (Forestry Commission 2010), with transport in the UK alone accounting for 3.5 million tonnes of carbon dioxide each year (Farrar & Nason 2005). These statistics include all types of agriculture, including organic farming, but, industrialised agricultural systems are by far the greatest providers of food. Furthermore, food is symbolic of the attitude which is behind climate change – that the Earth is seen, by humans, to be there for the benefit of humans. We are eating the Earth. It therefore fits within this schema that food is partly in actuality, and also symbolically, responsible for the potential, but frighteningly plausible, death of the Earth.

5.24 Monbiot (2006) explains how this might occur if radical efforts are not taken to reduce the output of human produced greenhouse gases. It is a situation known as 'positive feedback', where the point comes when, however much humans do to limit, or even ban, the production of greenhouse gases, events set in motion will ensure the continued increase of the Earth's temperature. What may happen is that as the Earth heats up, trees and plants die that would previously have acted as carbon sinks. This causes further warming. This will lead to a state whereby soil, rather than absorbing carbon dioxide, releases it instead. This leads to further warming. Whilst this is happening, the melting of permafrost leads to the release of methane, therefore leading to further warming. And so on. And so the Earth's temperature rises again and again. Monbiot equates the eventual consequences with the Permian, when almost all life forms on the Earth were extinguished^[3].

Some Reflections on Food-as-Death

6.1 Having outlined the conceptual field of food-as-death, two issues become apparent, and these are interrelated. The first is that the level 'communities' is not an obvious fit in the schema that I have proposed. It seems to follow easily from the first level (corporeal) but it does take a small leap of the imagination to accept that it also leads into the level 'biodiversity and ecosystems', and indeed this level would follow on very easily from the first. Food-as-death at the level of communities appears to be a separate category altogether. And I would argue that this dissonance is an aspect of the other issue – dualism.

6.2 As can be readily observed, with the exception of the ultimate level (the Earth) the conceptualisation of food-as-death exposes the dualism inherent in industrial food production practices – not only on the basis of who gets to eat who or what, but even when it leads to death, there is duality. The stories of humans

and of the rest of the biosphere are not the same. Deaths through food for humans are self inflicted on an individual and species basis – i.e. that humans inflict the consequences upon other humans. This is not the same as saying that these deaths are deliberate, rather, that this is what arises out of the dominant conception of food as a commodity. But the entire ethos separates humans from all other aspects of this Earth.

6.3 This is why the community level does not appear to mesh with 'biodiversity and ecosystems'. Yet ecosystems are also communities – many-species communities, which could (should) include humans. Community(s) need not be a purely human/social phenomenon. Pretty (2002) argues in support of renewed connection between humans and the land, which is summed up in the phrase 'land ethic', a radical vision of Aldo Leopard:

This land ethic implies thinking of land and community as a connected network of parts, which includes us as humans, and in which each element possesses intrinsic rights. There are many different views of this land ethic; some say it is visionary, others that it is dangerous nonsense. But the point remains that most people in industrialized countries still see nature as a bundle of resources that are separate from us. Thus the land ethic remains radical.' (Pretty 2002p172)

If this were the community in question, it would merge easily into the next level - but then there would be no support for the claim that food is death.

6.4 To conceptualise food-as-death is more than using death as a metaphor, since there is a direct relationship between food and death. It is worth reiterating here that food is a sign, consisting of a signifier, which is the materiality of food and the signified, which in this instance is the concept of death. Food is physical and alive until the point of becoming food. Similarly much of the damage created by industrial agricultural systems is physical and results in the death of other living beings. Death is physical, therefore actual, as well as conceptual. Food-as-death is a metonym, where a connection is used to represent the whole. In this case, food provision systems cause death. This is not the whole story, since food obviously has a major role in supporting life. But it also causes death, and it is this connection to 'death' that is used to represent 'food'.

6.5 Chandler states that semiotics challenges the 'literal' because it does not accept that there is any value free representation. Language itself shapes reality. Conceiving of food as death is an attempt to shape an alternative reality; it is not value neutral, it is intended to help promote radical environmentalism. The connotational field of food-as-death highlights food provision for human in the context of ways of life which are death seeking. Food-as-death is a trope which can provide a focal point for radical environmentalist critiques for these ways of life. It is, however, insufficient on its own, in that it only offers a critique, but not a solution. The essential task therefore, is to demonstrate that food for humans can be organised in a way which affirms the well being of humans, communities and non-human nature.

Conceptualising Food-as-Life

7.1 Concepts are understood in relation to other concepts. This is seen in terms of oppositions, where something is understood by virtue of what it is not. Saussure - one of the founders of the discipline of semiotics – claimed that signs are:

'...purely differential and defined not by their positive content but negatively by their relations with the other terms of the system. Their most precise characteristic is being what others are not' (Saussure 1915, quoted in Penn 2002p228)

7.2 Following Saussure therefore, it is necessary to conceive of an alternative trope in opposition to foodas-death, and which is meaningful to radical environmental philosophies, and this obviously, will be foodas-life, when food does indeed nourish and sustain life.

7.3 This may appear as though we have come full circle. However, it must be reiterated that this will be at the connotative level, rather than the denotational level as described above, and will have a very different set of meanings. What therefore would be the essential features of a connotative field of food-as-life?

7.4 Radical environmental philosophy, whether ecocentric or anthropocentric, challenges dualistic notions of a distinction between humans and nature. Food-as-life will need to reflect an understanding of humans as being part of nature. This is a challenge to the dualism presented by the concept of food as death.

Food inevitably requires the death of something, regardless of who eats what, and how that death is arrived at. Death therefore is an integral part of life. Saussure argued that concepts are understood by their negatives, but this is not necessarily the same as meaning that one is good and the other bad.

7.5 I would argue that death and life define each other – neither is positive or negative - and that death and life have artificially been set in opposition. This is one of the significant features of the opposition of humans and nature.

7.6 Food -as-life, therefore, needs to accept the interrelatedness of life and death. Food-as-death shows that industrialised food practices do not, and that they therefore create death rather than life.

Conclusion

8.1 'Conceptualising Food as Death' is deliberately provocative. Its intent is to draw attention to the

devastating consequences of today's industrial food provision practices, and the concept is sufficiently startling to capture attention. By understanding how the way in which we allow food to be organised on our behalf not only damages the natural world, but our relationship with it, as well as ourselves and our relationships with each other, it is possible to begin the process of change.

8.2 The way food is produced through industrialised agricultural systems presents a major threat to humans, non-human species and the environment as a whole. But solving the problem of food also presents an outstanding opportunity. If we change the way we conceptualise food, and consequently the way we produce food, this in itself should go a long way to changing our relationship with the environment and with other humans.

8.3 Reality mirrors language: food-as-death is only the starting point. Food-as-life is something to aim for where the very act of eating is an act of integration.

'A thing is right when it tends to preserve the integrity, stability and beauty of the biotic community. It is wrong when it tends otherwise.' (Leopold 1968p224)

Notes

1 Radical environmentalism promotes small scale, local and self sustaining communities. This is not to fall into the 'local trap' as defined by Born & Purcell (2006). Their argument is that there is nothing inherently superior to the local any more than there is anything intrinsically hierarchical and exploitative in global food systems even though current global systems are demonstrably so. Born & Purcell take considerable pains to point out that they are not against the local per se, but only the careless privileging of the local. The local trap confuses ends with means and thereby assumes that local on its own will necessarily lead to social or environmental justice. As an example, they suggest that food grown organically and transported causes less environmental damage than the same type of food grown locally using industrial agricultural techniques. This claim is well supported (e.g. Farrar & Nason 2005). Food grown organically and locally would provide the best solution so far, but clearly illustrates Born & Purcell's contention that there is more to sustainability than merely the local.

2 The Via Campesina is a worldwide movement of peasant farmers who are fighting against neoliberal policies promoted by leading political powers, specifically the US and European Union, and the resulting lack of control over their farms and their traditions. They have produced 'The People's Food Sovereignty Statement' asserting the 'right of peoples to determine their own food and agriculture'. This is reproduced in full in Rossett 2006.

3 It is now widely accepted that climate change is inevitable and that it is a direct result of human action. The IPCC (International Panel on Climate Change), established in 1988, is a scientific body which reviews scientific, technological and socio-economic research pertinent to climate change. The findings are then disseminated in a way that is 'policy relevant and yet policy neutral, never policy prescriptive' (IPCC 2011). In the fourth major report produced in 2007, the IPCC stated that 'warming of the climate system is unequivocal' (quoted inGiddens, 2009 p21). It is however, important to note that the concept of human induced climate change is not universally accepted. Giddens (2009) outlines the major causes of dissent: warming is only moderate, that the worlds temperature has always been in a state of flux and human activities are largely irrelevant; that scientific opinion is still divided and that the IPCC is a political body as well as a scientific body with its own agenda (The IPCC denies this, as quoted above), and that global warming is one scare amongst many. As Giddens notes, the views of climate change sceptics should be considered in the interests of rigorous research. It is however, beyond the scope of this paper to address any of these arguments; my own position is that however much I long for all or any of these views to be correct, I remain unconvinced.

References

BALOUET, J C & ALIBERT, E (1990) Extinct Species of the World New York: Barron's.

BAUDRILLARD, J (2003) Passwords. London: Verso.

BEARDSWORTH, A & KEIL, T (1997) Sociology on the Menu. London: Routledge.

BOOKCHIN, M (1991)(a) 'Social Ecology' in Dobson (ed.) The Green Reader. London: Andre Deutsch.

BOOKCHIN, M & Foreman, D (1991)(b) Defending the Earth. Montreal: Black Rose Books.

BOOKCHIN, M (1998) 'Society & Ecology' in J S Dryzek, & D Shlosberg D (eds.) *Debating the Earth :The Environmental Politics Reader*. Oxford: Oxford University Press.

BORN, B & PURCELL, M (2006) Avoiding the Local Trap: Scale and Food Systems in Planning Research. *Journal of Planning Education and Research* 26:195-207. [doi:10.1177/0739456X06291389]

BRINEY, A (2010) Green Revolution: History and Overview of the Green Revolution http://geography.about.com/od/globalproblemsandissues/a/greenrevolution.htm

CHANDLER, D. (2002) Semiotics: The Basics. Abingdon: Routledge. [doi:10.4324/9780203166277]

COBLEY, P & JANSZ, L (2010) Introducing Semiotics. London: Icon Books.

COOK, C D (2004) Diet for a Dead Planet. New York: The New Press.

DEFRA (2005) *The Environment in Your Pocket*. London: Department for Environment, Food and Rural Affairs.

DICKENS, P (1992) *Society and Nature: Towards a Green Social Theory.* Philadelphia: Temple University Press.

DUNLAP, W & CATTON, R A (1980) New Ecological Paradigm For Post-Exuberant Sociology. *American Behavioural Scientist* 24, 1:15-47.

ECKERSLEY, R (1992) Environmentalism and Political Theory. London: UCL.

FARRAR J & NASON, J (2005) *Reducing Gwynedd's Environmental Footprint*. Bangor: WWF; University of Wales, Bangor; Gwynedd Council.

FORESTRY COMMISSION (2010) Emissions Pie Chart http://www.forestry.gov.uk/images/emissionspiechart.jpg/%File/emissionspiechart.jpg>

FRECKLETON, A M, GURR, M I, RICHARDSON, D P, ROLLS, B A & WALKER, A F (1989) Public Perception and Understanding in C Spedding (ed.) *The Human Food Chain.* London: Elsevier Applied Science.

GARNER, R (1996) Environmental Politics. Hemel Hempstead: Prentice Hall/Harvester Wheatsheaf.

GIDDENS, A (2009) The Politics of Climate Change. Cambridge: Polity Press.

GIDDENS, A (1979) Central Problems in Social Theory. London: Macmillan.

GOODY, J (1982) *Cooking, Cuisine and Class: A Study in Comparative Sociology.* Cambridge: Cambridge University Press.

HANNIGAN, J (1995) Environmental Sociology. London: Routledge.

HICKMAN, M (2008) The True Cost of Cheap Chicken'. The Independent 4 January

IPCC (2011) <http://www.ipcc.ch/organization/organization.shtml>

JACOBSEN, E (2004) 'The Rhetoric of Food: Food as Nature, Commodity and Culture' in M Lien & B Nerlich (eds.) *The Politics of Food.* Oxford: Berg.

LANG, T & HEASMAN, M (2004) Food Wars: The Global Battle for Mouths Minds and Markets. London: Earthscan.

LAWRENCE, F (2004) Not on the Label: What Really Goes into the Food on Your Plate. London: Penguin.

LEEDS-HURWITZ, W (1993) *Semiotics and Communication: Signs, Codes, Cultures.* New Jersey: Lawrence Erlbaum Associates.

LEOPOLD, A (1968) A Sand County Almanac. Oxford: Oxford University Press.

MOORE LAPPE, F (1971) Diet for a Small Planet. New York: Ballentine Books.

MONBIOT, G (2006) *Heat.* London: Penguin/Allen Lane.

NAESS A (1973) The Shallow and the Deep: A Summary' *Inquiry* 16 pp 95-100. [doi:10.1080/00201747308601682]

NAESS A. (1997) Sustainable Development and the Deep Ecology Movement in S Baker, M Kousis, D Richardson & S Young(eds.) *The Politics of Sustainable Development.* London: Routledge.

NATIONMASTER (2010) Mortality Statistics: Eating Disorders http://www.nationmaster.com/graph/mor_eat_dis-mortality-eating-disorders

PENMAN, D (1996) The Price of Meat. London: Gollancz.

PENN, G (2002) 'Semiotic Analysis of Still Images' in M W Bauer & G Gaskell (eds.) *Qualitative Researching with Text, Image and Sound.* Sage: London.

PEPPER, D (1993) *Ecosocialism: from Deep Ecology to Social Justice.* London: Routledge.

PEPPER, D (1996) Modern Environmentalism. London: Routledge.

PORRITT, J (1990) 'Where on Earth are We Going' London: BBC Books.

PRETTY, J (2002) 'Agri-culture' London: Earthscan.

PRETTY, J (2005) 'Do You Like Green Eggs and Ham? Times Higher Education, 30 September.

REDCLIFT, M & WOODGATE, G (1994) 'Sociology and the Environment: Discordant Discourse?' in M Redclift & T Benton (eds.) *Social Theory and the Global Environment.* London: Routledge.

ROSSETT, P (2006) Food is Different: Why We Must Get the WTO Out of Agriculture. London: Zed Books.

STEWART, A (2004) The Earth Moved. London: Frances Lincoln.

WATER POLLUTION GUIDE (2010) Eutrophication http://www.water-pollution.org.uk/eutrophication.html

WORLD HUNGER EDUCATION SERVICE (2010)

<http://www.worldhunger.org/articles/Learn/world%20hunger%20facts%202002.htm>