

# LOST IN THE Supermarket

**Michael Pollan** *On How The Food Industry  
Has Changed The Way We Eat*

ARNIE COOPER



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**A**t mealtimes, most of us pick what sounds good, or what's quick, or what's cheap, or maybe what's good for us. Rarely do we stop to consider where our food comes from, or how our eating habits affect our culture and our environment. In his new book, *The Omnivore's Dilemma* (Penguin Press), journalist Michael Pollan asks what we should eat. How we answer, he says, defines our relationship with the natural world.

Pollan grew up on Long Island in the early sixties, when farms still outnumbered strip malls on the outskirts of New York City. An avid child gardener, he grew tomatoes, peppers, cucumbers, peas, and beans in his family's landscaped suburban yard. At harvest time he'd sell the produce at a little stand to his sole customer, his mother, who was his primary influence when it came to growing food. (His father was, in Pollan's words, "the great indoorsman," whose idea of gardening was to stay in the garage tinkering with the irrigation system.)

Pollan's mother also inspired his love of writing and literature, and by the age of fourteen he was writing for his high-school literary magazine and newspaper. He majored in English at Bennington College in Vermont, where his mentors were novelist John Gardner and author Alan Cheuse — now a book critic on National Public Radio. Believing "writer" wasn't a realistic career choice, Pollan got a job as an executive editor at Harper's in 1983. Four years later he became a contributing writer for the *New York Times Magazine*, and his work has appeared regularly there ever since.

For Pollan, an early proclivity for gardening grew into a lifelong fascination with plants, nature, and food production. His books deal with the intersection of human society and the natural world, from *Second Nature: A Gardener's Education* (Grove Press) to *The Botany of Desire: A Plant's-Eye View of the World* (Random House), which was excerpted in the May 2003 issue of *The Sun*. What distinguishes Pollan from most other journalists is his willingness to immerse himself in his subject matter. Whether diving for abalone in chilly waters or hunting a feral pig — which he did for his latest book — he likes to get personally, messily involved.

Over his career of more than two decades, Pollan has received numerous journalism awards, including the Humane Society's Genesis Award and the Global Award for Environmental Journalism for his reporting on genetically modified crops. In 2003 he was appointed the Knight Professor of Journalism at the University of California at Berkeley, which meant leaving the rocky soil of northwestern Connecticut for the grow-anything terrain of northern California. (He now lives just minutes from the Berkeley campus.) I spoke to him in his living room, where artwork by his wife, Judith Belzer, hung on the wall. In person Pollan is energetic and easy to talk to, with a boyish face that belies his fifty-one years. My only regret is that I didn't get to sample any of his cooking.



**MICHAEL POLLAN**

**Cooper:** What was your goal in writing your latest book?

**Pollan:** To answer the question of what I should eat — for my health, for my karmic well-being, and for my pleasure. There's a huge amount of confusion right now about what to eat, and people want to be more conscious of what they're eating, either because of their health or because they care about the natural world and animals. People want to do the right thing. What the right thing is, however, depends on what you value.

**Cooper:** What is "the omnivore's dilemma"?

**Pollan:** It's the existential predicament we're in regarding food. Humans need to eat a great many different types of food to get all the nutrients we require. If you look at our teeth, our jaws, and our digestion, you see that we're designed to eat meat as well as vegetable matter. But deciding what to eat out of all the potential foods available is a complicated process. The world is full of toxins. Not all plants want to be eaten, nor all the parts of each plant. Fruit wants to be eaten as part of the plant's reproductive strategy. Leaves, no. One bite of some mushrooms will kill you.

Our human ancestors had to navigate this promising and perilous landscape of good things to eat and poisons. As a result, they developed cognitive tools that enabled them to remember how something felt and tasted and what effect it had on them. Many anthropologists and sociologists believe that the size of our brain and its sophistication flow directly from this dilemma of what to eat. Most omnivores are pretty smart. Rats, for example, have complex mechanisms for figuring out what to eat. A cow, on the other hand, eats only one thing, so its skill is not in its brain but in its gut, which can take grass and get every nutrient the animal needs from it. That's a form of intelligence too; it's just not sheer brain power. The cow doesn't have to devote a lot of time to figuring out what to eat: if it's grass, it's dinner. Anything else is poison.

As human cultures developed, they established rules about what to eat and how much to eat and what order to eat things in, which helped solve the dilemma. But the cultural tools that once helped us choose our meals are rapidly disappearing. Families used to control what their members ate and pass along learned wisdom in the form of a food culture. Now that's gone. Most people don't eat as families. We eat individually, going one-on-one with the food supply, which is how the food industry likes it.

Today we find ourselves in an industrial food environment that is very good at fooling our eating instincts. For example, we're instinctually drawn to sweetness and repelled by bitterness. Fat tastes good to us and feels good in our mouth. Why should that be? Well, both sugar and fat have very high concentrations of energy, and our human ancestors needed to store up plenty of energy, in case their food supply ran short.



JEFFREY HERSCH

Now McDonald's pushes our evolutionary buttons by making things very sweet, salty, and fatty. And that's where we start getting into trouble. Our instincts don't work in the industrial food environment, because they lead us to eat too much sugar and fat. In a sense, we're facing the omnivore's dilemma all over again, only instead of being in a natural landscape, now we live in a landscape of supermarkets and fast-food franchises.

**Cooper:** Your book is structured around four very different meals that you ate as part of your research. How did you choose them?

**Pollan:** Each meal exemplifies a particular food chain. I made an "industrial organic" meal from ingredients bought at Whole Foods in Berkeley. I followed a bushel of corn to a lunch at McDonald's. I had a meal that came entirely from the pastures of farmer Joel Salatin in Virginia, consisting of chicken, sweet corn, rocket salad, Virginia wine, and egg soufflé. Finally I ate a meal that I'd hunted, gathered, and grown myself, consisting of fava-bean toasts, pasta with morels and fava beans, roast loin and braised leg of wild boar, cherry tart, and wine that had been made by a guest at dinner.

**Cooper:** Let's start with the industrial organic meal. How did you decide what to have?

**Pollan:** I chose the food labels that engaged me, starting with the chicken, which came from Petaluma Poultry, a big

organic-chicken grower. In the produce section I bought from some of the big companies like Earthbound and Cal Organic, to show how far the reach of organic food has grown; you can now get organic asparagus from South America any time of the year. Which raises the question: Is it in the spirit of organic farming to ship asparagus across the world using fossil fuel?

**Cooper:** I recently bought some eggs that were "cruelty-free," with "no animal byproducts" and recycled packaging. I realized after I got home that they were from New Zealand.

**Pollan:** There's a lot of New Zealand organic food getting into our market, both because there's such a shortage of organic products here, and because shipping is so cheap, although that's going to change with rising oil prices.

That kind of agricultural system isn't sustainable in the long run. Consumers should be paying more attention to the environmental issues raised by food transport, not just to pesticides and treatment of animals. Maybe if you live on the East Coast, you shouldn't eat salad in the winter. There are plenty of local winter vegetables you can eat, and lettuce has very few calories. Essentially you're shipping water across the country.

**Cooper:** Why was it important for you to eat a McDonald's meal? Everyone knows what fast food is, and you'd eaten it before.

**Pollan:** I wanted to have that meal because I saw it through a whole different lens this time, and that was the lens of corn. That chapter comes at the end of a long section of the book in which I follow a bushel of corn, the cornerstone of the American food chain, to market. I don't think people have any idea when they look at a McDonald's menu that they're mostly looking at different manifestations of corn. It was fed to the animals that were turned into meat; it was used to fry the French fries; it's the basis of the salad dressings and the sodas. With the help of a scientist on the Berkeley campus, I took a McDonald's meal and put it through a mass spectrometer. We found that a very high percentage of it could be traced back to cornfields in Iowa. It ranged from 15 percent of the bun to 100 percent of the soda. And I ate that meal in a moving car, which had 10 percent ethanol — made from corn — in the gas tank.

Corn and soybeans are the great commodities of American agriculture, and we have learned to grow them in huge quantities: 10 billion bushels of corn last year. Those crops are very good at converting sunlight and chemicals into carbohydrates, which we then convert into sweeteners, gasoline for our cars, and feed for the animals from which we get our protein. We can also make protein directly from soybeans. Because we subsidize corn so much, and because of the skill with which our farmers grow it, it's incredibly cheap: \$1.50 for a bushel — *fifty-six pounds*. And that's just the kernels! That's a lot of food for \$1.50. The challenge is to turn that cheap corn into something more expensive. And that's what the food industry and McDonald's do so well.

To grow corn that cheap, you need more than just subsidies. You also need vast quantities of fossil fuel. The food industry consumes about 20 percent of imported petroleum, much of which goes to fertilize cornfields. Corn takes a great amount of nitrogen to grow, and the way we make artificial nitrogen is to turn natural gas into ammonium-nitrate fertilizer. So something else you're eating in that McDonald's meal is fossil fuel. A pound of beef takes a half gallon of oil to grow. A bushel of corn also takes about a half gallon. It takes ten calories of fossil-fuel energy to produce one calorie of food energy that way. So to eat that McDonald's meal, we need to keep the oil flowing. That's one reason we're in Iraq.

I don't want to sound like a monomaniac who blames every ill in this country on corn. I love corn. Corn is an amazing plant. I just think we're growing too much of it.

**Cooper:** Why was it important for you to forage your own meal?

**Pollan:** I was curious to see whether I could do it, whether I could actually provide for myself. I hadn't hunted before, and I wanted to see how I felt about killing an animal and cleaning it. My underlying assumption in this book is that our relationship to food constitutes our most profound engagement with the natural world, and we've really lost sight of that. We deal with nature when we go camping, but we don't realize that, at the dinner table, we're dealing with nature too. In writing this book, I wanted to recall that fact. That's why I worked on a farm for a week; that's why I planted corn with a farmer in Iowa; and that's why I went hunting and gathering.

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I also wanted to deal with the primal transactions involved in feeding ourselves. How do I feel about hunting? How do I feel watching this animal die? Why am I disgusted as I'm cleaning this animal I'm going to eat? How am I going to get over that disgust? I do think that, if you are going to eat meat, you should at least once in your life deal with killing an animal. And I dealt with it and was still able to eat it, but there was a moment when I wondered if I could.

As far as gathering goes, I had the usual American fungi-phobia. When you're hunting mushrooms, you have to be good at identifying them. Apparently I don't have a problem now distinguishing a false chanterelle from a true one, because I'm still alive. [Laughter.] Gathering chanterelles and morels in the Sierras was a pleasure. It was like a treasure hunt. At first you're kind of blind to them, and then suddenly they start popping up, as if they were talking to you. It's like harvesting your garden, only better, because you didn't have to plant it.

All types of hunting and foraging are intimate ways to experience the natural world. You're so engaged, so focused. On the hunt I was as alert in nature as I've ever been, even more intensely than when I've gotten lost in the woods. I saw better; I smelled better; I heard better.

**Cooper:** So you hunted and killed a feral pig.

**Pollan:** I did. It was one of the hardest things I've ever done, and I had mixed emotions about it. I was extremely pleased when I succeeded, because I'd worked very hard, and it had taken me a couple of tries to shoot the animal. I didn't have the moment of shame that I'd thought I might have when I saw the pig lying there. On the contrary, I was excited and proud. My companion even took a photograph of me: the classic Hemingway trophy shot. But when I got home that night and looked at the picture, that's when I felt disgusted with myself and had that moment of shame: who was this asshole who was so happy about having killed a big animal?

**Cooper:** How ambivalent are you about eating meat?

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**Pollan:** I'm not ambivalent about eating meat when I know where it's come from and that it has been raised sustainably; that the animals got to live lives consistent with their creaturely character and were slaughtered humanely. This means I don't eat much meat.

**Cooper:** You said earlier that we are "designed to eat meat." Does that mean we *should* eat meat?

**Pollan:** When I began work on this book, I was very concerned as to whether I could morally, ethically, and ecologically defend meat-eating. I wrestled with the moral and ethical issues when I hunted that wild boar. And I found that, ecologically, meat-eating is very defensible.

I used to live in New England, where the landscape is hilly and rocky — not very good farmland, except in some small valleys. The only way for humans to get much food from that landscape is to eat animals that convert grass into protein. There are many other parts of the world where that is the best way to feed the population — much better than transporting food from distant farms, which requires fossil fuel and technologies to keep food fresh.

Then there's the fact that when you grow crops, you're still killing animals. Every time you drive a tractor over a field, you crush woodchucks in their burrows. And croplands destroy animal habitat and are very hard on the environment, especially in hilly places. Even with organic farming, there is the risk of erosion and often the loss of biodiversity. Grasslands are environmentally one of the most benign habitats there are. I'm talking about pastures, prairies, savannas, and other landscapes where animals graze. We tend to think trees are better for the environment, but grasslands have plenty of biodiversity and help lessen the greenhouse effect by reducing carbon-dioxide levels in the atmosphere. All plants take in carbon dioxide, sequester the carbon, and release the oxygen back into the air. What's important about grasses is that they sequester most of that carbon in the soil, and very little in their actual "bodies." Trees sequester carbon primarily in their trunks, and when they fall over and die, the insects and fungi break them down, and that carbon goes back into the air.

**Cooper:** Do grasslands remain ecologically benign when we

graze cattle on them? In 1991 Ted Williams wrote in *Audubon*, "Cattle grazing in the West has polluted more water, eroded more topsoil, killed more fish, displaced more wildlife, and destroyed more vegetation than any other land use."

**Pollan:** That's true, in the case of continuous grazing on brittle lands. But when grazing is well managed, the grasslands actually improve, erosion is reduced, and topsoil is built. It's all in how you do it.

That said, the way we're raising animals for meat now is not only ethically objectionable but ecologically disastrous: we're growing row crops and feeding them to animals kept in cages. In America, where we have more than enough food, we should be grassing that land over and grazing animals on it instead.

**Cooper:** Rather, it seems we're grassing over the rain forest.

**Pollan:** The irony is that part of the rain forest may once have been grassland. Charles Mann's book *1491* describes how, in the places where agribusinesses have deforested the Amazon for cattle grazing, they've found evidence of roads and earthworks and all sorts of human activity. So a lot of the Amazon probably was grass and crops before the collapse of the native civilizations due to colonialism beginning in 1492. It's an untended garden at this point, an orchard gone wild. The reason there are so many useful plants in the Amazon may be that they were *planted* there.

I'm not proposing we turn the Amazon back to grassland. My point is that when meat is raised on grass, the calculations of environmental damage need to be redone. All the environmental critiques of meat refer to feedlot beef, which is raised in pens and fed corn. It's not the eating of animals so much as the way they live and the way we feed them that creates environmental problems.

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