

YOUNG READERS EDITION

The  
Omnivore's  
Dilemma

THE SECRETS BEHIND WHAT YOU EAT

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DIAL BOOKS

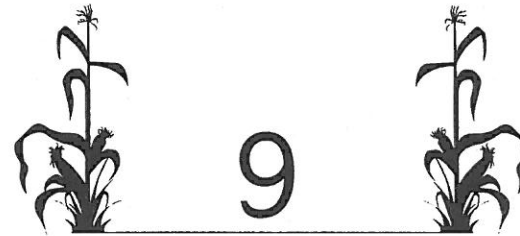
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is designed to be consumed in the car on the way to school or to work. Campbell's has even designed a microwavable soup that can be eaten in a car.

About 47 percent of American families say they still eat together every night. But research shows that many of those "family dinners" are in fact something quite new. In many houses now, each member of the family prepares something different to eat. Mom might cook something vegetarian, while the kids take a pepperoni pizza from the freezer and zap it. They don't all gather at the table at the same time. By the time Dad sits down, with his own low-carb meal, the kids may have gotten up. Is that a family dinner? Not in my opinion.

What difference does it make if families don't eat together? Well, let me answer that question with another question. Is eating just a task that we have to get done as fast and "conveniently" as possible? Is it something we do only because we have to, like taking medicine or brushing our teeth? Looking at food that way robs us of one of life's greatest pleasures. We should not only enjoy and appreciate our food, we should enjoy making it and eating it in the company of others. Food is not just fuel. It's also about family and friends and community.

Yet in spite of this, as part of my research I decided to have one of these alone-but-together meals. My family and I were going to share our separate processed meals, from a fast-food restaurant at the end of the industrial food chain. We were going to solve the omnivore's dilemma the way millions of Americans do every day. We were going to McDonald's.



## My Fast-Food Meal

### FAST FOOD

Every food chain ends in a meal. When it came time to eat my industrial food chain meal, since it was impossible to follow Naylor's corn or steer 534 directly to my plate, I had a lot of choices. I could have bought a meal from KFC or Pizza Hut or Applebee's, or from hundreds of other fast-food outlets. I could have bought a bunch of prepared foods and heated them up (I don't want to say *cooked*) at home. In the end I decided to buy a meal at a McDonald's and eat it in a moving car. Somehow it seemed like the thing to do.

My eleven-year-old son, Isaac, was more than happy to join me at McDonald's. He doesn't get there often, so it's a treat. (For most American children today, it is no longer such a treat: One in three American kids eats fast food every single day.) Judith, my wife, wasn't quite as happy. She's careful about what she eats. To her, having a fast-food lunch meant giving up a "real meal."

Isaac pointed out that she could order one of McDonald's

new “premium salads” with the Paul Newman dressing. I read in the business pages that these salads are a big hit, but even if they weren’t, they’d probably stay on the menu. Marketers know that a salad or veggie burger in a fast-food chain gives kids something to say to overcome parents’ objections. “But Mom, you can get the salad . . .”

Which is exactly what Judith did: order the Cobb salad with Caesar dressing. At \$3.99, it was the most expensive item on the menu. I ordered a classic cheeseburger, large fries, and a large Coke. Large turns out to be a full thirty-two ounces (a quart of soda!). Of course, thanks to the magical economics of supersizing, it cost only thirty cents more than the sixteen-ounce “small.” Isaac went with Chicken McNuggets, plus a double-thick vanilla shake, and a large order of fries. He also ordered a new dessert treat consisting of freeze-dried pellets of ice cream.

We would be eating alone together. That each of us ordered something different is one of the wonders of the industrial food chain. Marketers break the family down into its various groups (parents, kids, moms, dads) and sell something slightly different to each group. That way we each have a reason to go to McDonald’s. The total for the three of us came to fourteen dollars, and was packed up and ready to go in four minutes. Before I left the register I picked up a handout printed in tiny type that was called “A Full Serving of Nutrition Facts: Choose the Best Meal for You.”

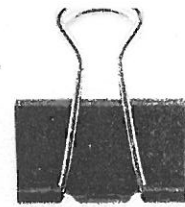
### CHICKEN OR NUGGETS?

We could have slipped into a booth, but it was such a nice day we decided to put the top down on the convertible and eat our

lunch in the car. Both the food and the car have been designed for eating on the road. These days 19 percent of American meals are eaten in a car. In fact, we could have ordered, paid for, and picked up the food without opening the car door.

Our car has cup holders, front seat and rear, and, except for the salad, all the food could be eaten with one hand. Indeed, this is the genius of the chicken nugget. Now it is just as easy to eat chicken in a car as a hamburger. No doubt the food scientists at McDonald’s are right now hard at work on the one-handed salad. By the way, the car was running on gas mixed with ethanol. So while we were eating corn, the car was eating corn too.

I ate a lot of McDonald’s as a kid. This was back when you still had to order a second little burger or sack of fries if you wanted more. The chicken nugget had not



### CHEMICAL NUGGETS

Among the chemicals added to a chicken nugget are sodium aluminum phosphate, monocalcium phosphate, sodium acid pyrophosphate, and calcium lactate. Those are antioxidants that keep the fat in the nugget from spoiling. Something called dimethylpolysiloxane is an antifoaming agent. It is added to keep foam from forming when the nugget is fried. Dimethylpolysiloxane is a suspected cause of cancer.

Then there is also something called tertiary butylhydroquinone, or TBHQ. This chemical is made from petroleum and is either sprayed directly on the nugget or the inside of the box it comes in. Its job is to “help preserve freshness.” TBHQ is a form of butane (lighter fluid). Eating a single gram of TBHQ can cause “nausea, vomiting, ringing in the ears, delirium, a sense of suffocation, and collapse.” Ingesting five grams of TBHQ can kill you. But the government allows food makers to spray a tiny amount of this on your food to preserve it.



yet been invented. I loved everything about fast food. The individual portions were all wrapped up like presents and I didn't have to share with my three sisters. I loved the combination of flavors when I bit into a burger—the soft, sweet roll, the crunchy pickle, the tasty moistness of the meat.

Fast food has a flavor all its own. That flavor has little to do with the flavors of hamburgers or french fries you might make at home. It's flavor created from chemicals in a laboratory. These "fast food" flavors make a lot of fast-food meals taste the same. Even Chicken McNuggets have the same fast-food taste as the hamburgers or french fries, though they're technically chicken, not potato or beef.

Isaac announced that his white-meat McNuggets, a new McDonald's recipe, were tasty. When I asked Isaac if the new nuggets tasted more like chicken than the old ones, he seemed surprised by the question. "No, they taste like what they are, which is nuggets." He then dropped on me a withering two-syllable "duh." In his mind, at least, there is no real link between a nugget and a chicken except the name. No doubt a lot of you feel the same.

Isaac passed one up to the front for Judith and me to sample. It looked and smelled pretty good, with a nice crust and a bright white inside that looked sort of like chicken breast meat. Yet all I could really taste was salt and that all-purpose fast-food flavor. Maybe there was a hint of chicken in there somewhere, but not much.

Later I looked at the flyer I had grabbed to see exactly what goes into a nugget. Of the thirty-eight ingredients it takes to make a McNugget, I counted thirteen that can come from corn. Among them are the corn-fed chicken itself; modified cornstarch; mono-, tri-, and diglycerides; dextrose; lecithin;

yellow corn flour; regular cornstarch; vegetable shortening; partially hydrogenated corn oil.

According to the handout, McNuggets also contain several completely synthetic ingredients, items that come not from a corn or soybean field but from a petroleum refinery or chemical plant. These chemicals are what make modern processed foods possible. They keep the food from going bad or looking strange after months in the freezer or on the road.



### NUGGET KNOWLEDGE

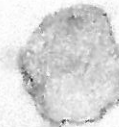
In 1983, Tyson invented the chicken nugget at the request of McDonald's, which was looking for a hands-free chicken product.



In 1992, chicken surpassed beef as the most popular meat in America



6 Chicken McNuggets contain nearly twice as much fat as a regular hamburger



As of 2004, McDonald's sold about 4.8 billion individual nuggets per year

### WHERE'S THE BEEF?

Compared to Isaac's nuggets, my cheeseburger is a fairly simple food product. According to the McDonald's handout, the cheeseburger contains only six ingredients: a 100 percent beef patty, a bun, two American cheese slices, ketchup, mustard, pickles, onions, and "grill seasoning," whatever that is. It tasted pretty good too, though what I mainly tasted were the ketchup, mustard, pickles, and onions. By itself, the gray patty had hardly any flavor.



Eating it, I had to remind myself that the burger came from an actual cow. (Probably an old burned-out dairy cow, which is where most fast-food beef comes from.) Part of the appeal of hamburgers and nuggets is that their boneless forms allow us to forget we're eating animals. I'd been on the feedlot at Poky only a few months earlier, yet I had trouble connecting that place to my cheeseburger. I could not taste or smell the feed corn or the petroleum or the antibiotics or the hormones—or the feedlot manure, even though I knew they were there.

By the time it reaches us, industrial food has been processed so much it no longer seems like something made from plants and animals. Where did my cheeseburger come from? It came from McDonald's. As far as industrial food companies are concerned, that's all we need to know. But it's just not so. My cheeseburger came from slaughterhouses and factory farms in towns like Garden City, Kansas, from ranches in Sturgis, South Dakota, from food science laboratories in Oak Brook, Illinois, from flavor companies on the New Jersey Turnpike, from processing plants owned by ADM and Cargill, from grain elevators in towns like Farnhamville, and, at the end of that long and twisted trail, from a field of corn and soybeans farmed by George Naylor in Churdan, Iowa.

How much corn did Judith, Isaac, and I consume in our McDonald's meal?

Add it up:

Hamburger: corn fed to a cow = 2 pounds corn

6 nuggets: corn fed to a chicken = 1/2 pound

High fructose corn syrup in 3 drinks = 1 pound

Subtotal: 3 1/2 pounds of corn.

There's more corn in the meal, but it's harder to measure. There are corn products everywhere. For example, there's

more corn sweetener in my cheeseburger. The bun and the ketchup both contain HFCS. It's in the salad dressing too, and the sauces for the nuggets, not to mention Isaac's dessert. (Of the sixty menu items listed in the McDonald's handout, forty-five contain HFCS.)

The nugget is made with corn products called binders and emulsifiers and fillers. Isaac's shake contains milk from corn-fed animals. Judith's salad contains cheese and eggs from corn-fed animals. The salad's grilled chicken breast is injected with a "flavor solution" that's also full of corn products. In fact, the majority of calories in the "healthy" salad come from corn. And the french fries? You would think those are mostly potatoes. Yet half of the 500 calories in a large order of fries come from the oil they're fried in. That means the source of those calories is not a potato farm but a field of corn or soybeans:

### CORN EATERS 'R' US

Some time later I found another way to figure out just how much corn we had eaten that day. Scientists can use a machine called a spectrometer to look at the carbon in food and tell how much of it came from corn. I asked Todd Dawson, a biologist at the University of California, Berkeley, to run a McDonald's meal through his spectrometer.

Dawson and his colleague Stefania Mambelli prepared a graph that showed roughly how much of the carbon in the various McDonald's menu items came from corn. In order from most corny to least, this is how the laboratory measured our meal:

Soda (100 percent corn)

Milk shake (78 percent)

Salad dressing (65 percent)

Chicken nuggets (56 percent)

Cheeseburger (52 percent)

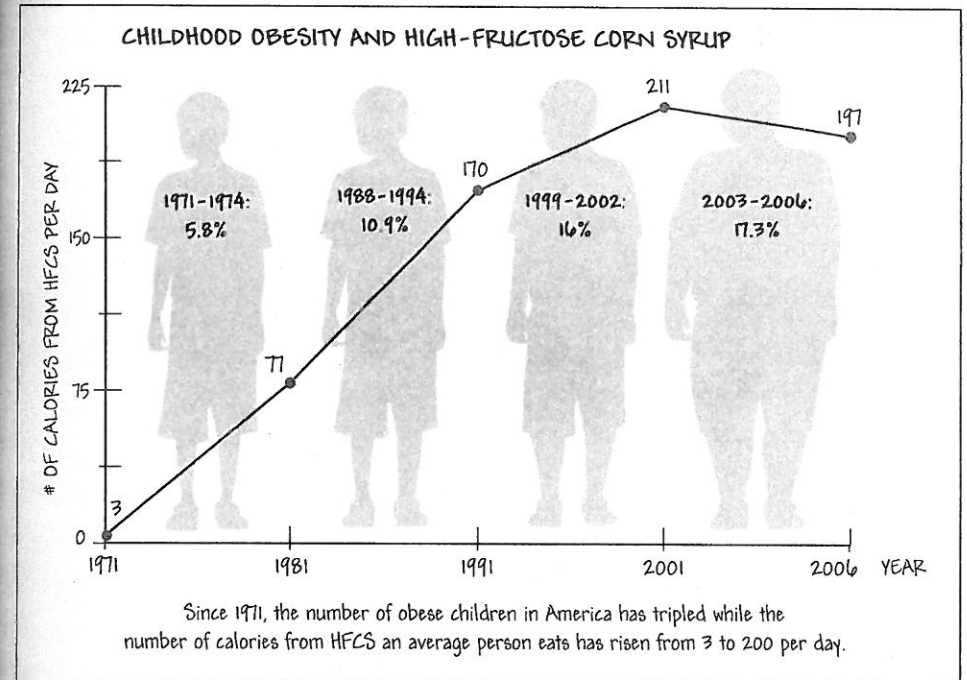
French fries (23 percent)

What looks like a meal with lots of variety turns out to be mainly corn. But so what? Why should it matter that we have become a race of corn eaters such as the world has never seen? Is this a bad thing? The answer all depends on where you stand.

If where you stand is in agribusiness, processing cheap corn into forty-five different McDonald's items is a great thing. It is a way for agribusinesses to sell us more food than we need and so a way for them to make more money. We may not be expanding the number of eaters in America, but we've expanded how much food they eat, which is almost as good. Judith, Isaac, and I together consumed a total of 4,510 calories at our lunch, which is about two-thirds of what the three of us should eat in a day. We had certainly done our parts in chomping through the corn surplus. (We had also consumed a lot of petroleum, and not just because we were in a car. To grow and process those 4,510 food calories took at least ten times as many calories of fossil energy, something like 1.3 gallons of oil.)

Corn-based food does offer cheap calories, if you don't count the billions the government spends to support cheap corn. For people with low incomes, this might seem like a good thing. In the long run, however, these cheap calories come with a high price tag: obesity, Type II diabetes, heart disease.

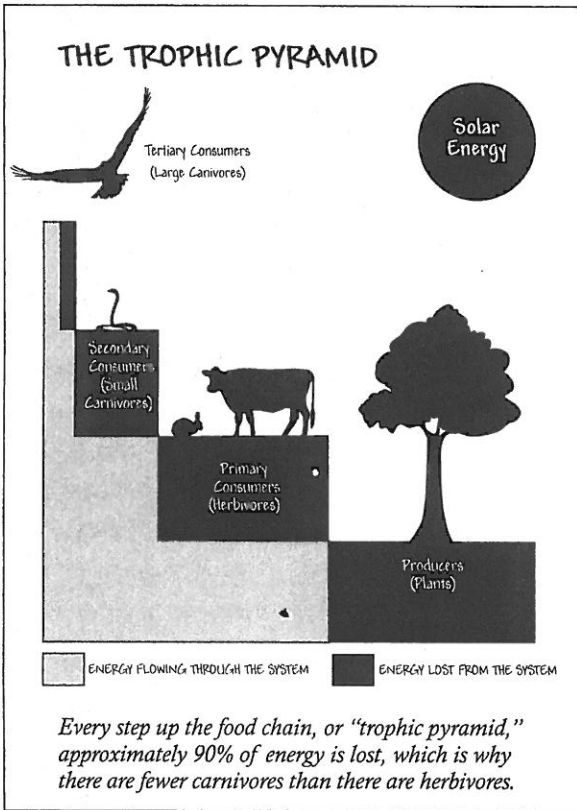
For poor people in other countries, America's industrial food chain is a complete disaster. If you eat corn directly (as Mexicans and many Africans do) you consume all the energy in that corn, but when you feed that corn to a steer or a chicken, 90 percent of its energy is lost. It is used up to make bones or feathers or fur, or just to keep the steer or chicken alive. This is



Source: See page 77, also USDA Economic Research Service.

why vegetarians say we should all eat "low on the food chain." Every step up the chain reduces the amount of food energy by a factor of ten. Processing food also burns energy. All of this means that the amount of food energy lost in the making of a Chicken McNugget could feed a great many more children than just Isaac.

And how does this corn-based food chain look to the corn farmer? As you've seen, the industrial food chain has been an economic disaster for the farmers who grow the food in it. Growing corn and nothing but corn has also damaged the soil of our farmlands, polluted the water, and threatened the health of all the creatures downstream. And of course it means that billions of animals are doomed to live out their lives on factory farms.



*Adapted from Encyclopaedia Britannica*

Yet there is one winner in all of this—corn itself. Of all the species that have adapted to thrive in a world dominated by humans, surely no other has done better than *Zea mays*. Imagine an Iowa farm with corn, corn, corn as far as the eye can see, ten-foot stalks in perfect thirty-inch rows to the horizon. That farm is just a small part of an eighty-million-plus-acre corn lawn rolling across the continent.

If the corn could, it would laugh at us, the humans eating and drinking it as fast as they can. You have to wonder why we Americans don't worship this plant as the Aztecs did. Like they once did, we make great sacrifices to it.

These were my thoughts as we sped down the highway putting away our fast-food lunch. What is it about fast food? Not only is it served in a flash, but more often than not it's eaten that way too. We finished our meal in under ten minutes. From the packaging to the taste, fast food is designed to be eaten quickly. Real food is a pleasure to eat. You want to take your time and enjoy every bite. There's no point in taking your time

with fast food. After a few bites, you forget what you're eating. It's not exactly food, but a kind of food substitute. So you eat more and eat more quickly, bite after bite, until you feel not satisfied, exactly, but simply, regrettably, full.