Whatever Happened to Organic?
Food, Nature and the Market for "Sustainable" Food

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"Organic is becoming what we hoped it would be an alternative to."

A Tale of Two Fish

The development of the organic movement has been littered with debates, arguments and fall-outs. One can go back to the formation of the Soil Association (SA) in 1946/47 and the refusal of Sir Albert Howard (the "inventor of compost" and the official Imperial Economic Botanist) to join the fledgling organization because of his view that it was too lenient in its restrictions on chemical use in agricultural production. However, tensions in the organic movement—in both the EU and U.S.—that have been growing for a decade or so have finally boiled over. One could identify several areas where these tensions are being played out (for example, the regulation of organic egg and broiler production). However, the most notable outbreak of hostilities in the U.K. concerns the certification—or not—of farmed fish.

The certification of organic cod has exacerbated divisions within the organic sector. Licensed by the Organic Food Federation (OFF), "No Catch Cod" has established itself very successfully in the U.K. market, garnering multiple awards along the way. However, the assessment of this cod farming by others within the organic sector has been damning. The central criticism is the use of permanent lighting in the sea pens for up to two years to prevent the animals from maturing and spawning. The companies involved argue that they do this for welfare reasons, since spawning cod are aggressive. However, the use of lighting also produces much larger, commercially viable fish. Lighting and its effects were identified by at least one member of the Advisory Committee on Organic Standards (ACOS) as a grave cause of concern. Another critic, Lawrence Woodward, former Soil Association chairman and director of the Organic Research Center, argued: "I don't believe that consumers who are buying organic farmed cod are getting what they expect in terms of environmental protection, in terms of food quality, and in terms of welfare for the fish. I applaud the Soil Association's decision not to certify cod." The plot thickens, however, when one considers the rest of Woodward's quote. Having applauded the SA's decision to refuse to certify the farmed cod, he continued: "…It's a pity that they've certified salmon...As far as I am concerned, all certification of these wild species of animals should not occur."

The BBC claims that a confidential report for the Soil Association states that the certification of farmed salmon as organic illustrates the gulf between its principles and the salmon farm standards it has accepted. The report doesn't mention the permanent lighting used with cod but focuses on the risk from sea lice and waste. The certification of farmed salmon prompted the resignation of Peter Kindersley as a Soil Association trustee, who argued it was a "complete betrayal of everything organics has stood for on every level." In a very revealing interview discussing the SA certification of farmed salmon, Woodward declares:

> We wanted to change the food system. What is actually happening is that the food system is changing the organic sector. It's very important to get behind genuine organic so that we can change the food system.

This raises interesting questions about what, if anything, "genuine organic" means and about the circumstances, if any, in which the development of the organic movement could change the food system.

Before returning to such issues, we consider the origins of sustainable agriculture and the movement for it. We then look at the organic/sustainable relationship and the implications of the phenomenal growth of the organic sector in the last ten to fifteen years. We argue that a number of commonly—and often subconsciously—held notions of organic food and farming that developed in the second half of the 20th century are misplaced. While organic farms have historically been smaller, family run, mixed farms often producing for local consumers, there is nothing intrinsic in most organic regulation that requires this. As the organic sector grows and offers profitable options for the conventional farming and agribusiness sectors, it is subject to pressures that undermine the assumptions that many make about it. There are pressures to slowly bleed "organic" of much of its meaning.

Whether this matters, and if so, what can be done about it, are areas for discussion. Clearly Woodward believes it does matter and that there is something that can be reclaimed: a "genuine organic" that can change the food system.

Sustainable and Organic Agriculture

The desire for a more sustainable agricultural production system has a long history, pre-dating many other areas of production and consumption where sustainability has become an issue more recently. As a result, many "alternative" agricultural systems have developed. These include integrated pest management (IPM), integrated crop management, low-input agriculture, low-input sustainable agriculture, low-external-input agriculture, agroecology, permaculture, biodynamic farming—as well as the best known in the global North, organic agriculture.

The problems associated with conventional and industrial agriculture, which these approaches have in various ways responded to, have long been acknowledged:

> Agriculture has come to draw the inputs which it uses from more distant sources, both spatially and sectorally, to derive an increasing proportion of its energy supplies from non-renewable sources, to depend upon a more narrow genetic base and to have an increasing impact on the environment. This is particularly reflected in its heavy reliance on chemical fertilizers and pesticides, its dependence upon subsidies and price support and its external costs such as threats to other species, environmental pollution, habitat destruction and risks to human health and welfare.

While definitions of sustainable development—and, to a lesser extent, sustainable agriculture—proliferate, we will say little more about this other than to note that the word sustainable is derived from the Latin, *sustinere*, meaning to keep in existence, which implies permanence or long-term support. Further, Ikerd's definition of a sustainable agriculture, with explicit biophysical, economic and social aspects, suffices for the purposes of this paper. A sustainable agriculture is:

> …capable of maintaining its productivity and usefulness to society over the long run. ... it must be environmentally sound, resource-conserving, economically viable and socially supportive, commercially competitive, and environmentally sound.

Lampkin points out that contemporary organic farming is based on a number of approaches that have evolved and have been blended over time to produce the current organic farming, which he defines as seeking

> …to create integrated, humane, environmentally and economically sustainable production systems, which maximize reliance on farm-derived renewable resources and the management of ecological and biological processes and interactions, so as to provide acceptable levels of crop, livestock and human nutrition, protection from pests and disease, and an appropriate return to the human and other resources.

The International Federation of Organic Agriculture Movements (IFOAM) sets out basic standards for production and processing, which make clear that the scope of the principles extends beyond simple biophysical aspects to matters of justice and responsibility. Hence the principles seek "the establishment of an entire production, processing and distribution chain which is both socially just and ecologically responsible." There has been a long co-evolution between the understandings of sustainable and organic agriculture, and while the former has been somewhat hard to pin down, being defined mainly in terms of what it is not, organic has come to be defined precisely in a way that allows inspections and certification.

The development and certification of these standards has led to farming systems that have considerable environmental benefits at the farm level. Stolze, et al.'s review of the environmental impacts of organic farming in Europe finds that "organic farming clearly performs better than conventional farming in respect to floral and faunal diversity." In terms of soil, they conclude that "organic farming tends to conserve soil fertility and system stability better than conventional farming systems…no differences between the farming systems were identified as far as soil structure is concerned." Regarding water quality, the review concluded that "organic farming results in lower or similar nitrate leaching rates than integrated or conventional agriculture." Stolze, et al. conclude that nutrient balances on organic farms are often close to zero and that "energy efficiency…is found to be higher in organic farming than in conventional farming in most cases."

However, as the salmon and cod farming controversies discussed above indicate, the relationship between organic and sustainability is a contested one, and this contestation is increasing in intensity. Indeed the furor over farmed fish highlights that while "organic" used to be regarded as tightly defined in contrast to rather fuzzy "sustainable agriculture," this is no longer the case: the nature of organic is now also up for grabs.

While the sustainable/organic relationship has been discussed for many years, the pressures to modify the meaning of organic have never been greater. Even in less pressurized times, the relationship was debated. For example, consider Hodge's view that "it must be questionable as to whether organic farming, as currently practiced, can reasonably be regarded as sustainable….A restriction on the use of inorganic chemicals is not a sufficient condition for sustainability, but it may not even be a necessary condition."

Carter and Dale argue in *Topsoil and Civilization* that the fertility of large areas of ancient Greece, Lebanon, Crete and North Africa was destroyed by low-input, chemical-free farming. This highlights the risk of focusing only on the absence of certain inputs in assessing the environmental effects of farming systems. This is still relevant, because farming that is "organic by neglect" continues today, hence an inspector for the Organic Crop Improvement Association (OCIA) in the United States reports that the idea that a crop is organic because of the absence of chemical inputs is all too common. This "does a major disservice to the majority of organic farmers who are making excellent progress in developing healthy and naturally resilient whole farm systems." He also describes

> …so-called organic farms with 1050 acres of soybeans out of 1100 acres total...Others have even less rotation than many conventional farms. The sustainability of organic farms runs across the entire range of sustainability, just like it does for conventional farms.

How can such unsustainable systems be passing the organic certification process? The reason is that certification standards must, by their very nature, focus on (usually the exclusion of) particular inputs or tools. While these standards may be derived from a set of broad principles based around ecology, health, and fairness, defining standards with which to assess whether producers and processors are acting in a manner that is "socially just" or "ecologically responsible" is difficult and not something the main organic certifiers have shown much appetite for. Those involved in the

organic bodies have been far more concerned with setting out the environmental or biophysical aspects of organic systems than their economic and social organization.

These tensions between the broad principles of the organic movement and the certification standards that have facilitated its development have been affected by the growth of the sector. It should, however, be noted that the "broad principles" have themselves evolved over time. It is usually forgotten that the largest group represented on the first Council of the SA was *Kinship in Husbandry*, a far-right group whose ideology mixed the sacredness of soil with that of blood and race, and who advised the British fascist leader, Oswald Moseley, on agricultural issues.

Returning to organic standards and the nature of certified organic farming, there are several closely related pressures at work. But driving them all is the economic development of the organic market. Almost 31 million hectares are now certified organic globally, with Oceania accounting for 39 percent, Europe 23 percent and Latin America 19 percent. Some nations, such as Austria with 14 percent, now have more than 10 percent of their cultivated land as organic. The value of the global market in organic food and beverages in 2005 was estimated at €25.5 billion and is predicted to rise to over €30 billion in 2006. Within the U.K., organic retail sales were worth more than £1.5billion in 2005, a figure almost one-third higher than the previous year. The Organic Targets Campaign, backed by the SA, aims to have 30 percent of U.K. land managed organically by 2010.

The radical increase in organic farming's relative profitability, which is behind these trends, has drawn new sections of the farming population into organic production. There is much evidence on the changing profile in terms of background and attitudes of more recent entrants into organic farming, especially those converting from conventional production. During the many years that organic farming remained a niche of producers wedded to the broader organic principles, the gap between principles and standards was less important. Not so now. As Woodward comments "there are lots of loopholes in the regulations, and in practice these are being heavily exploited, …the consumer will one day wake up and see this stuff is not what they think it is." Furthermore, the conversion of these larger scale, more established, conventional food producers to organic has effects within the market. The processes of competition, centralization and specialization, which have served to force down producer prices in the conventional food sector, have begun to play out in the organic sector.

A rather more startling effect of this change in the economics of organic food is neatly summed up by Pollan:

> The organic movement has become a $7.7 billion business…Perhaps inevitably, this sort of growth … has attracted the attention of the very agribusiness corporations to which the organic movement once presented a radical alternative and an often scalding critique.… And now that organic food has established itself as a viable alternative food chain, agribusiness has decided that the best way to deal with that alternative is simply to own it.

From this, several effects flow. There is pressure from agribusiness and the large retailers to reshape organic standards to facilitate further exploitation of the market. Stories from within the organic movement of these pressure are increasing, hence Laville and Vidal's report that "supermarkets are putting pressure on organic food watchdogs to lower standards so they can fully exploit a billion-pound industry" and the call from the CEO of Tesco for the British organic industry to become more "professional" in order to match the growth in demand. The certification battles over farmed salmon and cod should be seen in this context.

The potential for pressure from agribusiness and the retail giants on what is permitted to be called organic does not only apply to the certifying organization but also to the state regulatory bodies. The formation of the first national organic standards in the U.S. and the role of the U.S.

Department of Agriculture (USDA) in that process provide an insight into the nature of this pressure.

Regulatory Capture and "Industrial Organic" in the U.S.

As in many Western countries, organic certification in the U.S. was initially done by a patchwork of local organizations regulating the small niche market for organic goods. By the 1980s, there were moves to shift to standardized federal regulation. The most obvious reason for this was the growth in the market alongside a proliferation of certifying agencies, posing the risk of confusion and even fraud. However, according to Vos, an additional reason prompted the move:

> [T]here were rumors that the USDA, along with the FDA, was considering banning the term "organic" altogether, apparently because the rising popularity of organic foods was calling into question the products and practices of conventional agribusiness (Bowen, 1998). In this climate of suspicion, some leading members of the organic movement began lobbying members of congress, which ultimately led to the introduction…of the Organic Foods Production Act (OFPA) into the 1990 Farm Bill.

Following this, the National Organic Standards Board (NOSB) was established to formulate national standards and make recommendations to the USDA. A consultation process then began to solicit input from the organic sector. Between 1994 and 1996, recommendations were submitted to the USDA, and in 1997 the National Organic Program Proposed Rule (NOPPR) was released. The release of this proposed rule by the USDA caused widespread consternation and anger and was taken by many involved in the organic sector to indicate that the USDA was a "captured" agency entirely unsuited to regulate the organic sector. In short, critics charged that agro-industrial interests had shaped the proposed rules to suit their own needs:

> The language of the rule, while appearing to be transparently democratic in its solicitation of commentary, reads like a public repudiation of the organic tradition. It dismisses, questions, and overturns NOSB recommendations at almost every turn ….the controversy appears to be a collision between two mutually incomprehensible discourses, thoroughly and irretrievably at odds with each other.

The most commonly cited problems with the proposed rule (its publication elicited nearly 300,000 responses to the USDA) were the inclusion of the use of genetically modified organisms (GMOs), sewage sludge, and food irradiation. The use of sewage sludge would have assisted large-scale operations in the procurement of the necessary nutrients without establishing closed-nutrient cycling systems, hence the proposed rule facilitated large-scale organic monocropping. Permitting GMOs was an anathema to most organic producers and would have facilitated pest control of large operations. The use of ionizing radiation to kill food pathogens would have enabled the organic industry to use the same mass processing and distribution techniques that characterize the conventional food system.

In addition to these so-called "big 3" issues, there was ambiguity over antibiotic use and a flat fee for registration, which was seen as problematic for small producers. The proposed rule also prohibited any organizations from identifying their produce as having been produced under more stringent conditions. Thus, the rule represented a ceiling not a floor, with no differentiation from these standards permitted.

The storm of protest that followed publication of this proposed rule forced the USDA to back down on the "big 3." However, the revised rule retained the flat rate registration fee and remained both a floor and a ceiling. For these and other reasons, the regulation still proved highly unpopular with many in the organic sector. Vos cites a member of the Washington State Organic Advisory Board:

> [T]he rules…give the impression that the NOP [National Organic Program] would be a sort of Trojan horse attempting to introduce an alien agenda into the organic industry. It is difficult not to perceive that these agendas are the very same ones generally embedded in USDA policies which give the impression that the USDA is an agent of large agribusiness interests.

One can observe a general trend, perhaps most developed in the U.S., made up of (i) growing profits in the organic sector alongside crises in the conventional food sectors; (ii) growing industrialization of organic production, processing, packaging, and transportation; and (iii) pressure from agribusiness to shape organic regulation.

Pollan reviews the development of the organic sector in the U.S. and the emergence of "industrial organic." His case study is an interesting one: Cascadian Farm was a pioneer organic farm in the 1970s that achieved major growth and was eventually bought out by General Mills, a large food conglomerate. What the large-scale conventional firms like Gerber's, Heinz, Dole, Archer Daniels Midland (ADM), and ConAgra (which all developed or acquired organic brands after 1990) brought was a model of large-scale growing, buying, processing, and sales. Echoing Woodward's call for a return to "genuine organic," Pollan poses the question as to

> …whether the logic of an industrial food chain can be reconciled to the logic of the natural systems on which organic agriculture has tried to model itself. Put another way, is "industrial organic" a contradiction in terms?

There is no doubt some find the involvement in and increasing domination of the organic sector by agribusiness distasteful. We have highlighted the resulting pressures on standards and the potential for a cost-price squeeze hitting the smaller, pioneer producers. Linked to these effects is the drawing of organic producers and produce into the existing transnational agroindustrial structures.

This has implications on the farm and beyond the farm gate. Agribusiness typically is characterized by the integration of the organizations along the food production, processing, transportation and retailing chain. In effect, farmers become contract growers with diminishing control over what and how they produce. Engaging with these modes of operation—however committed one may be to changing the food system—inevitably leads to changes on the farm. Mass food for profit exerts pressure back through the food supply chain, changing the scale of production, the varieties grown, and the methods of production. These pressures are acknowledged by a farmworker interviewed by Pollan who explains that:

> The maw of that processing plant beast eats 10 acres of cornfield an hour…and you're locked into planting a particular variety like Jubilee that ripens all at once and holds up in processing. So you see how the system is constantly pushing you back toward monoculture, which is anathema in organic. But that's the challenge—to change the system more than it changes you.

These on-farm trajectories, whether a result of engaging with the conventional food chain or because of the pressures from competing economically with those who have, are only part of the picture. The off-farm environmental effects of the food system, long ignored, now receive more attention, most notably the emissions of carbon dioxide and other green house gases (GHGs). However, some within the organic movement have been concerned for some considerable time with these trends. In a very prophetic article entitled "Is Organic Enough?" organic producer Bill Duesing wrote:

> The energy-intensive, distant, large-scale, corporate-controlled global food distribution system.…will be happy to offer organic as an option, and will keep working to increase its share of our food dollars….If the organic food system falls into the same patterns of scale, distance and control as the conventional food system, human beings will have very little work to do as the scale of operations is increased, and as production is moved to regions with the lowest labor, land and energy costs.

Patrick Madden, then president of the World Sustainable Agriculture Association, wrote in 1996:

> I am frankly alarmed by the trend of globalization of trade…in agriculture…I am very concerned that establishment of national and international certification standards will draw huge multinational organizations into that segment of agriculture, and that countless family farms will become extinct, and many rural communities will be devastated, and food security will be worsened in very many places.

Until the early 1990s, there was little reason to worry about the off-farm effects of the organic food system, because it and the farms that it comprised were small, and there was very little movement of inputs and outputs across large distances within countries and virtually none between countries. As the organic sector increasingly exhibits "the same patterns of scale, distance and control as the conventional food system," this is no longer the case. While the weight of evidence regarding the on-farm benefits of organic production was referred to earlier, food is not consumed on-farm, and therefore assessment of the impact of food has broadened to include food miles and associated emissions of CO_2, methane (CH_4), nitrogen oxide (NO_x); volatile organic compounds (VOCs); and the amount of packaging that ends up in landfills. Sustain, the U.K. alliance of civil society groups advocating environmentally sustainable and healthy food, reports that a "typical" U.K. family of four generates the following CO_2 emissions annually: 4.2 metric tons from their house, 4.4 from their car, and 8 from the production, processing, packaging and distribution of their food.

The basis for these large amounts of CO_2 and other GHG emissions are growth in food movements at both the national and international level. At the national level, supermarkets increasingly dominate both the conventional and organic food markets. In 1994 supermarkets accounted for 62 percent of U.K. organic sales, and by 2000 the figure had reached 80 percent. In 2005, U.K. retail sales of organic products totalled £1.6 billion, an increase of 30 percent from 2004, while the value of sales through producer-owned outlets (box schemes, mail order, farm shops, etc.) was £125 million. Although two-thirds of organic sales via supermarkets are U.K. produced, many of the fruits and vegetables are imported, much of it by air.

Supermarkets operate on the basis of the "Just in Time" centralized distribution system. "Just in Time" is the process whereby goods get to the supermarket, or components to the assembly line, "just in time" to be utilized. This entails a complex system of ordering, delivery planning, and distribution centers. The purpose is to turn goods over as quickly as possible and keep stocks low. Overwhelmingly, this involves the use of long-haul trucks operating to very tight delivery schedules. As a result, the average distance between supermarkets and distribution centers in the U.K. is 69 kilometers, or 138 kilometers on a round trip. One result of the "Just in Time" system's operation is that 30 percent of all U.K. freight vehicles travel empty.

Conventional sourcing systems also generate incredible volumes of identical food products moving in opposite directions. Lucas catalogues a whole series of such "food swaps." For example, the U.K. imported 126 million liters of liquid milk and 23,000 metric tons of milk powder in 1997 while exporting 270 million liters and 153,000 metric tons in the same year.

The globalization of the organic sector and, in Duesing's words, the development of the same patterns of scale, distance and control mean that organic food is also increasingly being shipped around the world, especially by air with environmental impacts shown below:

Table 1. Greenhouse Gases and Energy Used per T-km of Freight Movement

	Energy Use	Emissions per T-km (g)				
	Kj/T-km	CO_2	HCs[a]	NOx	CO	VOCs[b]
Rail	677	41	0.06	0.2	0.05	0.08
Boat	423	30	0.04	0.4	0.12	0.1
Road	2,890	207	0.3	3.6	2.4	1.1
Air	15,839	1,206	2	5.5	1.4	3

[a] Hydrocarbons; [b] Volatile Organic Compounds
Source: Sustain

Despite accounting for only 1 percent of "food-tonne-kilometres," airfreighted food accounts for 11 percent of CO_2 emissions from food transport. Trying to systematically evaluate the GHG load of organic imports to the U.K. is very difficult. The government's advisory bodies, the United Kingdom Register of Organic Food Standards (UKROFS) and its successor, ACOS, appeared not to hold the data on volumes and sources of organic imports, and the major retailers have declined our past requests for the data.

These tensions and trade-offs between the on- and off-farm effects of food consumption are now acknowledged by the organic movement. In 2001, the Soil Association launched an "Eat Organic, Buy Local" campaign, and in 2007, it began a review to respond to the environmental impacts of airfreighted organic food, with options said to include an outright ban on airfreighting. One issue to be incorporated within the review according to SA director, Patrick Holden, was the effect of any ban on exporters in developing countries and associated equity and ethical trading issues. This leads to another aspect of the development of the organic sector, the role of the global organic sector in developing countries.

Organic Imports & Developing Countries

Organic imports from developing countries are calculated to be worth over US$500 million. Europe represents the largest single organic market, with an estimated value of US$5 billion in 1997. In Europe as a whole, supply continues to lag behind growing demand. Over 80 percent of commodities such as fresh produce and beverages are imported in contrast to very low import proportions for goods such as organic meat and eggs.

Barrett, et al. report that in 2000, the EU listed import authorizations for the import of organic food from over 60 developing countries and that within the EU, the U.K. ranks third as a first destination for the import of organic produce from developing countries, some way behind Germany and the Netherlands. Leaving aside the off-farm environmental effects, the broader social implications of this shift to sourcing organic exports from developing countries is an issue also worthy of some attention. It might be hoped that the production of high-value export crops would offer an opportunity for some farmers in developing counties to generate revenues for investment on- or off-farm sufficient to be able to shift out of poverty.

Barrett, et al., writing specifically about Kenya's exporting of horticultural crops (which are exported from a number of sub-Saharan African countries), note that the U.K. supermarkets dominate this export trade, handling 70 percent of Kenya's exports of these crops. They argue that:

> Supermarkets are thus in a powerful position to influence what is actually grown in Africa, how it is grown and by whom, which reflects their need to keep profit margins as high as possible, as well as ensuring that the needs and demands of their customers are satisfied…Most

> importers predicted that smaller operations will become progressively marginalized as large-scale producers invest heavily to expand operations and are able to meet the ever increasing demands of the EU and U.K. regulatory framework.

Raynolds, writing about the international organic and fair trade movements, also considers which type of producers in the South are providing the organic exports:

> A number of studies suggest that due to the substantial costs and risks of organic production, much of the international trade is controlled by medium and large enterprises, challenging the assumption that it is small farms that benefit from the growing organic market. While marginal producers may be unable to afford to enter the organic trade, "Increasingly...larger farmers are seeing organic production as a good commercial proposition."

Speaking specifically about the rapidly growing organic banana trade, she argues that:

> The smallest organic banana producers are those in the Dominican Republic, but even here growers are mid-sized farms by local standards. Most Latin American organic bananas are grown on plantations. For example, Dole Food Corporation—which controls 25 percent of the conventional banana trade and a significant share of the U.S. organic sector—has in recent years become a major organic banana supplier.

For Raynolds, it seems clear that the patterns of organic trade that are developing between the South and the North are indeed replicating those of the conventional sector. The environmental concerns that motivate so many organic purchasers in the North, she argues, should not obscure the fact that the social implications of their purchasing in the source country are ambiguous:

> While some consumers may assume that purchasing certified organic products has progressive social implications, the organic trade in many ways re-enforces the traditional subordination of Southern producers. Voices from the South have virtually no say in the standards being used to define organic production by IFOAM or by legislation in major markets. At a national level, one can legitimately question whether encouraging colonial agro-exports like coffee or bananas, reconstituted under the label "organic," is environmentally or socially sustainable. At the level of the producer, one finds that marginal organic farmers in the South are likely to be as dependent on exploitative middlemen, corporate buyers, and volatile prices as conventional producers, unless they enter into fair trade networks.

This last issue of fair trade networks is an important one. Implicit in the suggestion is a negative answer to Duesing's question as to whether organic is enough. Raynolds points to a struggle to retain the "progressive" aspects of organic production, which, put another way, could be seen as a struggle for the meaning of organic production. On one side are those who see "organic" as a movement with social and environmental principles at its heart, whereas others regard it as nothing more than a production standard. Regardless of where one stands in relation to this divide, the old, rather uncritical assumptions about what organic farming represents are being challenged, and participation in the debate about the future of the system, from producers and consumers, would seem timely.

This struggle or battle for "organic" may be something that is played out implicitly with the different supply networks that have developed in the sector. The development of farmers' markets, box schemes, farmgate sales, fair trade importing, etc., may be seen as examples of attempts within the organic sector to develop alternative networks and patterns of control to what exists in the conventional sector. In this sense they are reflecting inclinations common in the conventional farming sector where the buying power of supermarkets is often berated by farmers. A survey recently found that 98 percent of farmers believe their future would be more secure if they "went back to basics… selling direct to the public."

Where Are the Public in All This?

The discussion thus far has concentrated on the production and regulatory aspects of the development of the organic sector with little attention paid to the role of the public. We believe that the public have held, often subconsciously, a range of vague and sometimes contradictory views about organic food regarding how it was produced and what it meant for them. There is a range of motives involved in the purchase of organic food including: taste; environmental benefits; the desire to support small/U.K./local farmers; food safety; the desire to avoid pesticides; health; and animal welfare. Associated with these motives, people have tended to see organic food in opposition to perceived traits of conventional food and the system that provides it. Hence they typically identified organic food as being local and coming from small, mixed, family-owned farms as opposed to the food from large, remote, corporate-controlled, specialized (commodity) farms. These rather uncritical assumptions were not particularly problematic, because until the mid-1990s, that happened to be the case for the bulk of organic produce. However, the development of the organic sector is causing increasing numbers to question some of these assumptions, although the increases in the numbers buying organic food swamp this greater skepticism.

As we have seen, when moving from general principles to certification standards, there is considerable opportunity to violate all of these earlier assumptions about the organic food chain and the types of farms producing organic food. If one's concern is the avoidance of pesticides or a safer or better tasting product for one's own consumption, then this may not be a problem at all. Indeed if organic production is simply a production standard that Con Agra can implement using contract growers as effectively as a small farmer selling locally, then these trends may be exactly what is required to move organic food out of the affluent niche market into the mainstream. However, for those who regard "organic" as a movement, as something that is a challenge to the existing patterns of scale and control, then the battle for "genuine organic" is important.

This points to the error of focussing only on the environmental or agronomic aspects of food production. The notion of organic as "natural" is flawed. First, because organic production requires management; it requires inputs, not least from humans. Organic standards have always been social constructs shaped by the social forces at work. The recent U.K. battles over farmed cod and salmon have highlighted this, but it has always been true. Mansfield's review of the submissions made when the U.S. was drafting its organic rules on whether wild fish should be included within the organic scheme illustrates the divergent views from within the organic movement on the organic/nature relationship:

> How organic can you be—wild fish roaming the oceans for food then spawning in their natal streams. No food source provided by man, and no interference by man.
>
> Indeed, the basic concept underlying the word "organic" is that food production should be as close to nature as possible.
>
> "Organic" is not synonymous with the pristine waters and naturally protected environment that produces fish without human intervention…a natural environment is not the same as… "certified organic," nor is an organic system simply a copy of a natural system. This is confusing natural with "organic-by-default."
>
> Organic is a system of agriculture… organic farms...are agroecosystems, not natural systems.

A rejection of the notion that organic systems are simply "natural" or organic farming is just letting nature take its course refocuses attention on the social processes by which standards are created and evolve. It also highlights that the social organization of a sustainable food system needs explicit attention. It is not the case that the setting of the certification standards in purely agronomic terms will determine the social and economic structures that follow.

Food Politics and Protests

The fact that organic regulations are socially determined rather than brought down from on high by agronomists points to there being a role in their determination for those who eat as well as those who produce food. In the age of "consumer sovereignty," this role is commonly assigned to the influence of food purchases, but this is not always the case. There is a long history of protest associated with both shortages of food and the poor quality of available food. Food adulteration, for example, has a long and dark past. Accum's work in the 19th century on adulterations of food and culinary poisons identified many weird and dangerous additives to foods in London. He reported the addition of alum and chalk to bread flour, and pipe clay, plaster of Paris and sawdust to bread, concluding that it was astonishing that "the man who robs a fellow subject of a few shillings on the highway is sentenced to death; while he who distributes a slow poison to a whole community escapes unpunished."

Shortages and adulteration have in many cases led to protests and food riots. Booth reports the curate of Qitheroe noting in 1795 that

> …we have had alarms about riots. The poor around us will not eat brown bread nor will servants. A gentleman of considerable fortune in this country had the spirit to turn every servant in his house away on their persisting to refuse eating brown bread.

These riots are sometimes characterized crudely as simply actions that were precipitated by the absence of core foodstuffs. But as Stevenson notes, these "'grocery' riots concerned not only…the price of wheat or bread but [also] … 'other foodstuffs' that were not essential to subsistence." In his work on the moral economy of the crowd in England in the 18th century, E.P. Thompson argues against the belief that such protests and riots by the "mob" were spasmodic and "compulsive, rather than self-conscious or self-activating, simple responses to economic stimuli." His view is that such protests resulted from a society torn by economic and political forces in which "just prices" and certain previously held entitlements were no longer honored.

Food riots are generally regarded as the preserve of historians of the pre-20th centuries and something made redundant by the emergence of strong states and complete food markets. Taylor, however, describes in detail the food protests and riots that took place, for example, in France in 1911, the U.K., U.S., and Spain in 1916-17, in Canada in the 1920s and 1930s, and in Vichy and occupied France in the 1940s. She argues that the "form of protest was remarkably consistent in each case, and reminiscent of traditional food riots of earlier centuries." More recently, 2007 saw Tortilla Riots in Mexico because of a rapid escalation in the price of a kilo of tortillas—the source of 47 percent of Mexican calorie consumption—from 6.5 pesos in December 2006 to 10 pesos in January 2007.

While food riots seem a distant prospect in the global North at present, food has risen within the political agenda in the last ten years, a process accelerated by the rise of the anti-globalization movement. This process is perhaps best encapsulated by the rise to fame of José Bové and the Confédération Paysanne following the dismantling of a partially completed McDonald's franchise at Millau in 1999, protests at the Seattle WTO meeting, destruction of plots of GM crops, and other protests against the role of the WTO.

Along with increasing aggressive direct action, we are seeing something far less overtly political and collective in the form of the rise of the "ethical consumer." This phenomenon has led some to question whether the supermarket trolley has dethroned the ballot box. Here it is argued that although voter turnout is falling and apathy reigns in official politics, the public (i.e., "consumers") is expressing its views through individual purchases. Gabriel and Lang, in their assessment of the many meanings of "the consumer," chronicle four waves of the "consumer as activist." These range from the rise of the co-operative movement and the attempt to secure quality food at "fair" prices through to the rise of consumer groups and the attempt to secure the necessary

information with which to obtain "value for money," and its later, more political grass-roots form (which they dub Naderism). The final manifestation of the consumer, according to Gabriel and Lang, is that of political consumers with an orientation on ethical buying, boycotts, and organized campaigns against targets from Barclays to Nestlé.

While the support for organic food and farming has a long history within these movements, the questions about the cooptation of organic have now led many to focus also on the desire for a re-localization of the food system as well as a rejection of many of the other aspects of industrial agriculture. Local has become the new organic in that local is associated with many "good" things and counterposed to a broad range of often vaguely defined ills of the "global" foods system, as highlighted in Table 2.

The new orientation on local food is only ever going to be a partial, shorthand identification of a range of issues such as those above. The rise of concern over the globalized (organic) food system has prompted various studies claiming to show that local is not always best. New Zealand researchers, Saunders, et al., argue that:

> N.Z. products compare favorably with lower energy and emissions per tonne of product delivered to the U.K. compared to other U.K. sources. In the case of dairy N.Z. is at least twice as efficient; and for sheep meat four times as efficient.

In an assessment of the relative environmental burdens of local and distant foods, Foster, et al. also argue that the evidence on the environmental impact of locally produced foods is weak.

Table 2. Global versus Local as Emblems

"Global"	**"Local"**
market economy	moral economy
an economics of price	an economic sociology of quality
TNCs dominating	independent artisan producers prevailing
corporate profits	community well-being
intensification	extensification
large-scale production	small-scale production
industrial models	"natural" models
monoculture	biodiversity
resource consumption and degradation	resource protection and regeneration
relations across distance	relations of proximity
commodities across space	communities in place
big structures	voluntary actors
technocratic rules	democratic participation
homogenization of foods	regional palates

Food miles are clearly only part of the story. Pirog, et al. suggest transport accounts for about 11 percent of energy used in the U.S. food system, compared to 18 percent for production and 28 percent for processing. But the desire for a more local food is not just about CO_2 or kilojoules, it is about a wish to reconnect to the food system, to know and be sure of the food one eats in the light of a loss of trust about what goes on away from the gaze of the public or regulator. In this sense, it is emblematic of the wider concerns of those no longer sure that organic necessarily captures those concerns sufficiently. Organic certification has offered one way of overcoming this trust deficit, a means by which the food buyer can have greater faith in the quality of food provided by a distant, unknown producer. Shorter food chains are argued to be another way of bridging the gap, not only involving lower GHG emissions and energy use but reconnecting producers and consumers.

Concerted individual consumption decisions may send signals through the market, but there is scope for more collective action rather than simply responding as an individual consumer. Public procurement of food and the campaign to stop the use of EU non-discrimination legislation that would prevent governments favoring local food sources is one example of this. Incorporating non-price elements into such contract criteria is one option, as is campaigning for prices that reflect the real social costs of production, processing, transport, and consumption. This would serve to radically alter the implications of a "cheap food" agenda.

Conclusions

The challenge that organic poses to the ills of the conventional food system is incomplete , and there are considerable questions that are still unresolved. For example, the process by which those who eat and those who produce the food are reconnected is unclear. For some this involves physical proximity, something rather problematic given the urban/rural divide, no matter how far the urban agriculture movement develops. For others what is required is trust—not a need to know the producer but to know that the production and processing is done with integrity rather than in pursuit of easy profits. If a return to the land and a repopulated countryside of small producers is not on the agenda—and there seems to be no sign of it—then trust rather than direct knowledge of the producer seems the feasible route.

Regarding the nature of the rural, much of the criticism of the food system contains a rejection of "big," whether it be implicit or explicit. Part of this is a rejection of big agroindustrial transnational corporations and their role in (organic) agriculture's development, but it is partly also a rejection of the big farm. This is something rather different, and once one disentangles the "big" landowners and the subsidies they enjoy, the question remains whether there is anything inherently bad about a big farm. Is a farm running a dairy herd of 250 cows bound to cause greater nutrient flows into watercourses and have less biodiversity than would be the case if there were several farms with smaller herds? This seems less clear, and exactly what is bad and what is not about "big" should be the subject of more critical thought and discussion. We would argue that part of the rejection of big farming is part of the romanticization of a lost, rural scene which "has been a powerful presence, especially in English culture, and a strong influence in shaping rural/urban relations as well as fuelling a long history of struggles to protect and preserve the countryside from urbanization."

This paper has outlined several concerns over the development of the organic food sector. The sources cited raising these issues have been from within the organic sector, and they are concerned about the subversion of "their" challenge to the mainstream food system. The contention is that there is something worth fighting for, that although organic standards may have their inconsistencies, problems and omissions, they constitute a meaningful organizing point in the critique of the agroindustrial food system. There are, of course, many other critics of organic farming with a very different aim—not to redirect the development of the organic sector but to discredit it entirely with allegations that organic production is inefficient, backward, unable to feed the world, and even a public health threat. This paper is based on the view that the battle for organic is worth fighting. It may be that industrial organic wins this contest, but if so, the concerns that have led to the rise of organic and, more recently, local food will resurface in new forms. Michael Sligh, the chairman of the NOSB in the U.S., captured this well during the formulation of the USDA's organic rules when he wrote:

> This process will institutionalize the word "organic" within the U.S. government…And if this process proves to be too onerous or false, the soul of organics will be lost. Then, those who love organics will have two choices: to reclaim the word and concept, or find new words and concepts. The future will determine this.