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A CRITIC AT LARGE

PARADISE SOLD

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What are you buying when you buy organic?

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The share price of the Whole Foods Market, Inc., now stands at \$62.49. Adjusting for stock splits and dividends, one share would have cost you \$2.92 when the company opened on Nasdaq, in January of 1992, so it has done extremely well. Last year, its total revenue was more than \$5 billion and its gross profit was more than \$1.6 billion. In 2004, according to the *Financial Times*, Whole Foods was “the fastest-growing mass retailer in the US, with same-store sales rising 17.1 per cent quarter-on-quarter.” Having opened in 1978 with a single countercultural vegetarian establishment in Austin, Texas, Whole Foods now has a hundred and eighty-one natural-food supermarkets, including many acquired in purchases of smaller chains: among them, Wellspring Grocery, in 1991; Bread & Circus, in 1992; Mrs. Gooch’s Natural Foods, in 1993; and Fresh Fields, in 1996. In 2004, Whole Foods opened a fifty-eight-thousand-square-foot mega-mart in the new Time Warner Center, at Columbus Circle, with forty-two cash registers, a two-hundred-and-forty-eight-seat café, and three hundred and ninety employees. “Our goal is to provide New Yorkers with an engaging shopping experience and to become an integral part of this truly unique community,” a company executive said. And in 2004 Whole Foods crossed the Atlantic, acquiring six Fresh & Wild stores in London and making plans to open others there under its own name. Its ambitions are global.

I like to shop at Whole Foods. Sometimes I go there just to see the variety and the colors: what new kinds of chard and kale will they have today? The employees—“team members,” as they’re called—seem reasonably happy and are often quite knowledgeable about the things they sell. A Wellesley graduate is one of the company’s prize exhibits. “I just hang on to the fact that my job is good in some larger sense,” she says on the corporate Web site. “If people buy the sprouts, they’re eating healthier foods, the farmer is doing well, and it’s good for the planet because they’re grown organically.” Since 1998, Whole Foods has ranked high among *Fortune’s* “100 Best Companies to Work For in America.” Although the company is as ferociously anti-union as Wal-Mart—John Mackey, the volubly libertarian founder and C.E.O., has called unions “parasites”—Whole Foods limits the compensation of its highest-paid executives to no more than fourteen times the employee salary average, and it likes to talk about how it rewards team members’ initiative. Mackey once told *Forbes*, “Business is simple. Management’s job is

to take care of employees. The employees' job is to take care of the customers. Happy customers take care of the shareholders. It's a virtuous circle." Whole Foods gives people what they want, or, at least, the increasing number of people who don't blanch at the prices, which have earned the company the presumably affectionate nickname "Whole Paycheck": \$3.98 for a five-ounce plastic box of Earthbound Farm organic baby arugula salad; \$2.98 for six and three-quarter ounces of intricately packaged Earthbound Farm organic "mini-peeled carrots with Ranch Dip." For the price of the fixings for a modest family dinner at Whole Foods, you could just about afford one share of its stock. The motto of the great English supermarket pioneer Sir Jack Cohen was "Pile it high; sell it cheap." Whole Foods has shown the rewards that can flow from the opposite policy.

Whole Foods is only the most visible face of the newly confident organic industry. In February, *Consumer Reports* announced that sales of organic products had gone up twenty per cent a year during the past decade, reaching \$15 billion in 2004—out of a total U.S. food system worth a trillion dollars—and that nearly two-thirds of American consumers bought organic foods last year, paying, on average, a fifty-per-cent premium over conventional foods. In March, Wal-Mart made the remarkable announcement that it would double its organic-grocery offerings immediately. Wal-Mart is betting that, if it follows its usual practice of squeezing suppliers and cutting prices ruthlessly, the taste for organic foods will continue to spread across the social landscape. "We don't think you should have to have a lot of money to feed your family organic foods," its C.E.O. said at the most recent annual general meeting.

But icons beget iconoclasm, and, just when the organic business has attained cultural legitimacy, a market has opened up for debunkers. "Organic, Inc.: Natural Foods and How They Grew" (Harcourt; \$25), by the business writer Samuel Fromartz, is a cultural, political, and economic history of the modern organic industry that is markedly critical of the distance that "Big Organic" has come from its anti-industrial roots in the early twentieth century. "Agrarian Dreams: The Paradox of Organic Farming in California" (California; \$21.95), by the geographer Julie Guthman, is a meticulous academic study of the institutional dynamics of the state's organic agriculture and asserts that organic agriculture, far from escaping the logic of capitalism, has wholly embraced it. And Michael Pollan's outstanding "The Omnivore's Dilemma: A Natural History of Four Meals" (Penguin; \$26.95) is a wide-ranging invitation to think through the moral ramifications of our current eating habits. Pollan undertakes a pilgrim's progress along modern food chains, setting standards for ethical eating which the industrial approach of Whole Foods and its suppliers fails to satisfy.

Such criticisms reflect growing discontent among many veterans of the organic movement. As one consumer advocate told Pollan, "Organic is becoming what we hoped it would be an alternative to." This disillusionment is fuelled by questions about quality, sustainability, and business ethics—but it is also, crucially, a matter of ideology and morality. For many who participated in the early phase of organic farming, its subsequent history is a story of paradise lost—or, worse, sold—in which cherished ideals have simply become part of the

sales pitch. According to the Web site of Earthbound Farm, a major supplier of Whole Foods, eating organic is an almost spiritual quest: “We honor the fragile complexity of our ecosystem, the health of those who work the land, and the long-term well-being of customers who enjoy our harvest. . . . Organic farming encourages an abundance of species living in balanced, harmonious ecosystems.” This is late-modern georgic in its ripest vein. Where Virgil asked, “What makes the cornfield smile?,” Earthbound Farm’s Web site has the answer: the use of “earth-friendly methods to grow healthful crops without relying on chemical pesticides or using synthetic fertilizers.” But the reality is no idyll.

The plastic package of Earthbound Farm baby arugula in Whole Foods was grown without synthetic fertilizers; no toxic pesticides or fumigants were used to control insect predators; no herbicides were applied to deal with weeds; no genes from other species were introduced into its genome to increase yield or pest resistance; no irradiation was used to extend its shelf life. It complies with the U.S. Department of Agriculture’s National Organic Program, a set of standards that came into full effect in 2002 to regulate the commercial use of the word “organic.” So what’s the problem?

It all depends on what you think you’re buying when you buy organic. If the word conjures up the image of a small, family-owned, local operation, you may be disappointed. Like Whole Foods, Earthbound Farm is a very big business. Earthbound’s founders, Drew and Myra Goodman, Manhattanites who went to college in the Bay Area, and then started a two-and-a-half-acre raspberry-and-baby-greens farm near Carmel to produce food they “felt good about,” are now the nation’s largest grower of organic produce, with revenues for this year projected at more than \$450 million. Their greens, including the arugula, are produced on giant farms in six different counties in California, two in Arizona, one in Colorado, and in three Mexican states. Earthbound grows more than seventy per cent of all the organic lettuce sold in America; big organic retailers like Whole Foods require big organic suppliers. (Earthbound actually dropped the “organic” specification when it started its mass-distribution program, in 1993—even though the stuff *was* organic—because its first client, Costco, thought it might put customers off.) By 2004, Earthbound was farming twenty-six thousand acres; its production plants in California and Arizona total four hundred thousand square feet, and its products are available in supermarkets in every state of the Union. The Carmel Valley farm stand is still there, largely for public-relations purposes, and is as much an icon of California’s entrepreneurial roots as the Hewlett-Packard garage in downtown Palo Alto.

Success is not necessarily a sin, of course, and, for many people, buying organic is a way of being environmentally sensitive. Earthbound notes that its farming techniques annually obviate the use of more than a quarter of a million pounds of toxic chemical pesticides and almost 8.5 million pounds of synthetic fertilizers, which saves 1.4 million gallons of the petroleum needed to produce those chemicals. Their tractors even use biodiesel fuel.

Yet the net benefit of all this to the planet is hard to assess. Michael Pollan, who thinks that we ought to take both a wider and a deeper view of the social, economic, and physical chains that deliver food to fork, cites a Cornell scientist's estimate that growing, processing, and shipping one calorie's worth of arugula to the East Coast costs fifty-seven calories of fossil fuel. The growing of the arugula is indeed organic, but almost everything else is late-capitalist business as usual. Earthbound's compost is trucked in; the salad-green farms are models of West Coast monoculture, laser-levelled fields facilitating awesomely efficient mechanical harvesting; and the whole supply chain from California to Manhattan is only four per cent less gluttonous a consumer of fossil fuel than that of a conventionally grown head of iceberg lettuce—though Earthbound plants trees to offset some of its carbon footprint. “Organic,” then, isn't necessarily “local,” and neither “organic” nor “local” is necessarily “sustainable.”

Earthbound and other large-scale organic growers have embraced not only the logic of capitalism but the specific logic of California agribusiness. Julie Guthman's book shows how, ever since the gold rush, the state's growers have aimed at maximizing monetary yield per acre. First, it was wheat to feed the influx of gold miners and those dependent on the mining industry; then, after railways and refrigerated cars enabled the delivery of shining fresh produce across the country, it was orchard fruit. Later still, tract housing and mini-malls proved more profitable, which is why you'll have a hard time finding orange groves in Orange County. Guthman writes that big, concentrated, high-value organic agriculture in California is “the legacy of the state's own style of agrarian capitalism.” You saw this style in action when, in 1989, a “60 Minutes” exposé about residues of the carcinogenic pesticide Alar found on apples caused a consumer stampede to the organic-produce bins. “Don't panic, buy organic,” was the mantra, and growers responded by borrowing heavily to expand their organic enterprises. When the scare subsided, supply outstripped demand, and, in the inevitable shakeout, some small-scale organic farmers had to sell out to larger players in the food industry. Washington State's Cascadian Farm was one such. Its founder, a “onetime hippie” named Gene Kahn, sold a majority holding to Welch's, and now it is a division of the \$17.8 billion giant General Mills. He hasn't the least regret: “We're part of the food industry now.” The investors bankrolling Big Organic have no reason to fear the vestigial hippie rhetoric: it's not so much a counterculture as a bean-counter culture.

According to Samuel Fromartz, ninety per cent of “frequent” organic buyers think they're buying better “health and nutrition.” They may be right. If, for any reason, you don't want the slightest pesticide residue in your salad, or you want to insure that there are no traces of recombinant bovine somatotropin hormone (rbST) in your children's milk, you're better off spending the extra money for organically produced food. But scientific evidence for the risks of such residues is iffy, as it is, too, for the benefits of the micro-nutrients that are said to be more plentiful in an organic carrot than in its conventional equivalent.

Other people are buying taste, but there's little you can say about other people's taste in carrots and not much more you can intelligibly articulate about your own. The taste of an

heirloom carrot bought five years ago from the Chino family farm in Rancho Santa Fe, California, sticks indelibly in my memory, though at the time I hadn't any idea whether artificial fertilizers or pesticides had been applied to it. (I later learned that they had not.) For many fruits and vegetables, freshness, weed control, and the variety grown may be far more important to taste than whether the soil in which they were grown was dosed with ammonium nitrate. Pollan did his own taste test by shopping at Whole Foods for an all-organic meal: everything was pretty good, except for the six-dollar bunch of organic asparagus, which had been grown in Argentina, air-freighted six thousand miles to the States, and immured for a week in the distribution chain. Pollan shouldn't have been surprised that it tasted like "cardboard."

The twentieth-century origins of the organic movement can be traced to the writings of the English agronomist Sir Albert Howard, particularly his 1940 book "An Agricultural Testament." Howard was a critic of the rise of scientific agriculture. In the mid-nineteenth century, following the work of the German chemist Justus von Liebig, it was thought that all plants really needed from the soil was the correct quantities and proportions of nitrogen, phosphorus, and potassium: the N-P-K ratios that you see on bags of garden fertilizer. For many crops, it is the availability of nitrogen that limits growth. Legumes apart, plants cannot extract nitrogen directly from the practically unlimited stores of the gas in the atmosphere, so farmers in the nineteenth century routinely enhanced soil fertility using animal manures, guano, or mined nitrates. But, just before the First World War, the German chemist Fritz Haber and the industrialist Carl Bosch devised a way of synthesizing ammonia from atmospheric nitrogen. From there, the commercial production of enormous quantities of nitrogenous fertilizers was a relatively easy matter. The result was a technological revolution in agriculture.

But Howard had worked in India as "Imperial Economic Botanist" to the government of the Raj at Pusa, and his experiences there convinced him that traditional Indian farming techniques were in many respects superior to those of the modern West. Howard was a pragmatist—the criterion of agricultural success was what worked—but he was also a holist and a taker of the long view. The health of the soil, the health of what grew in it, and the health of those who ate what grew in it were "one great subject." To reduce this intricacy to a simple set of chemical inputs, as Liebig's followers did, was reductionist science at its worst. Soils treated this way would ultimately collapse, and so would the societies that abused them: "Artificial manures lead inevitably to artificial nutrition, artificial food, artificial animals and finally to artificial men and women," racked with disease and physically stunted. You could indeed get short-term boosts in yield through the generous application of synthetic fertilizers, but only by robbing future generations of their patrimony. Soil, Howard wrote, is "the capital of the nations which is real, permanent, and independent of everything except a market for the products of farming." We have no choice but to go "back to nature" and to "safeguard the land of the Empire from the operations of finance." The "supremacy of the West" depends upon it.

Howard's ideas reached America largely through J. I. Rodale's magazine *Organic Gardening and Farming*, and, later, through a widely read essay by Wendell Berry in "The Last Whole Earth Catalogue." The organic movement that sprang up in America during the postwar years, manured by the enthusiasm of both the hippies and their New Age successors, supplemented Howard's ideas of soil health with the imperative that the scale should be small and the length of the food chain from farm to consumer short. You were supposed to *know* who it was that produced your food, and to participate in a network of trust in familiar people and transparent agricultural practices. A former nutritionist at Columbia, who went on to grow produce upstate, recalls, "When we said organic, we meant local. We meant healthful. We meant being true to the ecologies of regions. We meant mutually respectful growers and eaters. We meant social justice and equality."

There is no way to make food choices without making moral choices as well, and anthropologists have had much to say about the inevitable link between what's good to eat and what's good to think. Decisions about how we want our food produced and delivered are decisions about what counts as social virtue. One of the founding texts of modern social theory, Émile Durkheim's "The Division of Labor in Society," drew a distinction between what he called mechanical and organic solidarity. In societies characterized by mechanical solidarity, each person knew pretty much what every other person did and each social unit encompassed pretty much all the functions it needed in order to survive. Mechanical solidarity, in Durkheim's scheme, was largely a premodern form. By contrast, organic solidarity flowed from the division of labor. Individuals depended upon one another for the performance of specialized tasks, and, as modernity proceeded, the networks of dependence that bound them together became increasingly anonymous. You didn't know who grew the food at the end of your fork, or, indeed, who made the fork. But, then, the original English sense of "organ" was an instrument or a machine made up of interdependent specialized parts, as in the musical pipe organ. The application to living things came only later, by way of analogy with machines; the eye, for example, is the "organ of seeing." And so, by semantic inversion, champions of organic farming actually seek virtue not in organic but in mechanical solidarity.

The quest for the shortest possible chain between producer and consumer is the narrative dynamic of Michael Pollan's book, which is cleverly structured around four meals, each representing a different network of relations between producers, eaters, and the environment, and each an attempt at greater virtue than the last. Pollan's first meal is fast food, and he follows a burger back to vast monocultural industrial blocs of Iowan corn, planted by G.P.S.-guided tractors and dosed with tons of synthetic fertilizer, whose massive runoff into the Mississippi River—as much as 1.5 million tons of nitrogen a year—winds up feeding algal blooms and depleting the oxygen needed by other forms of life in the Gulf of Mexico. Pollan then follows the corn to enormous feedlots in Kansas, where a heifer that he bought in South Dakota is speed-fattened—fourteen pounds of corn for each pound of edible beef—for which its naturally grass-processing rumen was not

designed, requiring it to be dosed with antibiotics, which breed resistant strains of bacteria. Pollan would have liked to follow his heifer through the industrial slaughterhouse, but the giant beef-packing company was too canny to let him in, and so we are spared the stomach-churning details, which, in any case, were minutely related a few years ago in Eric Schlosser's "Fast Food Nation." Pollan also follows the American mountains of industrial corn into factories, where the wonders of food technology transform it into the now ubiquitous high-fructose corn syrup, which sweetens the soda that, consumed in super-sized quantities across the nation, contributes to the current epidemic of type 2 diabetes. All very bad things.

The second meal is the Big Organic one that he bought at his local Whole Foods store in California, featuring an "organic" chicken whose "free-range" label was authorized by U.S.D.A. statutes, but which actually shared a shed with twenty thousand other genetically identical birds. Two small doors in the shed opened onto a patch of grass, but they remained shut until the birds were five or six weeks old, and two weeks later Pollan's "free range" chicken was a \$2.99-a-pound package in his local Whole Foods. This meal was better—the corn-and-soybean chicken feed was certified organic and didn't contain antibiotics—but still not perfect. Pollan's third meal was even more virtuous. After spending several weeks doing heavy lifting on a polycultural, sustainable smallholding in the Shenandoah Valley, Pollan cooked a meal wholly made up of ingredients that he himself had a hand in producing: eggs from (genuinely) free-range, grub-eating hens, corn grown with compost from those happy birds, and, finally, a chicken whose throat he had slit himself. Very good, indeed—and no nitrogenous runoff, and no massive military machine to protect America's supplies of Middle East oil and the natural gas needed to make the synthetic fertilizer.

Finally, Pollan decides to eat a meal—"the perfect meal"—for which he had almost total personal responsibility: wild morels foraged in the Sierra foothills, the braised loin and leg of a wild pig he had shot himself in Sonoma County, a chamomile tisane made from herbs picked in the Berkeley Hills, salad greens from his own garden, cherries taken by right of usufruct from a neighbor's tree, sea salt scraped from a pond at the southern end of San Francisco Bay, and—O.K., strict perfection is unobtainable—a bottle of California Petite Sirah, presumably organic. This was not a way of eating that Pollan thinks is realistic on a routine basis, but he wanted to test what it felt like to have "a meal that is eaten in full consciousness of what it took to make it." That consciousness, for Pollan, is more religious than political—every meal a sacrament. "We eat by the grace of nature, not industry, and what we're eating is never anything more or less than the body of the world," he says.

Pollan winds up demanding that we know much more about what we're putting into our mouths: "What it is we're eating. Where it came from. How it found its way to our table. And what, in a true accounting, it really cost." The "naked lunch," William Burroughs wrote, is the "frozen moment when everyone sees what is on the end of every fork." Burroughs meant it metaphorically; Pollan means it literally. He wants to know his farmer's name, and to know that his hamburger was once part of the muscles of a

particular cow. He wants to do his bit to save the planet. That means he wants to eat locally, within a network of familiarity. But, even so, the knowledge required is potentially infinite. What particular bacteria, fungi, and trace elements lurk in the soil of your sustainable community farm? Does your friendly local farmer use a tractor or a horse? If a tractor, does it use fuel made from biomass? If a horse, are the oats it eats organic? If the oats are organic, does the manure with which they were grown come from organically fed animals? How much of this sort of knowledge can you digest?

Pollan seems aware of the contradictions entailed in trying to eat in this rigorously ethical spirit, but he doesn't give much space to the most urgent moral problem with the organic ideal: how to feed the world's population. At the beginning of the twentieth century, there was a serious scare about an imminent Malthusian crisis: the world's rapidly expanding population was coming up against the limits of agricultural productivity. The Haber-Bosch process averted disaster, and was largely responsible for a fourfold increase in the world's food supply during the twentieth century. Earl Butz, Nixon's Secretary of Agriculture, was despised by organic farmers, but he might not have been wrong when he said, in 1971, that if America returned to organic methods "someone must decide which fifty million of our people will starve!" According to a more recent estimate, if synthetic fertilizers suddenly disappeared from the face of the earth, about two billion people would perish.

Supporters of organic methods maintain that total food-energy productivity per acre can be just as high as with conventional agriculture, and that doublings of N-P-K are made necessary only by the industrial scale of modern agriculture and its long-chain systems of distribution. Yet the fact remains that, to unwind conventional agriculture, you would have to unwind some highly valued features of the modern world order. Given the way the world now is, sustainably grown and locally produced organic food is expensive. Genetically modified, industrially produced monocultural corn is what feeds the victims of an African famine, not the gorgeous organic technicolor Swiss chard from your local farmers' market. Food for a "small planet" will, for the foreseeable future, require a much smaller human population on the planet.

Besides, for most consumers that Earthbound Farm organic baby arugula from Whole Foods isn't an opportunity to dismantle the infrastructures of the modern world; it's simply salad. Dressed with a little Tuscan extra-virgin olive oil, a splash of sherry vinegar, some shavings of *Parmigiano Reggiano*, and *fleur de sel* from the Camargue, it makes a very nice appetizer. To insist that we are consuming not just salad but a vision of society isn't wrong, but it's biting off more than most people are able and willing to chew. Cascadian Farm's Gene Kahn, countering the criticism that by growing big he had sold out, volunteered his opinion on the place that food has in the average person's life: "This is just lunch for most people. *Just lunch*. We can call it sacred, we can talk about communion, but it's just lunch." ✦