A Tale of Two Films: The Full Commentary

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Two newly released documentary films, *Food, Inc*. and *Fresh* are bound to broaden the national dialogue underway about what we eat and how we grow food in America. While the two movies cover much of the same ground, they differ in tone and substance. *Food, Inc*. will leave many viewers alarmed and eager for change, while the stories in *Fresh* about people creating healthier local and regional islands within the larger food system are uplifting and hopeful.

Michael Pollan narrates much of *Food, Inc*. In the opening segment, as the camera moves along the aisles of a modern supermarket, capturing pictures on food packages of red barns, happy cows, and green fields, Pollan remarks upon "…the spinning of this pastoral fantasy" by the American food industry.

Eric Schlosser, author of *Fast Food Nation*, is the back-up narrator of *Food, Inc*. He focuses his comments on the industrialization of the meat industry, emphasizing throughout that "…[industrial] food has become much more dangerous in ways that are being deliberately hidden from us." He explains that because most Americans prefer the white meat on chicken breasts, the industry "redesigned" the chicken so that each bird produces more breast meat. One consequence of this "improvement" in chicken genetics is shown a few scenes later. A ground-floor camera shot inside a large boiler house captures chickens so front heavy from their big breasts that they can walk only a few steps before falling forward, victim of their weight and poorly developed, weak bones.

On camera, Schlosser exudes folksy charm. Sitting at the counter in Alen Ander's Bright Spot Restaurant, he admits that a hamburger and French fries are his favorite meal. What he has to say about food safety and the government is another matter. He explains how today's large-scale beef slaughterhouses are perfect venues for spreading *E. coli* O157:H7, and that each hamburger can have pieces of hundreds or even thousands of animals in it. And on the topic of government oversight and regulation of animal product food safety, Schlosser states that:

"It's remarkable how toothless our regulatory agencies are, and that's the way industry wants it."

About the Films

Fresh is a film by Ripple Effect Productions, edited by Mona Davis and produced and directed by Ana Sophia Joanes. Information on the film can be found at <www.freshthemovie.com>.

Food, Inc. is currently showing in several major cities and is a joint production of River Road Entertainment, Participant Media, and Magnolia Pictures. Robert Kenner directed *Food, Inc.* Information about the film, where it is showing and a book that accompanies the film is presented on the *Food, Inc*. website at <www.foodincmovie.com>. *Food, Inc*., the book, contains 13 chapters by different experts, including four done by individuals featured in the film.

Food, Inc. is the more critical and sharp-edged of the two films. It does not attempt to provide an assessment of the strengths and weaknesses of the food system. The film strives to inform and motivate the viewer to demand change in the food system and does so through piecing together a series of images that are designed to surprise, and sometimes shock the viewer.

Food, Inc. is the first film to fully recount the tragic story of Kevin Kowalcyk, the two and a half year old child who was exposed to *E. coli* O157:H7 when eating hamburger on vacation in the Pacific Northwest in 2001. Twelve days after consuming the tainted meat, after a painful fight for his life, Kevin died from the infection and general organ failure triggered by HUS (Hemolytic-uremic syndrome), the always serious, sometimes fatal complication of *E. coli* O157:H7 poisoning.

The film also covers, very effectively, the so-far unsuccessful efforts by Kevin's mother and grandmother to urge Congress to craft and pass legislation making sure that no other family has to endure their loss. Their effort has led to the drafting of a bill now known as "Kevin's Law," legislation that would give the USDA greater authority to shut down meat processors shipping contaminated product. According to the film, "Kevin's Law" is still languishing in Congress, despite hundreds of additional *E. coli* O157:H7 deaths, several hearings, and a mountain of evidence that has triggered near-universal agreement that the country's food safety system is broke.

On a positive note, the major food safety reform legislation crafted by Congressman Henry Waxman and Edward Markey that recently passed the House Energy and Commerce Committee provides the Food and Drug Administration the authority to inspect and shut down unsanitary fruit and vegetable processing plants, a provision fully in accord with the spirit of Kevin's Law. Unfortunately though, the Waxman-Markey bill is focused on the fruit, vegetables, nuts, and grains side of the food safety equation, where FDA reigns supreme, and does nothing to address serious and lingering food safety problems in the meat industry, where USDA is in "charge," but to a surprisingly modest degree.

Food, Inc. is most effective when documenting the human toll of our contemporary food system. The segment on the workers in a Smithfield pork slaughterhouse in Tar Heel, North Carolina is captured very

effectively on film. Conditions faced by workers at the plant are described by Eduardo Pena, an employee of a local union.

In Tar Heel, the company and INS (Immigration and Naturalization Service) has apparently reached an informal agreement that only a small number of illegal workers, mostly Hispanic, will be handcuffed and arrested, prior to being deported. During one of the raids captured on film, 15 workers were arrested and taken away. Apparently, some number around 15 satisfies an unstated INS quota, but is low enough not to sacrifice productivity during any one shift at the Smithfield processing plant.

This segment is one of several that drive home the point that animals are not the only victims of abuse and exploitation in the modern food system.

Seeds of Hope

The strength and appeal of the movie *Fresh* stem from the positive and uplifting stories of people that have taken concrete actions to create a piece of an alternative food system, or at least a healthier island within the larger food system. Diana Endicott started Good Natured Family Farm Coop in Kansas City, Missouri. The Coop is an alliance of 75 family farms in the surrounding area and provides with direct access for them to local stores. Russ Kremer founded the Ozark Mountain Pork Cooperative, out of frustration with the conventional pork business, and again, business is doing well, farmers have regained hope, and consumers are getting a healthier, tastier product from hogs raised with a much higher degree of commitment to animal welfare than typically the case on large, conventional hog farms.

The remarkable success of the three acre urban farm in the middle of Milwaukee also provides hope to the viewer that change is possible, in large part because people are hungry for it and need change to combat the twin threats of obesity and diabetes. This farm is the home of the Growing Power Food Community Center, an organization started by Will Allan some several years ago. Will is an ex-professional athlete, whose physical presence alone commands attention. *Fresh* captures the intense interest on the faces of visitors to his farm, young and old, as they listen to him talk about nutrient levels in tomatoes, how to feed and care for worms, and the need to take responsibility for one's own diet.

Joel Salatin and the healthy looking pigs, chickens, and beef cows raised by him and his family on Polyface Farm in Swoope, Virginia play major roles in both films. Salatin combines the wisdom of a successful farmer-marketer, the country charm and eloquence of Wendell Berry, and the passion of a country preacher. A wonderful scene in *Food, Inc.* covers chicken processing on Polyface Farm. The job is carried out in an inviting, open-sided building that benefits from the afternoon breeze. Workers in the building look out over the surrounding fields and woods. Joel and a crew of about five are shown carrying out the routine tasks necessary to transform a chicken into a broiler ready for the pot or barbecue.

The Polyface Farm chicken-processing team carries on with its tasks, camera rolling, as if nothing were out of the ordinary. Joel seamlessly maintains the flow of his critique of the problems with the

American food system as he eviscerates chickens on a pace of about three per minute. The whole operation appears remarkably calm and pleasant.

The chicken processing scene works so well because of the inevitable contrast to the many earlier clips in the film of the same process in conventional, large scale slaughterhouses, where the chicken carcasses are flying by with line speeds of 50 or more per minute, and workers struggle to even begin to keep up with the pace of the line and their assigned task. Salatin and his co-workers show that it does not have to be that way, but he also acknowledges that he cannot provide chickens to his customers at the prices common in supermarkets.

In *Food, Inc*., Joel Salatin reflects upon the consequences for a society that allows animals and workers to be treated as cogs in a machine that is set to run at such unnatural, and sometimes inhuman, speeds. He states –

"A culture that just views a pig as a pile of protoplasmic inanimate structure to be manipulated by whatever creative design the human can foist on that critter, will probably view individuals within its community, and other cultures in the community of nations with the same type of disdain and disrespect, and controlling-type mentality ."

"What's Wrong with That?"

Both films contain a few, usually short scenes featuring people who are proud of the efficiency and productivity of the American food system. For example early in *Food, Inc*., a chicken industry spokesman says that:

"What the system of intensive production accomplishes is to produce a lot of food on a small amount of land at a very affordable price. And somebody explain to me what's wrong with that."

The rest of the film stands as a response to the "…what's wrong with that?" question. Recurring themes include the dirty, stressful conditions on many Concentrated Animal Feeding Operations (CAFOs), pollution from manure lagoons and the greenhouse gases emitted from CAFOs, reliance on antibiotics to keep animals growing, and the toll on workers and contract farmers.

While *Food, Inc*. touches on the heightened reliance on antibiotics in CAFOs, *Fresh* delves into the details of how daily, low doses of antibiotics can trigger the emergence of resistant strains of bacteria, eventually infecting people and eroding the utility of once-effective human antibiotics.

Tight quarters and near-constant stress require daily administration of low-doses of antibiotics through feed or water on essentially all, large-scale, conventional pig and poultry farms. In fact, as documented in the book *Hogging It* published by the Union of Concerned Scientists in 2001, about 70% of the antibiotics and antimicrobials used in the U.S. were given to farm animals (access the Executive Summary at http://go.ucsusa.org/food_and_environment/antibiotic_resistance/page.cfm?pageID=264). In fact, *Hogging It* estimated that the 24.6 million pounds of antimicrobials were then being used on hog, chicken, and beef farms, while some 3 million pounds were used in treating infections in humans.

Accordingly, about 8 pounds of antimicrobials are administered to three major livestock species for every one pound used in human medicine.

Another problem – CAFOs with tens of thousands of pigs and beef produce a lot of manure, and in one place. CAFO operators deal with the mountain manure and rivers of urine by constructing lagoons that are, on a good day, unpleasant and dangerous places. Too many animals in a given region lead to grossly excessive manure application rates on farmland, contaminating water, triggering health problems among neighbors, and greatly increasing greenhouse gas emissions.

In *Fresh*, Pollan offers a clear explanation of what happens when animals are concentrated in feedlots and on large farms, away from the cropland growing the feed needed to raise the animals –

"You created a pollution problem where you didn't have one, because if you keep animals on farms, their manure is a blessing, you can use it to grow other crops…We took the solution – plants and animals working together – and we divided it neatly into two problems. One is this pollution problem on the feedlot, where the manure becomes a pollutant instead of a blessing. And the other is on the farm, where we have a fertility crisis, because there are no animals, so we have to buy synthetic fertilizer."

Unhealthy animals undermine animal welfare and increase food safety risks. Hormones given to animals to speed growth or production undermine their health and pose their own unique food safety risks, including heightened risk of *E. coli* O157:H7 gaining a foothold in the digestive tract of cattle, a point made in both films.

Farmers also are exploited by the current food systems in ways that deserve much more attention. Carol Morison, a contract chicken grower for Perdue, explains in *Food, Inc.* how the companies have near-complete control of every facet of their operations. Moreover, growers must borrow on the order of $500,000 to build two houses for raising broilers, an investment that might generate $18,000 profit in a good year, and only then after a lot of hard, dirty, often dangerous work. After a chilling scene where dead chickens are picked up and disposed of, she sums up her experience by saying "…to have no say in your business is degrading."

The films cover most of the significant hidden costs of cheap food, especially low-cost, mass-produced animal products. Both stress the need to move these costs onto the balance sheet of our contemporary food system, so that costs and benefits, and the risks and social impacts of alternative ways to produce, process, and market food can be more fully appreciated. While many individuals and organizations in the conventional food system, and many farmers, are working to adopt healthier and more sustainable ways to produce food, for now in conventional agricultural circles, the fear of change still trumps hope that change will be for the better.

The Nature of Efficiency

In *Food, Inc*. Pollan introduces a new segment of the film with the point that each step taken by scientists, agribusiness, and farmers to increase the efficiency of food production tends to create new and unforeseen problems. The film then turns to a scene composed of an industrial operations center

filled with computer screens and TVs, from which a few people are reportedly controlling the operations of ten-plus BPI (Beef Products, Inc.) meat slaughter plants across the United States. Here again, the pictures are worth a thousand words.

Eldon Roth, the founder of BPI, is interviewed (the only agribusiness leaders willing to go on camera). He explains that "…from a food safety standpoint, we think we're ahead of everybody." BPI pioneered the application of ammonium and ammonium hydroxide in the hamburger making process, chemicals capable of killing *E. coli* O157:H7, according to BPI. Asked about BPI's marketshare, Roth estimates that BPI product is in 70% of the hamburgers sold in America today. He adds "…in five years, we think we will be in 100%. We do have some competitors; I think we are going to beat them. You know, again, it's a marriage of science and technology."

Pollan then returns to assert that "…we've skewed our food system to the bad calories…it's directly related to the kind of farm policies we have." This observation leads to a now familiar critique of U.S. farm policy as set forth in Pollan's recent books and the commentary of many other experts. The gist of the argument is that farm policy must change so that carrots become cheaper than potato chips. Once this happens, the hope is that meaningful progress will be made in addressing obesity and diabetes, and other public health problems rooted in the modern American diet.

These themes are also addressed in *Fresh.* After explaining how the integration of animals and grass on Polyface Farm generate some $3,000 per acre in sales (mostly direct to consumers), compared to about a $150 per acre on the neighboring beef farm, Salatin explains that –

"…we're not talking about going back to grandpa's farm. We're talking about marrying the best of the technology and innovative we have…" with the collected knowledge and experience of farmers.

Pollan also highlights differences in the nutritional quality of food in *Fresh.* He explains that when the emphasis is simply on increasing production and efficiency, the quality of food often suffers. Organic eggs from chickens with access to pasture that cost $4.00 to $5.00 a dozen are "…a completely different product…" higher in Omega 3s and Vitamin A. He says that "We've made food cheaper, but we have also diminished it nutritionally." He goes on to assert that USDA data shows that key nutrients have declined by 40%.

Two Views of Wal-Mart

In *Food, Inc*. both Joel Salatin and Gary Hirshberg, CEO of Stonyfield Farms address the enormous impact of Wal-Mart on the food industry. Hirshberg says "For me, when a Wal-Mart enters the organic space, I'm thrilled…When I run into my old environmental friends, many are initially horrified by the kinds of company that I'm keeping these days. But when I go on to explain what the impact of one purchase order from Wal-Mart is in terms of not pounds, but tons of pesticides…tons of chemical fertilizers…we get away from the emotion and we get down to the facts."

But Salatin has "….absolutely no desire to be at Wal-Mart. As soon as you grasp for that growth, you're gonna view your customer differently. You're gonna view your product differently. You're gonna view your business differently…"

Feeding the World

In *Fresh*, Andy Kimbrell of the Center for Food Safety confronts the core question "Can organic farming feed the world?" by saying –

"One of the complaints we often hear about organic is…you can't feed the world with it. We know now that is just wrong. We have the science….Medium size organic is far more productive than any size industrial agriculture…we have the studies, the data…"

Kimbrell is correct, in that there have been several studies in the last few years that have concluded that organic farming systems are the more productive and practical alternative in the developing world, where soils are typically run down from years of production with little rest and few off-farm inputs. A 2008 report from the United Nations Environment Program (UNEP) analyzed 286 projects encompassing 37 million hectares in 57 countries. They concluded that where organic and/or near-organic practices were adopted, crop yields increased by more than 100 percent, compared to existing practices.

The enhanced performance of organic systems in most of these studies arises from incremental improvement in soil quality, which in turn improves water conservation and utilization. The increase in biodiversity on farms adhering to organic principles also helps prevent the buildup of pests and lessens the risk of catastrophic crop losses, while also improving diets.

Despite the existence of hundreds of studies carried out in the developing world that conclude that organic farming is the soundest system to pursue, there are not enough data and studies to convince everyone. In addition, success with organic practices requires a higher level of knowledge and management skill, in order to utilize local resources to best advantage, overcome yield constraints, and maximize the biological health of diverse farming systems. Attaining such knowledge and skill takes time and a degree of trial and error. Some believe these knowledge and management-related hurdles are just too high, and for this reason place their faith in technologies that bring solutions to farmers in a bag or can, or embedded in the genetic traits of seeds.

In the developed world, most studies show that crop yields on organic farms lag conventional farming yields by a few percent to as much as 30%, except in dry years during which organically managed soils often take in and hold more moisture, and produce higher yields than on nearby conventional farms.

While crop yields are typically a bit lower, organic farms often produce more crops in a given year than on nearby conventional farms. Plus, nutrients are typically present in higher concentrations in crops harvested from well-managed organic farms. A 120-bushel organic corn crop that contains 8% protein will produce about as much milk or meat as a 130-bushel conventional corn crop with 6.5% protein.

In the case of livestock production in developed counties like the United States, conventional animal production systems push cattle, pigs, and chickens to grow faster and produce more than the case on organic and sustainable livestock farms. For example, the average dairy cow on a conventional farm produces one-quarter to one- third more milk than the average cow on an organic farm. But as a consequence, the milk from highly productive conventional cows typically contains lower levels of fat, protein and vitamins. In addition, the cows often suffer higher rates of illness and lameness and are often hard to rebreed. For these reasons, the productive life of a dairy cow on a high-production conventional farm is far shorter than on a typical, well-managed organic dairy farm.

But after watching these films, more people are likely to question whether the single-minded pursuit of faster growth on chicken farms and more milk per cow has served us well when the full range of consequences from high-yield production systems are taken into account. Pushing animals to produce more and grow faster also inevitably increases the risk of animal health and disease problems, some of which morph into food safety and human health problems. Two examples are touched upon in both films –

- Feeding beef cattle corn-based diets to make them grow faster alters the ecology of their rumen in ways that opens the door to infections with *E. coli* O157:H7. Cows did not evolve eating grain; forcing them to do so takes a toll on their health.

- The stress and dirty conditions in confined animal operations expose animals to sometimes extreme disease pressure, necessitating daily doses of antibiotics to keep animals growing and producing. This use of antibiotics triggers the emergence on farms of strains of bacteria resistant to antibiotics. The resistance genes that are part of these strains then find their way from animals on farms, to people, and then from a vet or worker on a farm, to a family member, to a schoolmate, and on through the human population.

For good reason, society has said “No” to performance enhancing drug use by professional athletes. There are both medical and ethical reasons why. Steroid hormones are used by home-run hitters to build strength, and they clearly have helped some hitters chase and break records. For long distance runners and cyclists, a range of drugs, including steroids, can be used to build strength and endurance, but they do so at a cost – a big increase in cancer later in life, not to mention untimely death from a range of other problems.

Pushing animals to produce at a pace and at levels where their bodies break down, where they cannot walk without falling over, and where normal behaviors are nearly impossible, is now common on a majority of large-scale conventional hog and poultry operations. This tradeoff is, for the most part, accepted by most farmers and industry leaders as necessary to maximize efficiency and productivity, and lower costs. Both films raise awareness that there are tradeoffs between production levels, efficiency and animal well being, but neither addresses the nuts and bolts, or costs and consequences of changing the current system on the scale needed to transform the U.S. food system.

Research from around the world supports the clear conclusion that both input-intensive, conventional farming systems and organic farming have the technical capacity to meet caloric intake needs of the human population. With few exceptions limited to the aftermath of serious weather events, war, or social collapse, hunger is caused by poverty, not a shortage of food.

While both systems can meet nutritional needs, neither system can hope to replicate today's U.S. or European diet for all of humanity. As world population grows and affluence spreads, there will need to be changes in the composition of the diet, such that one to two ounces of meat or fish per person during the evening meal are regarded as satisfying, as opposed to the six, eight, or even more than 12 ounce servings of meat and fish that are common in the U.S. and much of Europe.

In addition, both food losses to pests prior to cooking and consumption and plate waste will need to be reduced. Experts project that at least 25%, and perhaps as much as a third of all food production is lost to pests and diseases before consumption. The lack of adequate grain storage and refrigeration facilities in much of the developing world is a primary cause for such losses. The latest data for the United States projects average per capita food and beverage disappearance at about 3,900 calories per day. Yet our average per capita daily caloric intake is on the order of 2,400 calories, suggesting that about 1,400 calories worth of food per person per day are never ingested. This plate waste, combined with food that is discarded as spoiled, too old, or just not needed accounts for an amazing 36% of the total U.S. food supply, based on the USDA estimate of total daily caloric disappearance.

Widening the Debate

Food, Inc. and *Fresh* are a powerful combination. Their impact will obviously be a direct function of the number of people that see the films. The best chance for wide viewership is likely to come from airing on PBS. In a perfect world, some benefactor of PBS will provide the funding needed to show the two films back to back, starting with *Food, Inc.*

As a nation, we are long overdue for an extended discussion about the food we eat, how we grow it, and the way people and animals are treated within and by the system. With her interest in healthy, fresh foods for her children and the planting of a White House garden, First Lady Michelle Obama has gotten the dialogue off to a solid, spirited start. These two films have great potential to move the discussion forward for the benefit of all.