

The Omnivore's Dilemma



INTRODUCTION

BRIEF BIOGRAPHY OF MICHAEL POLLAN

Born and raised in Long Island, New York, Pollan attended Bennington College and received a Master's Degree in English Literature at Columbia University. He has since worked as a magazine editor and writer, notably as executive editor at *Harper's* from 1983 to 1994 and as a contributing writer and editor at *The New York Times Magazine* from 1995 to the present. Pollan began writing about gardening and agriculture after exploring it as a hobby, and has since become one of America's most prominent voices on issues relating to the modern food system. He is the author of eight books, five of which were *New York Times* bestsellers, and he has won numerous awards, including being named to *Time's* list of the 100 most influential people in 2010. Pollan has served as the Knight Professor of Journalism at the University of California, Berkeley, School of Journalism since 2003.

HISTORICAL CONTEXT

Many of the organic farmers Pollan encounters developed their political ideals from the radicalism of the 1960s, which saw small-scale, sustainable farming as a way of maintaining a healthy relationship between humans and the world around them. The mid-twentieth century saw the development of new and more efficient synthetic fertilizers, but landmark dissenting works like Rachel Carson's *Silent Spring* (1962) also drew attention to the negative effects of such technological breakthroughs and helped found the environmentalist movement. But as Pollan shows, the utopianism of this historical moment later gave way to more practical considerations. The 1960s' dream of sustainable collective agriculture looked increasingly less plausible in a globalized economy that required shifting vast amounts of food across long distances. Pollan also writes about two significant movements in twentieth-century political thought: animal rights and vegetarianism. In particular, Pollan engages closely with the work of Peter Singer, the world's foremost philosopher of animal rights. Singer is a utilitarian, meaning that he believes the most ethical action is the one that maximizes "utility"—in the case of animal rights, maximizing the happiness of animals and avoiding hurting them. For him, this means treating animals (in many cases) as having equal rights as humans. Ultimately, Pollan finds this point of view too extreme. He also becomes skeptical of vegetarianism, a movement which steadily gained ground beginning in the 1970s, as a result of increasing ethical and environmental concerns about the eating of meat.

RELATED LITERARY WORKS

Pollan's food-focused investigative journalism joins a long line of non-fiction works in this genre, beginning most famously with Upton Sinclair's *The Jungle* (1906). Sinclair's book exposed the brutal and unsanitary conditions in the American meat industry, drawing public attention to a previously under-scrutinized sector of the newly industrialized and prosperous American economy. Pollan's account of the short and miserable lives of animals on Concentrated Animal Feeding Operations (CAFOs) recalls Sinclair's shocking depiction. Pollan's work is also similar to more recent works of investigative food journalism, such as Eric Schlosser's *Fast Food Nation: The Dark Side of the All-American Meal* (2001), an exposé of the American fast food industry. Finally, the concluding section of *The Omnivore's Dilemma* is indebted to works in the nineteenth-century American transcendentalist tradition, a group of writers like Ralph Waldo Emerson and Henry David Thoreau. With its dream of an entirely self-sufficient meal created solely from hunting and gathering, this final chapter recalls Thoreau's most famous work, *Walden* (1854), a reflection on the human capacity for self-reliance in the natural world.

KEY FACTS

- **Full Title:** *The Omnivore's Dilemma: A Natural History of Four Meals*
- **When Written:** The early 2000s
- **Where Written:** Berkeley, California
- **When Published:** April 11, 2006
- **Literary Period:** Contemporary
- **Genre:** Nonfiction
- **Setting:** A variety of farms and food-related sites across the United States: the first section largely in the Midwest; the second in Virginia, California, and Washington; the third in the Bay Area of California.
- **Climax:** Of the four meals chronicled by Pollan, the fourth and final one is the most climactic, since it is the product of the most direct and local food chain possible.
- **Antagonist:** The industrial food system
- **Point of View:** First person

EXTRA CREDIT

Teaching Tools. *The Omnivore's Dilemma* was also adapted into a popular young readers' edition designed to make his analysis of the food system accessible to younger people.

Multimedia. As a result of his success as a writer, Pollan

developed a documentary series for Netflix that premiered in 2016. *Cooked* explores what ancient and modern cooking methods can tell us about the human relationship to food.



PLOT SUMMARY

Michael Pollan begins by diagnosing America with a “national eating disorder.” He argues that Americans are suffering from mass confusion about what to eat, propelled by constantly-changing food trends and conflicting diets. This is a uniquely human problem, since humans are omnivores by nature who can eat most plants and animals and, therefore, are faced with the challenge of deciding what to consume. This problem is especially acute in a country with endless food choices—many of which are highly processed and far removed from their natural origins. Pollan sets out to trace major American food sources like **corn**, which he follows from one end of the food chain to the other in a journey that takes him from farms to fast-food restaurants. In doing so, he explores the implications of the choices Americans make within the modern food system, ultimately seeking to answer what Americans should eat, for their own sake and for the sake of the planet.

Pollan explores the American food system by focusing on four different meals that are representative of three food chains: the industrial, the organic, and the hunter-gatherer. The first meal he focuses on is fast food, a product of the industrial food system. He begins with corn, a crop that dominates the American landscape, supermarket, and diet. Most corn is grown in enormous quantities to feed industrially-raised cattle and other livestock, and the rest is refined to create many of the ingredients in processed foods, providing sweetness, texture, color, and starch to many familiar products. Due to its efficiency as a plant, and its diverse utility for food, alcohol, and fuel, corn (species name *Zea mays*) has evolved alongside people very successfully, changing itself to meet human needs.

Pollan visits two farmers in Iowa who grow corn as part of the industrial system, using every tool and pesticide they can to grow as much corn as possible on their land. It is impossible to trace a particular ear of corn to the resulting meal, since corn from farms throughout the middle of the country is all industrially processed together, and three-fifths of that corn will become cattle feed on factory farms.

Although it is also difficult to follow the progress of a single cow, Pollan purchases and visits a steer named 534. 534 is born on a ranch in South Dakota, and he is sent to a feedlot in Kansas at the age of six months, where he is fed a corn-based diet. This is cheaper and easier than grazing cows, and it fattens them to produce the kind of marbled meat that Americans like. But cows’ stomachs are a complex system that have evolved specifically to process **grass**, so their corn diets make them sick, necessitating frequent medical care and antibiotics.

The corn that isn’t used to feed cows is sent to refineries, where it undergoes complicated processing to turn it into various edible and non-edible materials, most frequently high-fructose corn syrup. Food scientists are hard at work creating new and more complicated uses for corn all the time, illustrating how the industry is driven by the economic needs of food companies and manufacturers, rather than the best interests of its human consumers, the animals, or the planet. The corn industry harms the environment with its reliance on a huge amount of fossil fuels that go into producing its fertilizers, and the unnatural system of growing only one crop damages the planet because it requires chemicals to eliminate all other species on cornfields. Corn has also harmed American consumers by making unhealthy calories cheap and easily available. Because people eat a set amount of food, these companies have a profit incentive to find ways to pack as many calories together as cheaply and efficiently as possible, while also continuously convincing people to eat more.

Pollan eats his McDonald’s meal in the car with his wife Judith and son Isaac, and the meal evokes its removal from nature—a removal that he witnessed in tracing the origins of its ingredients. Fast food allows each member of the family to order something different, but each item is standardized to replicate the comforting smells and tastes to which the consumer is accustomed. Each item tastes only vaguely like the things it purports to be, with chicken nuggets merely conveying the “idea” of chicken. Pollan shows that many of the ingredients in his family’s fast-food feast originally came from corn, and he illustrates just how many resources have gone into this meal that, although cheap for the consumer, carries enormous costs, all of which are spread through the industrial food chain spanning the entire country.

Pollan’s second and third meals are both categorized as pastoral, or farm-based, and he uses these meals to explore the meaning of the labels “natural” and “organic,” demonstrating how different the food chains behind these labels can be. First, he looks at large-scale farming, the products of which wind up in large supermarkets like Whole Foods. His farm guru is Joel Salatin, an independent-minded small farmer who runs Polyface, his small family farm in Virginia. Salatin sneers at “Big Organic,” which he considers to be just as bad as the industrial food system. Pollan sets out to find out whether Salatin is right.

The organic movement began as an alternative, countercultural protest against industrial food in the late-60s, and it was characterized by localized, off-the-grid, back-to-the-land hippie ideas. Pollan finds that this movement morphed into a booming industry as it became increasingly popular and mainstream. The demand for organic products forced organic farms to scale up, and to therefore make compromises that don’t always match the ecologically-sound intentions of organic food, or the stories told by the Whole Foods packaging and advertising. He visits places like Cascadian Farms, which began as a cooperative

community and was later acquired by General Mills. He also goes behind the scenes at a poultry farm that purports to be free-range, though it actually only offers its chickens a tiny, bare, unused plot of land. The only concrete difference between this farm and an industrial chicken farm is that the chicken feed is grown without pesticides.

Although much of the food on the industrial-organic chain is more recognizable and traceable than fast food items derived from the purely industrial chain, what goes on behind the scenes is still often harmful to the environment. For example, Big Organic sometimes requires even *more* fossil fuels than industrial farms to combat the inefficiency of producing a huge amount of food without using chemical pesticides and fertilizers. Eating a dinner prepared from Whole Foods-bought ingredients, Pollan weighs the evidence that organic food is more nutritious and flavorful against the cost of flying his organic asparagus into San Francisco from Argentina in January. Pollan concludes that “industrial organic” does betray the intentions behind “organic”—it’s environmentally unsustainable, pricey, and yet it offers potential benefits in health and taste.

Pollan returns to immerse himself in the idyllic Polyface Farm, which Salatin has deemed “beyond organic.” Polyface doesn’t merely adhere to the letter of the law (the vague government regulations that allow industrial farms to call themselves organic)—he’s committed to the true spirit of the word. Polyface operates as a nearly self-sufficient and closed system, one that relies on the natural functions of its organisms and ecosystems. Calling himself a grass farmer, Salatin has developed farming methods that, instead of depleting his land, consistently revitalize it. As the cows are moved around nutritious, biodiverse, grassy pastures, the chickens follow, eating the grubs from the cow manure. Each system fertilizes the next, and the result is a group of animals that appear to Pollan to be happy and high-functioning, producing delicious, nutrient-dense food and almost no waste. They’re also tended by happy workers. Pollan participates in the slaughter, which is done carefully by hand, and he watches as members of the local community come to pick up their meat.

Salatin’s system compares favorably to the previous two, and the resulting meal is markedly more delicious and likely more nutritious as well. It also evokes fascinating conversations about the food, made possible by Pollan’s experience and close connection to it. A marked drawback is that Salatin cannot offer a satisfying answer to the question of how farms like this might be scaled to feed the population at large in the context of the modern economy.

For Pollan’s final meal, which he calls “the perfect meal,” he attempts to hunt and forage every ingredient himself, keeping the food chain as local as possible. Because he is engaging directly with his food, he has to grapple with more basic questions, like the ethics of killing and eating animals, and the

methods by which humans decide what foods are edible in the wild, particularly in the case of mushrooms. Although he can’t solve the ethics matter, he decides that full consciousness and purposefulness of what goes into his meals is the approach he will take. He finds a guide in Angelo Garro, who takes him hunting for wild pigs, one of which Pollan shoots. Pollan learns to forage for chanterelles, goes fishing for abalone, picks cherries from a local tree, fava beans from his garden, and procures wild yeast to use in bread. The meal is a carefully curated masterpiece that he shares with friends, and together they have a direct connection to everything they’re eating.

Pollan’s perfect meal is completely inefficient and unsustainable as a consistent practice, however—the other end of the spectrum from the unsustainable fast food meal. There isn’t an answer to how Americans ought to eat, but Pollan ends by emphasizing that food is a person’s most direct engagement with the natural world. He reminds readers that the consequences of human choices about what to eat extend far beyond what any one individual can see.



CHARACTERS

MAJOR CHARACTERS

Michael Pollan – The author and first-person narrator of *The Omnivore’s Dilemma*, Pollan is an accomplished writer on topics relating to food and the natural world. He is popular for writing in an accessible and entertaining way about the complicated economic and ecological systems behind the food we eat, and about how it’s grown and processed. In *The Omnivore’s Dilemma*, he combines first-person reporting with history and analysis, while traveling around the country to examine four different modern American food chains, and cook a meal based on each one. Living in the San Francisco Bay Area, Pollan eats these meals with his wife, Judith Belzer and son, Isaac Pollan, among other friends.

Joel Salatin – The spunky, libertarian farmer who runs Polyface Farms in Virginia, Salatin hosts Michael Pollan on his farm and expounds an almost spiritual belief in the purity and righteousness of his methods. Calling his farm “beyond organic,” he has created a self-sustaining system with practically zero negative ecological consequences. Preaching a fiery anti-government stance and a strong skepticism of all industrial, large-scale farms—even organic ones—Salatin is dedicated to his animals, his farm, his methods, and his community, refusing to compromise on his principles. He helps Pollan see the hypocrisy of modern organic standards and regulations, and he urges Pollan to notice the value of working with the natural world instead of against it.

George Naylor – Naylor runs the farm in Iowa that Pollan visits to learn about industrially-farmed **corn**. Naylor’s farm, which was passed down to him from his grandfather, contributes to

the region's giant supply of corn (which he sees as part of "the military-industrial complex"), and the farm suffers from the same issues that plague all modern corn farmers. He does his best to keep costs down by rotating his crops to replenish the soil, and he refuses to use GMO corn or other new technological developments in farm machinery. Therefore, although his yield is smaller, he makes more money from it.

Gene Kahn – The founder of Cascadian Farms in Washington state. Kahn began Cascadian Farms as a small family farm in 1971 as part of the original organic movement, and he later sold the farm to General Mills. Kahn is a proponent of compromise within the organic food system, believing in the need to scale up and partner with big business to improve the system from within.

Drew and Myra Goodman – The founders of Earthbound farms, which began in the 1980s as a small plot and roadside stand in California. The Goodmans scaled up as the demand for packaged lettuce boomed, and they later industrialized and partnered with companies like Costco and Wal-Mart to sell pre-washed and packaged lettuce on an intricate and highly unsustainable industrial farm that is nevertheless still technically "organic."

Paul Rozin – The research psychologist at The University of Pennsylvania who first coined the phrase "the omnivore's dilemma" in 1976 with his paper entitled "The Selection of Foods by Rats, Humans, and Other Animals." Rozin studied the difference between animals who only eat one type of food and those who can eat many foods; the latter type are faced with daily choices about what to eat. Michael Pollan used Rozin's phrase as the book's title.

Fritz Haber – The winner of a 1920 Nobel Prize, Haber invented the process of "fixing" nitrogen, or making free-floating nitrogen in the atmosphere usable to grow crops. This vastly increased agricultural productivity and allowed the world's population to grow since 1900. It has been said that two-fifths of the population would not be alive today without Haber. This development also vastly increased mankind's reliance on fossil fuel, which became a key component of the man-made fertilizer made possible by Haber. Unfortunately, Haber later collaborated with Hitler to develop chemical weapons for the Nazi war effort, and died in shame.

Steer number 534 – Michael Pollan purchases this steer (a neutered male cow) to track through his life cycle in the industrial agricultural system, from South Dakota to Kansas. Pollan chooses him for his distinctive markings, and follows him from his birth on a ranch to the feedlot where he is fattened for slaughter. Pollan is not permitted to follow steer number 534 to his death in the slaughterhouse.

Rosie – The organic Petaluma Poultry chicken that Michael Pollan follows from the farm to Whole Foods and cooks in his second meal. Purported to be free-range, Rosie and her fellow

chickens live in an industrial shed with a tiny outdoor patch of land that they never use, exposing the false narratives behind many organic and free-range products in Whole Foods.

Sir Albert Howard – An English agronomist who wrote influential treatises on agriculture, pointing out the complexity inherent in natural systems and the problems with reducing growth to a simple fertilizer formula in large-scale farming. He warned against the dangers of artificial fertilizer and, though he lost out, was influential to future organic farmers.

Earl Butz – The Secretary of Agriculture under Richard Nixon, Earl Butz abolished the New Deal system that had kept **corn's** quantity and price relatively stable through loans and buyback deals with farmers. Butz engineered a huge spike in the price of corn to justify making policies that favored large farms and high yields instead of small farms. Instead of keeping the price stable, the system changed so that the price could fluctuate, and the government would pay farmers directly. This allowed the price to fall as yield increased, which has trapped farmers like Naylor in the cycle of constantly falling prices and growing yields.

Bev Eggleston – The food marketer who works with Joel Salatin, selling foods from Polyface Farms to local farmers' markets. He argues to Michael Pollan that most food prices do not reflect the true cost of food, which is unfair to growers like Salatin. This makes Pollan think about the ways in which we value food.

Peter Singer – Philosopher and author of *Animal Liberation*, which argues on behalf of animals' rights on the grounds that principles of human equality should logically extend to animals. Michael Pollan takes the book to a steakhouse and reads it while eating meat and considering the ethics of meat-eating. Pollan finds Singer's argument to be very strong, and he temporarily becomes vegetarian while he considers this question. He exchanges emails with Singer about the possibilities of eating ethically raised and killed animals, which Singer doubts. Pollan decides that he needs to learn more by taking a closer look at the details of slaughter.

MINOR CHARACTERS

Angelo Garro – Originally from Sicily, Garro is passionate about food and seeks to recreate the foods and flavors from his native country in Northern California. Pollan enlists Garro's expert help in foraging and hunting for his last meal, ultimately finding mushrooms in nature and hunting pigs.

Ed and Rich Blair – The owners of Blair Farms, where steer number 534 was born.

Dr. Mel Metzlin – The veterinarian at Poky Feeders, where Michael Pollan visits steer number 534 as he is being fed and fattened. Metzlin explains to Pollan the harm done to cows' digestive systems by feeding them a **corn**-based diet instead of **grass**.

J. I. Rodale – The founder of *Organic Gardening and Farming* magazine, which was popular in the 1970s. Rodale chose the term “organic” and greatly influenced the countercultural movement against industrial food.

Wendell Berry – A writer who inspired Michael Pollan, particularly with his claim that “eating is an agricultural act.” This led Pollan to consider the many other ways in which eating constitutes an engagement with the rest of the world and a decisive act with far-reaching consequences.

Allen Shainsky – The founder of Petaluma Poultry, which produces a variety of chicken types, including kosher and organic. They make only tiny adjustments to produce each type of chicken, while largely following the same formula.

Teresa Salatin – Joel Salatin’s wife.

Rachel Salatin – Joel Salatin and Teresa Salatin’s eighteen-year-old daughter.

Galen – An intern for Joel Salatin on Polyface Farms.

Peter – An intern for Joel Salatin on Polyface Farms.

Art Salatin – Joel Salatin’s brother, who delivers Polyface Farms foods to surrounding restaurants. The chefs have a strong appreciation for the quality of Salatin’s food, and the local network is an important support network for the farm.

Jean-Pierre and Richard – They hunt for pigs with Garro and Pollan.

Anthony Tassinello – A chef who takes Pollan morel-hunting, which is a sensitive activity since most morel-hunters like to keep their locations secret.

Paulie Porcini – a professional mushroom hunter who joins the hunt with Pollan and Tassinello.

Judith Belzer – Michael Pollan’s wife.

Isaac Pollan – Michael Pollan and Judith Belzer’s son, age eleven when the book was written.

TERMS

The Omnivore’s Dilemma **Paul Rozin**, a psychologist at the University of Pennsylvania, coined this term in a research paper about the psychology of food choices in humans and animals. In contrast to animals that eat only one kind of food, like koala bears who eat only eucalyptus leaves, humans and rats are able to eat a huge range of foods. Omnivores have therefore developed complex systems for choosing what to eat, from instinctive and biological reactions to social constructs about what is healthy or trendy. Humans also have intellectual frameworks by which we understand what is ethical and proper to eat. **Michael Pollan** seeks to unpack this dilemma by exploring all of the factors that go into human food choices in the context of the modern American food system.



THEMES

In LitCharts literature guides, each theme gets its own color-coded icon. These icons make it easy to track where the themes occur most prominently throughout the work. If you don't have a color printer, you can still use the icons to track themes in black and white.



NATURE VS. HUMAN INTERVENTION

In his investigation of where food comes from, Michael Pollan argues that eating is a person’s most direct engagement with nature.

Nature, left to its own devices, will produce the plants and animals that humans use for food, but human intervention has inalterably changed these processes, from the agricultural development and cultivation of land and the domestication of animals to the scientific engineering of highly processed foods. The need to produce a huge volume of food to feed a large population has led to the development of a vast and complex industry; one that is responsive to the demands of the economy. Pollan shows how these systems have modified the state of the natural landscape, and the condition and behaviors of the plants and animals that we eat, and, in turn, our own behavior and condition.

“The omnivore’s dilemma,” for which the book is named, refers to the difficult choices we make about what to eat, because there are so many options available to us as omnivores. The sheer number of choices has been magnified in the modern era, when most Americans are no longer limited by seasonal or geographical restrictions in their diet. Pollan argues that making these choices constitutes our most essential and fundamental engagement with the world, on multiple levels. The number of living humans and our power over many elements of the natural world makes it nearly impossible to prevent the choices we make from affecting other species and their ecosystems.

Although it may seem like there is a line between the part of nature that is unaffected and that which is affected by human activity, Pollan argues that this is blurrier than it may seem. He explains that any kind of agricultural production at all involves human intervention, and our large population has led us to organize agriculture on a large scale. The scientist Fritz Haber first discovered that fertilizer, which uses elements that existed in small amounts naturally, could be made artificially. This vastly increased the available quantities of fertilizer, and has inalterably changed the food and energy cycle: “It has been less than a century since Fritz Haber’s invention, yet already it has changed the earth’s ecology. More than half of the world’s supply of usable nitrogen is now man-made.” Our use of fertilizer has served to “alter the planet’s composition of species and shrink its biodiversity,” but it has served some

species well, including ours, since we benefit from the vastly increased production of food. Crops that can handle large amounts of artificial fertilizer, like **corn** and **grass**, have also fared well.

Pollan writes about how the development of modern industrial agriculture has also deeply changed the lives of the animals we farm: “America’s food animals have undergone a revolution in lifestyle in the years since World War II.” Forcing animals to subvert their natural roles, instincts, and internal processes—including feeding cows corn instead of grass, and keeping pigs and chickens enclosed in tiny spaces—are radical impositions on them. Because we eat these animals, we also can’t escape the effect these changes have on us: “A growing body of research suggests that many of the health problems associated with eating beef are really problems with corn-fed beef.” Our changes to nature for the sake of agriculture impact the health of the animals, our health, and the health of the environment, creating the need for veterinary responses to their illnesses and ecological responses to pollution and other systemic waste.

Other innovations in the food system have come back to haunt us. An obesity epidemic has arisen because so many plentiful calories are now available. In his fast-food meal, Pollan writes, “Judith, Isaac, and I together consumed a total of 4,510 calories at our lunch—more than half as many as we each should probably consume in a day.”

After writing about the drawbacks of our industrial agricultural system, Pollan cautions against the conclusion that a system with less human intervention would be better. Nutritionally, there is evidence that this is the case: “A growing body of scientific research indicates that pasture substantially changes the nutritional profile of chicken and eggs, as well as of beef and milk.” And yet, the complicating details need to be considered. Pollan writes, “Conventional nutritional wisdom holds that salmon is automatically better for us than beef, but that judgment assumes the beef has been grain fed and the salmon krill fed; if the steer is fattened on grass and the salmon on grain, we might actually be better off eating the beef.” The purity of a product also depends on the side effects it produces, as seen in the case of large organic farms whose outputs are uncontaminated by chemicals, but which rely on an enormous amount of petroleum to run.

The organic industry has grown up to market to consumers who seek more natural products, but the institution of government-regulated standards for labelling “organic” and “natural” agriculture have obscured the reality of human interventions in key ways. Many consumers are under the impression that they’re buying natural products when they aren’t. Pollan describes the way high-fructose corn syrup can be deemed “organic,” and chickens enclosed in captivity “free-range.” Conversely, other consumers are happy to completely divorce their food choices from nature, as with fast food: “In

this consumer’s mind at least, the link between a nugget and the chicken in it was never more than notional, and probably irrelevant.” Pollan illuminates the problems with both of these approaches, each of which arise from the industrial-sized production chains.

Ultimately Pollan argues that antidotes to these problems are the small and local approaches taken by small-scale sustainable farmer Joel Salatin at Polyface Farms, or Pollan’s hunting and foraging comrades. However, these methods are far from leaving nature untouched—human intervention in nature is unavoidable at every level of our engagement with food, but Pollan believes that the level and kind of intervention should be calibrated to assess its positive and negative effects.



PLEASURE AND HAPPINESS

Pollan posits happiness and pleasure as important criteria for evaluating our food choices. As he follows the book’s four food chains (industrial, large-scale organic, small-scale organic, and locally foraged) and evaluates the meals that result from each one, he often stops to take note of the pleasure generated for him and the other people and animals involved. While pleasure and happiness are inherently positive, Pollan imbues these feelings with a deeper significance, linking them both to nature and culture, to the individual and the community. He finds happiness in an individual’s true expression, in things and species fitting together and doing what they’re designed to do, in knowledge and its pursuit, in personal responsibility, and also in the communal experiences and traditions that humans have built around food. He also shows how pleasure and happiness redeem less comfortable activities, like difficult farm work, slaughter, hunting, or eating a subpar fast-food meal.

Pollan’s emphasis on happiness doesn’t just pertain to the humans who are eating food. Pollan observes the animals in all four of the food chains he follows as part of his judgments about the quality and success of the food chains themselves. The steer that he buys in order to be able to follow it along the industrial food chain and eventually into a fast-food burger, named 534, is not the picture of happiness. Pollan writes, “I don’t know enough about the emotional life of a steer to say with confidence that 534 was miserable, bored, or indifferent, but I would not say he looked happy.” Pollan’s description of the steer serves as a contrast, on one hand, to the joyful image of the small-scale organic farmer Joel Salatin’s “happy pigs” rooting around and his chickens doing everything chickens want to and are wired to do, and on the other hand to the even worse misery of the supposed free-range chickens crammed into their stinking pen, or the pigs imprisoned in industrial farms and biting each others’ tails out of desperation, before having them cut off. For Salatin, and, it seems, for Pollan, animals being allowed and facilitated in being perfectly themselves constitutes their highest form of living, and a good

measurement of their happiness in the absence of a verbal ability to express emotion.

Humans, who don't have one perfect, hardwired way of eating or of living, nevertheless similarly have certain unique attributes whose expression and fulfillment can lead to happiness. For Pollan, pleasure comes in the cultivation and active pursuit of the proper meal, and way of being. Pollan notes how he finds rewards in the process of his work as an "ecological detective," gaining satisfaction by finding things out, seeing them up close, and learning to connect to this most primal part of life, combining the physical, spiritual, and intellectual. In food chains that are happening at a human scale, Pollan's guides are people who are immensely happy with what they do—such as Salatin and Angelo (Pollan's guide to hunting and foraging). For Joel Salatin, pleasure is intricately bound up with the way he lives and works. He says, "The way I produce a chicken is an extension of my worldview." Angelo, meanwhile, is a foodie looking for the perfect tastes, and ones in particular that remind him of his childhood in Italy. Both men lead Pollan to new worlds, and successful meals. And both are fulfilling their distinctly human hardwiring—Salatin in his spirituality and philosophy and Angelo in his adherence to culture and tradition.

Pollan cites the writer Brillat-Savarin, who "draws a sharp distinction between the pleasures of eating—'the actual and direct sensation of a need being satisfied,' a sensation we share with the animals—and the uniquely human 'pleasures of the table.'" And, indeed, vital to his evaluation of the four meals Pollan chronicles in the book is the setup in which they're consumed. Pollan matches these scenes to the mood of each food chain, from the McDonald's meal consumed in the car to the final, foraged meal painstakingly gathered and cooked, coming together in a group with many of its members contributing something personally. This represents a uniquely human culture and social life, and his evaluation of the four food chains takes into account the way their four meals are conducive to this, or not.

Despite his bias towards the more social meal providing a more valuable kind of happiness, Pollan looks for different pleasurable elements in any situation. When work on Salatin's farm, Polyface, feels particularly arduous, he reflects on the fact that, "Joel and Daniel plainly relish their work, partly because it is so varied from day to day and even hour to hour, and partly because they find it endlessly interesting." For Salatin, "One of the greatest assets of a farm is the sheer ecstasy of life." Even for the fast food meal—although it fails to deliver in many aspects of taste and nutrition—Pollan acknowledges that, "Like other comfort foods, it supplies (besides nostalgia) a jolt of carbohydrates and fat, which, some scientists now believe, relieve stress and bathe the brain in chemicals that make it feel good." About his son, Pollan writes, "For Isaac, the nugget is a distinct taste of childhood, quite

apart from chicken, and no doubt a future vehicle of nostalgia—a madeleine in the making." Pleasure and happiness also mitigate the more distressing aspects of slaughter in the book, where possible—at Polyface, Pollan finds comfort in the rhythm of killing chickens, and the faith that it's the most humane way he can do it. Much to his surprise and slight consternation, he even gets a thrill from hunting, an activity he had previously dismissed.

The various kinds of pleasure and happiness that Pollan finds throughout the book culminate with the foraging of his last meal, which is most satisfying because it takes place on an entirely human scale. He is most directly knowledgeable about and responsible for this meal, noting that this level of engagement is in many ways ideal for human satisfaction, though it is time-consuming and impossible to live that way all the time. Pleasure and happiness are one factor in his comparison of food systems, but cannot be the only one.



COMPROMISE

As Pollan explores the four different meals in his book and the food chains that produce them, he never settles on a single definitive "right way" that things should be done. Instead, he is sensitive to the idea of compromise. With an understanding that there is no one perfect food system, he looks at the successes and failures of all four of the food chains that he writes about, comparing the compromises inherent in each, and the trade-offs made by various farmers and food businesses based on their values and desired outcomes. In his own search for the perfect meal, Pollan is very aware that he is making compromises, and that, practically speaking, compromises must be made. But he also outlines a particular philosophy of compromise, and the requirements that he believes are necessary for any good or valid compromise. Ultimately, Pollan finds compromises admissible as long as they have a worthy goal and are made in good faith—and first the compromiser must be as informed as possible of the impacts of their decision, and weigh all of the relevant factors. In doing so, there is the best chance that they will match the proper compromise to the proper situation.

The four food chains that Pollan investigates and the meals he makes from each one represent a spectrum from the most industrial to the most natural. Each approach entails different compromises between the amount of food produced, its quality, profit, and its effects on the health of people, animals, and the environment. In the industrial agricultural system, farmers are under pressure from government policies and large food corporations to produce as much as possible. They are left little choice but to participate in a system that creates a lot of food at profit to the companies, but has harmful effects on public and environmental health.

On the opposite end of the spectrum are small organic farmers that refuse to compromise on health and environmental

effects, and therefore produce less food and reach fewer people. Pollan visits Joel Salatin, who runs a small sustainable farm called Polyface, and whose aversion to compromise is so strong that he refuses anything that goes against his values, writing, “I don't believe it's sustainable—or ‘organic,’ if you will—to FedEx meat all around the country.” Government standards for what can be considered organic are not even enough for Salatin, who has created something even more natural and sustainable for the entire ecosystem of the farm and his community. He believes that large organic farms have had to compromise for scale too much to even be truly considered organic.

Many farmers working in the large-scale, industrial organic category of farms, or “Big Organic,” are comfortable with the compromises they see as worthwhile. Pollan visits Gene Kahn of Cascadian Farms, which began as a small organic farm and turned into a large business owned by General Mills. Kahn believes that, although he has given up some of his original ideals, he is able to produce much more and is therefore doing good within the food system by selling so much organic produce and other products that would otherwise not be organic at all.

Pollan weighs whether or not industrial organic has a soul, whether it has lived up to any of its ideals, or whether it's worth labeling something as organic when this may be misleading. Shoppers at places like Whole Foods, which rely on “Big Organic,” have traded actual engagement with or knowledge about their food for labels and packaging calling the food natural and sustainable. Often, the farms these foods have come from are making major compromises for scale that don't line up with the ideals they are communicating to their customers. Pollan seeks to expose the varying realities behind the general label “organic,” arguing for a better system of distinguishing between the types of compromises being made behind the scenes.

Ultimately, Pollan shows that no one is immune from some kind of compromise, whether in the various types of organic farms or in the industrial system. He is driven by a desire to help consumers understand the trade-offs behind every food choice they make.



INTERCONNECTEDNESS

In tracing four different modern food chains and their resulting meals, Pollan explores the web of connections made by food. Eating, at its base level, is the intake of energy. Since we cannot directly inhale and use the energy of the sun, we rely on other organisms to process the sun's energy and convert it into the nutrients that we *can* process. This entails the transfer of energy through a variety of systems, both natural and industrial, which in sum creates the complex network of interactions required to feed all of humanity. Pollan argues that these inescapable connections

exist between everything in the natural world, even if we don't typically see or acknowledge that fact—and much of the modern food system relies on our *not* seeing it.

Pollan's comparison between food chains shows them to be, in many ways, radically different, but all share the inescapable interconnectedness of living things—they just handle that fact differently, and are more or less in denial about it. Polyface Farm, the small, sustainable, family-run farm, prides itself on being “a loop rather than a line”; a system designed to reinvest all waste products back into the process in another role. Its owner, Joel Salatin, is acutely aware of every way in which the parts of his farm relate to each other. Pollan writes, “Polyface is an intensive rotational dance on the theme of symbiosis.” While Salatin's own farm is a web of relationships that he attends to, in purchasing very few initial inputs and only selling his products within a small, local radius, Salatin refuses to engage with wider chains and networks of the food industry because he believes those chains create waste and side effects that he couldn't account for or repurpose.

Salatin is a model of a food producer who is always aware of and careful about his impact on the world, but Pollan makes it clear that Salatin is not the norm. In fact, Pollan describes in great detail the ways in which industrial agriculture completely abandons responsibility for the effects it has on the wider world, creating the opposite of a closed loop and often creating problematic consequences. For instance, Pollan explains how the massive amounts of fertilizer runoff from American industrial farms are creating a dead zone in the Gulf of Mexico, as fertilizer drains into the water and kills off algae and other living organisms. Meanwhile, the antibiotics used to suppress animals' reactions to their stressed conditions similarly wind up in unintended places: “The antibiotics these animals consume with their corn at this very moment are selecting, in their gut and wherever else in the environment they end up, for new strains of resistant bacteria that will someday infect us and withstand the drugs we depend on to treat that infection.” The industrial system is designed solely to maximize profits, so it is incentivized to ignore external effects in the service of producing and selling as much as possible.

Pollan is also interested in how the choices we make about food are distorted by what we see and what we don't see about these systems—both in what actually goes into the product, and what side effects the product creates. Most of the natural processes by which plants and animals metabolize energy are unseen, and we have manufactured a food industry that takes food production away from most of us and largely out of our view. This means the consumers of food rely on incomplete information when making our choices about what to eat, and which foods are good and bad. Pollan argues that more knowledge and closer investigation of our food helps us make more informed choices. As he puts it, “Our food system depends on consumers' not knowing much about it beyond the

price disclosed by the checkout scanner. Cheapness and ignorance are mutually reinforcing.” And Pollan shows how the industry at large—in stark contrast to a small farmer like Joel Salatin—is committed to maintaining consumer ignorance.

The organic movement began because consumers wanted to know more about their food, and to be reassured of its safety for them and the environment. As it has scaled up, many large organic farms have begun operating more like industrial farms, but the label of “organic” and the narratives surrounding places like Whole Foods trick consumers into thinking they still know where their food comes from. Labels on organic eggs that depict free-range chickens frolicking in a yard may not match the chickens sitting in an industrial shed. The fast-food chain takes a different tack, removing any kind of natural or recognizable narratives from their food products, and making no attempt to explain where the food comes from. This puts the food into a completely different category, one for which consumers have different expectations. Pollan writes: “That perhaps is what the industrial food chain does best: obscure the histories of the foods it produces by processing them to such an extent that they appear as pure products of culture rather than nature—things made from plants and animals.”

Pollan believes this lack of seeing that enables a denial of the interconnected nature of the food system can be rectified both by getting closer to his food’s origins and by changing the angle or scale of his perspective. He sees his book as playing a role in exposing the food system and giving consumers necessary information, although he is necessarily limited by his own background, perspective, and experiences. While he can never fully escape this, he attempts to zoom out to examine the wide range of things touched by the production of **corn** and soybeans that constitutes so much of the industrial food system (“You would be hard-pressed to find a late-model processed food that isn’t made from corn or soybeans.”) He also puts himself in the shoes of the other species he encounters: noting the success of corn and **grass**, he comments that, from another angle, it almost looks as if those species have domesticated us. No matter how close he gets, though, there are certain aspects of the food chain that Pollan still has trouble forcing himself to take in. Slaughter—which he is barred from watching in the industrial chapters—is still difficult to spend much time dealing with when he’s killing chickens at Polyface Farm and “dressing” the wild pig he shot with Angelo. These moments where he still needs to step away show him the extent to which we’ve successfully removed ourselves from the full scope of the interconnected web of nature. Pollan argues that as much as we can remember the web of implications behind each food, the more we will be motivated to make the best choices possible.



EFFICIENCY AND UTILITY

Because food systems are, in the end, oriented around producing commodities necessary for life, Pollan notes that an important criterion in

comparing and evaluating them is their efficiency and utility, but that much of the American economy only measures this in terms of profit. This measurement requires putting on blinders to all of the system’s external effects, including its impact on the environment and public health, and even many internal effects, like the health of cows that are fed **corn**. Pollan shows that the way we measure efficiency and utility in food is shaped by the fundamental values of the American economy rather than a more holistic view of its success—values that, on closer examination, Pollan deems as both difficult to agree with on a moral level and practically unsustainable in the long term.

Pollan’s visit to the conventional, industrial food chain reveals a web of inefficiencies hidden by the determination to subsidize corn and soybeans. He explains that as a country, we have focused the industrial food system single-mindedly on these two crops because by one measure, they are the most efficient: “Corn is the most efficient way to produce energy, soybeans the most efficient way to produce protein.” This logic is driven by the measure of calories and money. But at what expense? The massive costs to the environment and the difficulty with which the farmers sustain themselves are discounted. Pollan writes, “Ecologically this is a fabulously expensive way to produce food—but ‘ecologically’ is no longer the operative standard.”

The industrial system is not only ecologically inefficient, but also economically inefficient for most of the farmers. The system is designed to benefit the largest food companies who control most stages of production. They demand large yields of corn and soybeans, which they need to feed the next stage of the industrial food chain, the animals, and therefore place high demands on individual farmers with low compensation. Pollan visits the corn farmer George Naylor, who makes small compromises to be able to work within the industrial system and still get by. Naylor’s neighbor, adhering to the system perfectly by planting genetically modified corn and purchasing state-of-the-art technology, is barely getting by because of these enormous expenses—and picking up work outside of farming in order to support himself. The farmers are used to using yield as a measure of success, so the neighbor gets bragging rights and a sense of pride in producing more, even though his expenses are higher and he is therefore adding more corn to the system, helping keep prices low, and making less money himself.

The mainstream practice of producing meat relies on the same single-mindedness to justify itself: “The economic logic of gathering so many animals together to feed them cheap corn in CAFOs is hard to argue with; it has made meat, which used to be a special occasion in most American homes, so cheap and abundant that many of us now eat it three times a day. Not so

compelling is the biological logic behind this cheap meat. Already in their short history CAFOs have produced more than their share of environmental and health problems: polluted water and air, toxic wastes, novel and deadly pathogens.” Animal farmers similarly rely on the measures of calories and money, ignoring all other factors and looking at animals purely as machines. The resulting abundance of corn, soybeans, and meat creates imbalances, some of which can be rectified by economic measures, while others, like obesity—which we’re evolutionarily hardwired not to be able to resist under these conditions—are poorly addressed. After all, it makes good economic sense that people with limited money to spend on food would spend it on the cheapest calories they can find, especially when the cheapest calories—fats and sugars—are precisely the ones offering the “biggest neurobiological rewards.”

On small, sustainable farms like Polyface, Pollan finds a system of efficiency that makes vastly more sense. Polyface farmer Joel Salatin has a theory of the “holon,” or complete, closed system that converts waste from each part of his farm into a useful input for another: “What could be more efficient than turning cow pies into eggs? Or running a half-dozen different production, systems—cows, broilers, layers, pigs, turkeys—over the same piece of ground every year?” Yet this view, too, relies on restricting analysis to a few factors. It can’t account for the need to feed the number of people in America who need to be fed. Pollan is wary of relying on measurements that focus only on intuitively positive and feel-good factors, though he recognizes their value and importance. While he enjoys the meals that result from his Polyface chapter and the chapter where he hunts and forages all ingredients, he doesn’t argue for their all-around efficiency. His adventures in slowly learning how to hunt in pursuit of one kill, spending hours in the freezing ocean in pursuit of wild abalone, or weeks learning to pick mushrooms in the wild don’t offer a vision of a perfectly efficient food system, either.

Pollan tries not to favor any one measure of efficiency, but to point out that there are many that are worth considering. Most pointedly, he argues against the single-minded focus on any one particular factor, like profit.

Pollan argues that even the most synthetic American foods can be traced back to nature, and that therefore all of people’s choices have wide-reaching effects on the natural world. Corn is in fact the main ingredient in a dizzying array of processed foods, from soft drinks to cereals. Americans have the impression that they eat a rich and varied diet, but Pollan points out that the United States has become a “nation of corn eaters.” At no point in the longstanding and intimate relationship between humans and corn have people eaten so much corn, in so many different ways.

These unprecedentedly high levels of corn production come at a high cost, however—to the health of animals, humans, and the environment, and to the financial resources of the government, which heavily subsidizes corn farmers. High subsidies and production quotas have pushed farmers to produce more and more corn, driving down the price of the commodity and impoverishing farmers. (Counter-intuitively, the more productive farmers are, the more money they lose.) This surplus of corn is used to feed animals that are not adapted to eat it, leading to health problems in the animals and then in humans, who are similarly made unhealthy by overconsumption of corn. These absurdities demonstrate the ways in which the industrial food system has very significant costs and inefficiencies by most standards—and yet these concerns have been subjugated to the large profits made by the food businesses that dominate the agricultural economy. Corn symbolizes the effects of capitalism run amok, overtaking the food system and twisting the logic of the way people eat.



GRASS

Grass symbolizes the natural order of the agricultural food chain, as it is the food that cows have evolved over thousands of years to eat. Grass farming thus provides an example of an agricultural system that is designed by humans and oriented towards their needs, but still works in concert with nature. Like corn, grass has a close relationship with humans and their food, but maintains more independence, as it has not coevolved so closely with humans and has maintained its own life cycle and reproductive process. On truly organic farms like Polyface, grass plays the starring role in the food system, providing the solar energy and protein that supports the other animals and plants. Indeed, grass is so central to the philosophical mission and ecosystem of Polyface Farm that Joel Salatin refers to himself as a “grass farmer.” Michael Pollan points out that a cow’s reliance on grass makes excellent evolutionary sense, since cows fertilize the land with their waste, and their digestive system converts grass into energy that they then pass up the food chain to humans. This is a “sustainable, solar-powered food chain” that creates no waste and transforms sunlight directly into protein. By contrast, corn is more wasteful and less nutritionally beneficial for both animals and humans—cattle are fed corn simply because it is



SYMBOLS

Symbols appear in **teal text** throughout the Summary and Analysis sections of this LitChart.



CORN

As the most ubiquitous ingredient in processed foods, and the basis of the food chain for all industrially-raised meats and animal products in America, corn symbolizes the absurdity of the industrial food system. Michael

more economically efficient. For Pollan, while corn represents the industrial food system's prioritization of profit to the detriment of all other ethical and environmental values, grass symbolizes a more ideal and natural food chain.



QUOTES

Note: all page numbers for the quotes below refer to the Bloomsbury edition of *The Omnivore's Dilemma* published in 2006.

Introduction Quotes

☝☝ So violent a change in a culture's eating habits is surely the sign of a national eating disorder. Certainly it would never have happened in a culture in possession of deeply rooted traditions surrounding food and eating.

Related Characters: Michael Pollan (speaker)

Related Themes:  

Page Number: 2

Explanation and Analysis

Pollan argues that humans have a “natural” way of eating developed over thousands of years of evolution. Faced with a plethora of choices about what to eat (“the omnivore’s dilemma”), human culture developed partly to help people make choices about food. Regional cuisines, dining rituals, and other traditions around eating all helped codify a set of rules around when, what, and how to eat. The problem, Pollan asserts, is that Americans have no such set of rules. As a nation of immigrants, the country has never had a strong set of norms around food. The result is that Americans are unusually vulnerable to diet fads and manipulation from food companies. Lacking the continuity of cultural traditions, Americans look to the advice of doctors, advertisers, and friends to tell them what to eat.

☝☝ We show our surprise at this by speaking of something called the “French paradox,” for how could a people who eat such demonstrably toxic substances as foie gras and triple crème cheese actually be slimmer and healthier than we are? Yet I wonder if it doesn't make more sense to speak in terms of an American Paradox—that is, a notably unhealthy people obsessed by the idea of eating healthily.

Related Characters: Michael Pollan (speaker)

Related Themes: 

Page Number: 3

Explanation and Analysis

Unlike the United States, France is a country with long-established rituals governing the preparation and consumption of food. Some of the foods in traditional French cuisine are undeniably technically “unhealthy”—take, for example, the preponderance of bread, cheese, and pastries. But consumed in moderation, these foods bring a great deal of pleasure to the eater. Pollan points out that French people eat small portions in communal settings, taking the time to enjoy their meal rather than eating on the go. What matters is not the nutritional content of the food, per se, but that whole sensory experience of eating. By contrast, Americans are “obsessed by the idea of eating healthily,” foregoing entire food groups that they have deemed unhealthy. Pollan argues that this approach is immoderate and leads to the “paradox” of a diet-obsessed country with an obesity problem.

☝☝ What is perhaps most troubling, and sad, about industrial eating is how thoroughly it obscures all these relationships and connections. To go from the chicken (*Gallus gallus*) to the Chicken McNugget is to leave this world in a journey of forgetting that could hardly be more costly...if we could see what lies on the far side of the increasingly high walls of our industrial agriculture, we would surely change the way we eat.

Related Characters: Michael Pollan (speaker)

Related Themes:  

Page Number: 10-11

Explanation and Analysis

Throughout *The Omnivore's Dilemma*, Pollan argues that the industrial food system has a huge problem with transparency. In the natural world, everything is connected: all food chains involve the transfer of energy from one organism to another. In this sense, even the Chicken McNugget—a highly processed food—is the product of a larger ecosystem. But the processed food industry often obscures these natural “relationships and connections,” presenting food as if it was created in a lab or a factory. The result is that Americans often don't think enough about the origins of their food and the process by which it was created. The industrial food system thus invites its

consumers on a “journey of forgetting” that erases the relationship between humans and the natural world.

Chapter 2 Quotes

☛ The 129 people who depend on George Naylor for their sustenance are all strangers, living at the far end of a food chain so long, intricate, and obscure that neither producer nor consumer has any reason to know the first thing about the other. Ask one of those eaters where their steak or soda comes from and she'll tell you “the supermarket.”

Related Characters: Michael Pollan (speaker), George Naylor

Related Themes: 

Page Number: 34-35

Explanation and Analysis

Pollan explains that corn produced on farms like George Naylor's is in fact the basis for entire American industries and food production chains, from cereal to the Chicken McNugget. This is because corn is used to extract high-fructose corn syrup, a popular ingredient in processed foods, and as cheap food for cattle and other animals that will later be sold in American supermarkets. Pollan rejects the narrative that these foods simply appear in the grocery store, pointing out that everything in the food chain is connected. More often than not, a McDonald's meal begins in the corn fields of Iowa—even if the food industry is determined to obscure these connections.

Chapter 4 Quotes

☛ Through natural selection animals have developed a set of hygiene rules, functioning much like taboos. One of the most troubling things about factory farms is how cavalierly they flout these evolutionary rules, forcing animals to overcome deeply ingrained aversions. We make them trade their instincts for antibiotics.

Related Characters: Michael Pollan (speaker), Steer number 534

Related Themes: 

Page Number: 76

Explanation and Analysis

Pollan is very troubled by the conditions he encounters in Concentrated Animal Feeding Operations (CAFOs). In particular, he is struck by the fact that beef cattle are fed corn—a food they have not naturally evolved to eat. The result is a variety of dietary and health problems for beef cattle like steer number 34, most of whom will need antibiotics to survive. Worse, the waste produced by these animals, instead of turning into fertilizer (as it would in a more natural context) poses serious sanitary risks to the health of the animals in these environments, necessitating the use of yet more human intervention, i.e. drugs. For Pollan, these absurdities are an example of the ways in which the industrial food system “flout[s]...evolutionary rules,” ignoring the accumulated wisdom of thousands of years of evolution in favor of the logic of capitalism.

☛ For one thing, the health of these animals is inextricably linked to our own by that web of relationships. The unnaturally rich diet of corn that undermines a steer's health fattens his flesh in a way that undermines the health of the humans who will eat it. The antibiotics these animals consume with their corn at this very moment are selecting...for new strains of resistant bacteria that will someday infect us.

Related Characters: Michael Pollan (speaker), Steer number 534

Related Themes:  

Page Number: 81

Explanation and Analysis

For Pollan, the environmental ills of feeding beef cattle on a diet of corn—which they have not evolved to eat—do not only extend to the health of the animals themselves. A steer like number 534 will indeed likely suffer a variety of health problems when he is fed an “unnaturally rich diet” as a result of human intervention. But this diet also negatively impacts the health of the humans who eat the cattle. By consuming this meat, humans are also ingesting a diet high in protein and low in other nutrients, a diet that is linked to heart disease, obesity, and other health problems in humans. Even more disturbingly, humans may also be affected by the range of antibiotics given to cattle to inoculate them against the unsanitary conditions in meat factories. As Pollan shows, the interconnectedness of the world's ecosystem means that a single decision at one end of the food chain can have wide-ranging negative ramifications.

Chapter 5 Quotes

☛☛ The question is, Who or what (besides our cars) is going to consume and digest all this freshly manufactured biomass—the sugars and starches, the alcohols and acids, the emulsifiers and stabilizers and viscosity-control agents? This is where we come in. It takes a certain kind of eater—an industrial eater—to consume these fractions of corn, and we are, or have evolved into, *that* supremely adapted creature: the eater of processed food.

Related Characters: Michael Pollan (speaker)

Related Themes:  

Page Number: 90

Explanation and Analysis

Pollan points out a fundamental inefficiency in the functioning of the industrial food system: corn has become so cheap and plentiful that the industry is actually *looking* for ways to use more corn. This is not how commodities usually function in an economy. Typically, the supply of a commodity (like corn) increases in response to greater demand. But here, counter-intuitively, the supply exceeds the demand. The result is that the fast food industry is constantly devising new ways to use corn—in processed foods, cattle feed, and synthetic agents. The overproduction of corn thus in turn necessitates persuading the American consumer to eat more corn than they might be naturally inclined to eat. This provides a particularly ludicrous example of the logic of profit superseding the logic of nature.

Chapter 6 Quotes

☛☛ The power of food science lies in its ability to break foods down into their nutrient parts and then reassemble them in specific ways that, in effect, push our evolutionary buttons, fooling the omnivore’s inherited food selection system. Add fat or sugar to anything and it’s going to taste better on the tongue of an animal that natural selection has wired to seek out energy-dense foods.

Related Characters: Michael Pollan (speaker)

Related Themes:  

Page Number: 107

Explanation and Analysis

Pollan points out that there is an evolutionary explanation

behind people’s desire for sugary and fatty foods like French fries or donuts. Prehistoric humans evolved in a “feast or famine” environment of food scarcity: when they had access to food, they tended to eat more in order to store up energy against potential shortages later on. This development also led to a natural enjoyment of and preference for “energy-dense” foods—which often tend to taste sweet or salty. In this sense, the human preference for candy or fast food is a product of nature. What is *not* natural, however, is the way the industrial food system manipulates these hard-wired evolutionary preferences, producing foods that were only ever consumed in small portions by ancient humans. In other words, while humans are indeed naturally biased towards sweet and salty foods, prehistoric humans were never able to order a McDonald’s meal that pushed those “evolutionary buttons” in the same way. The widespread availability of such energy-dense foods is solely a product of human culture and technology.

Chapter 7 Quotes

☛☛ It looked and smelled pretty good, with a nice crust and bright white interior reminiscent of chicken breast meat. In appearance and texture a nugget certainly alludes to fried chicken, yet all I could really taste was salt, that all-purpose fast-food flavor, and okay, maybe a note of chicken bouillon informing the salt. Overall the nugget seemed more like an abstraction than a full-fledged food, an idea of chicken waiting to be fleshed out.

Related Characters: Michael Pollan (speaker)

Related Themes:  

Page Number: 112

Explanation and Analysis

When Pollan eats a McDonald’s meal with his family, he notes that much of the pleasure in fast food comes from a sense of nostalgia—for many people, fast food reminds them of their childhoods. But for Pollan, this pleasure is ultimately elusive and insubstantial. Although the chicken nugget is “reminiscent of” and “alludes to” real fried chicken, he finds himself mainly tasting salt and synthetic ingredients. This suggests that the chicken nugget (a product of human industry) cannot, in the end, taste like a “real” chicken (a product of nature). However much the industrial food system tries to appeal to humans’ hard-wired desires, the product they offer is, in Pollan’s view, more of an “abstraction” than a real food.

Chapter 8 Quotes

☝☝ This is an astounding cornucopia of food to draw from a hundred acres of pasture, yet what is perhaps still more astonishing is the fact that this pasture will be in no way diminished by the process...Salatin's audacious bet is that feeding ourselves from nature need not be a zero-sum proposition, one in which if there is more for us at the end of the season then there must be less for nature—less topsoil, less fertility, less life.

Related Characters: Michael Pollan (speaker), Joel Salatin

Related Themes:   

Related Symbols: 

Page Number: 126-127

Explanation and Analysis

In many of the food systems Pollan has described thus far, the relationship between humans and the natural world is imagined as a “zero-sum” game—which is to say, in order for humans to survive and prosper, the natural world must be subjugated and diminished. On Joel Salatin's sustainable farm, Polyface, Pollan sees a different way of conceptualizing this relationship, one that recognizes the interconnectedness of all things in the natural world. Polyface Farm finds a compromise between the needs of humans and animals: cattle are slaughtered, for instance, but their manure fertilizes the soil that will yield more nutrients to feed more cattle. This is “efficiency” in a very different sense than the profit-driven logic of the meat factory. Salatin, too, minimizes waste and maximizes profit, but in a way that acknowledges that care for plants and animals can be beneficial to humans as well.

Chapter 9 Quotes

☝☝ You have a choice of getting sad about all that or moving on. We tried hard to build a cooperative community and a local food system, but at the end of the day it wasn't successful. This is just lunch for most people. *Just lunch*. We can call it sacred, we can talk about communion, but it's just lunch.

Related Characters: Gene Kahn (speaker)

Related Themes:  

Page Number: 153

Explanation and Analysis

In Pollan's exploration of the “industrial organic” food system—which is to say, food grown along organic principles but sold in large national chains like Whole Foods—he encounters many people who have made compromises on their way from small farms to supermarkets. Gene Kahn, for instance, began as a small organic farmer but later sold his farm to General Mills, where he is now an executive. Kahn explains that he doesn't think the ideals of the organic movement were sustainable, because for most people, food is “just lunch” and does not involve a broader project of social improvement. In addition, a food system that was sustainable at the local level is often not able to scale up when it comes to shipping large amounts of food over long distances. Local organic food thus often adopted the more “efficient” models of larger corporations. In this sense, people like Kahn represent the segments of the organic community that have made pragmatic compromises with the demands of a globalized economy.

Chapter 10 Quotes

☝☝ Our civilization and, increasingly, our food system are strictly organized on industrial lines. They prize consistency, mechanization, predictability, interchangeability, and economies of scale. Everything about corn meshes smoothly with the gears of this great machine; grass doesn't.

Related Characters: Michael Pollan (speaker)

Related Themes:  

Related Symbols:  

Page Number: 201

Explanation and Analysis

Pollan points out that the industrial food system prizes efficiency above all else. Corn is widely used to feed beef cattle, for instance, because it offers high amounts of protein for little financial investment. In a Concentrated Animal Feeding Operation (CAFO), corn can feed large numbers of animals and fatten them quickly, making them suitable for slaughter at an earlier age than they would be in a natural setting. Everything about corn is designed to maximize profit and minimize waste and inefficiency. But while corn stands for the efficiency of a great human capitalist machine, grass stands for more “natural” values. Cattle have evolved over time to eat grass, a source of protein that fattens them more slowly but that provides a sustainable energy source (since cow manure fertilizes the pasture). In order to tap into this sustainable food cycle,

CAFOs would have to operate on entirely different principles. Corn allows meat companies to bend nature to the human will and process thousands of animals a day; grass-fed cattle are far less compatible with an industrial system of food production.

Chapter 11 Quotes

☛☛ “Efficiency” is the term usually invoked to defend large-scale industrial farms, and it usually refers to the economies of scale that can be achieved by the application of technology and standardization. Yet Joel Salatin’s farm makes the case for a very different sort of efficiency—the one found in natural systems, with their coevolutionary relationships and reciprocal loops. For example, in nature there is no such thing as a waste problem, since one creature’s waste becomes another creature’s lunch.

Related Characters: Michael Pollan (speaker), Joel Salatin

Related Themes:  

Page Number: 214

Explanation and Analysis

Pollan spends most of the first half of *The Omnivore’s Dilemma* critiquing the ideal of “efficiency,” which in the factory farms he visits often involves the subjugation of all ethical and environmental considerations in order to maximize profit. On Joel Salatin’s farm, however, he begins to articulate a recuperated idea of efficiency. Salatin is also a pragmatic businessman: he slaughters cattle and chicken for sale, like the meat factories Pollan had visited earlier, but he does it without needing to confine animals in close quarters, raise them in unsanitary conditions, and subject them to a litany of drugs. Instead, his farm harnesses the natural efficiencies of the world’s preexisting ecosystems. It is sustainable because it is an ecological “closed loop”—for example, animals produce waste, but that waste fertilizes the soil, providing “another creature’s lunch.” Meat factories have to deal with the problem of how to dispose of an abundance of animal waste, whereas Salatin has no such problem. His farm is naturally as opposed to artificially efficient.

Chapter 12 Quotes

☛☛ Polyface’s customers know to come after noon on a chicken day, but there’s nothing to prevent them from showing up earlier and watching their dinner being killed—indeed, customers are welcome to watch, and occasionally one does. More than any USDA rule or regulation, this transparency is their best assurance that the meat they’re buying has been humanely and cleanly processed.

Related Characters: Michael Pollan (speaker), Joel Salatin

Related Themes: 

Page Number: 235

Explanation and Analysis

Pollan believes that the ethical problem at the heart of the American meat industry is ignorance and lack of transparency. If people knew what actually goes on in a meat factory, he argues, they would lose their appetites. By contrast, Salatin’s Polyface Farm is radically transparent about its practices—so much so that Salatin slaughters animals outside, in the open air, so that anyone can show up and watch “their dinner being killed.” Salatin’s openness about his treatment of animals suggests that Polyface Farm is entirely confident that its animals are being treated ethically. By showing the origins of food rather than shrouding the process of meat production in mystery and obfuscation, Salatin acknowledges the interconnected relationship between humans and the animals they eat.

Chapter 13 Quotes

☛☛ [I]f the bar code on the typical package of pork chops summoned images of the CAFO it came from, and information on the pig’s diet and drug regimen, who could bring themselves to buy it? Our food system depends on consumers’ not knowing much about it beyond the price disclosed by the checkout scanner. Cheapness and ignorance are mutually reinforcing.

Related Characters: Michael Pollan (speaker)

Related Themes: 

Page Number: 244-245

Explanation and Analysis

Pollan believes that Americans are willfully and deliberately blind to the interconnected processes that produce the food they eat every day. Food has become cheap and plentiful, but at a deeper cost—no one seems to know

where their food comes from anymore, other than “the supermarket.” And it is most people’s interest in not knowing, Pollan argues, that allows powerful corporations to get away with practices that do significant harm to animals and the environment. As he asks rhetorically, if people know how pigs were treated, would they ever buy pork? In this sense, “cheapness and ignorance are mutually reinforcing” because inexpensive food almost always requires unethical practices. These practices, in turn, can only be perpetuated in an atmosphere in which people don’t understand (or don’t want to understand) the connections between their food and the animals that made the meat.

Chapter 14 Quotes

☛ Every meal at a table recapitulates this evolution from nature to culture, as we pass from satisfying our animal appetites in semisilence to the lofting of conversational balloons. The pleasures of the table begin with eating...but they can end up anywhere human talk cares to go. In the same way that the raw becomes cooked, eating becomes dining.

Related Characters: Michael Pollan (speaker)

Related Themes:  

Page Number: 272

Explanation and Analysis

As he eats an organic meal with family and friends, Pollan reflects on the way that human culture takes what could be a fairly basic evolutionary impulse (the gratifying of the human appetite for food) and turns it into a social event. Rather than merely wolfing down their food and leaving, humans take the time to enjoy the traditions and rituals around eating—rituals that often involve the participation of other people. In this way, a meal is more than a biological impulse; it is also a product of human culture. For Pollan, this dinner exemplifies not only the pleasure and enjoyment that humans can derive from eating, but also the complex interchange between nature and culture. Humans need to eat, but they don’t necessarily need to sit down for a meal together and enjoy a conversation. In this sense, the “pleasures of the table” turn out to be both natural and the product of human intervention.

Chapter 15 Quotes

☛ For one of the things I was hoping to accomplish by rejoining, however briefly, this shortest and oldest of food chains was to take some more direct, conscious responsibility for the killing of the animals I eat.

Related Characters: Michael Pollan (speaker)

Related Themes: 

Page Number: 281

Explanation and Analysis

Pollan turns to hunting and gathering because he is dissatisfied by what he sees as the complacency and ignorance of people who shop in grocery stores without wondering where all this cheap, convenient food comes from. As he shows, the food chain that leads from the cornfield to the meat factory to the supermarket has become impossibly tangled and complex, and the connections between the human and animal world are no longer very clear. He thus hopes to re-join “this shortest and oldest of food chains,” by which he means the relationship between the hunter who kills and forages for their own food. In a modern globalized food economy, people rarely think of themselves as having much connection at all with, say, the beef cattle that produced their steak. By hunting his own food, Pollan hopes to feel a sense of “direct, conscious responsibility” for the animals he eats. For him, this sense of connection with the natural world might be the only way to justify eating animals at all—by taking direct responsibility for ending their lives, rather than allowing an industrial food corporation to do the job for him.

Chapter 16 Quotes

☛ And while our senses can help us draw the first rough distinctions between good and bad foods, we humans have to rely on culture to remember and keep it all straight. So we codify the rules of wise eating in an elaborate structure of taboos, rituals, manners, and culinary traditions, covering everything from the proper size of portions to the order in which foods should be consumed to the kinds of animals it is and is not okay to eat.

Related Characters: Paul Rozin, Michael Pollan (speaker)

Related Themes:  

Page Number: 295-296

Explanation and Analysis

Pollan's book is named for "the omnivore's dilemma," a term coined by a scientist named Paul Rozin. Rozin observes that humans can eat a great variety of foods, but with great variety of choice comes indecision about what is safe and desirable to eat. Humans developed a variety of biological tools (like taste) to help make these determinations. But as Pollan points out, human culture has also had a significant role in helping humans resolve this old evolutionary problem. All of the rituals in human society that govern eating—such as cooking, table manners, and the social convention of mealtimes—represent a human intervention in nature. These "rules of wise eating" can also bring more pleasure to the act of eating, as Pollan notes: culture elevates the act of killing and eating animals, turning an act of survival into a centerpiece of human life.

Chapter 17 Quotes

☝☝ This isn't to say that we can't or shouldn't transcend our inheritance, only that it is our inheritance; whatever else might be gained by giving up meat, this much at least is lost. The notion of granting rights to animals may lift us up from the brutal, amoral world of eater and eaten—of predation—but along the way it will entail the sacrifice, our sublimation, of part of our identity—of our own animality.

Related Characters: Michael Pollan (speaker)

Related Themes: 

Page Number: 314-315

Explanation and Analysis

Pollan grapples with the ethical problems of eating meat by thinking about the traditional, "natural" relationship between humans and animals. In the distant evolutionary past, humans lived among animals as predators, killing other creatures to ensure the survival and perpetuation of their own species. In this sense, there is something very natural about humans eating meat. On the other hand, human culture has evolved in such a way that people now concern themselves with the rights of animals, questioning whether such a brutal transaction can be ethically justifiable. Pollan is sympathetic to these arguments, but he also wonders whether they represent an unrealistic application of human morality and social mores to the natural world. In this sense, refusing to kill animals might paradoxically require humans to act in a very *unnatural*, un-animalistic way that denies their own nature.

Chapter 18 Quotes

☝☝ This for many people is what is most offensive about hunting—to some, disgusting: that it encourages, or allows, us not only to kill but to take a certain pleasure in killing. It's not as though the rest of us don't countenance the killing of tens of millions of animals every year. Yet for some reason we feel more comfortable with the mechanical killing practiced, out of view and without emotion, by industrial agriculture.

Related Characters: Michael Pollan (speaker)

Related Themes:  

Page Number: 360-361

Explanation and Analysis

When Pollan kills his first animal, he feels pleasure—an emotion that first makes him feel guilty and ashamed. However, he ultimately comes to have a more positive understanding of the enjoyment people can take in killing and eating an animal with their own hands. Such a direct exchange between human and animal acknowledges the interconnections of the world's ecosystems rather than obscuring them. Unlike industrial agriculture, which practices "mechanical killing" away from most people's eyes, hunting forces the hunter to reckon with the full implications of what it means to take a life. For Pollan, this is a more honest and ethical way of killing animals, since it acknowledges the gravity of such a sacrifice and people's indebtedness to the animals who die to make their dinner.

Chapter 20 Quotes

☝☝ I prized, too, the almost perfect transparency of this meal, the brevity and simplicity of the food chain that linked it to the wider world...I knew the true cost of this food, the precise sacrifice of time and energy and life it had entailed.

Related Characters: Michael Pollan (speaker)

Related Themes: 

Page Number: 409

Explanation and Analysis

Throughout *The Omnivore's Dilemma*, Pollan has searched for the "perfect meal." He finally finds it in a meal consisting entirely of food he has hunted and foraged himself—because for once, he knows where all the ingredients came from. According to Pollan, the industrial food system thrives in the shadows, by obscuring the

precise origins of where America's seemingly endless supply of cheap and plentiful food actually comes from. This ignorance may make for a more comfortable grocery shopping experience, in which consumers don't have to think about pesticides, forest destruction, and animal suffering. But for Pollan, it is unnatural to think about food as merely originating "from the supermarket." Instead, he longs for a meal that could be honest about "the precise

sacrifice of time and energy and life" it takes to make food fit for human consumption, from the suffering of an animal that died to make the meal to the labor of the chef. His foraged meal is "perfect" because it is "perfectly transparent" about the networks of connection and interdependence between humans and the natural world around them.



SUMMARY AND ANALYSIS

The color-coded icons under each analysis entry make it easy to track where the themes occur most prominently throughout the work. Each icon corresponds to one of the themes explained in the Themes section of this LitChart.

INTRODUCTION: OUR NATIONAL EATING DISORDER

Michael Pollan begins by explaining that *The Omnivore's Dilemma* is a “long and fairly involved answer” to the question, “What should we have for dinner?” He points out that, though this question is seemingly rather straightforward, deciding what to eat has become something that requires a “remarkable amount of expert help.” Indeed, it is this unexpected complexity that has prompted him to consider why, exactly, contemporary cultures—especially in America—have found themselves needing “investigative journalists” to reveal the origins of their food. He stumbled upon this conundrum in 2002, he explains, when Americans largely cut bread and other carbohydrates out of their diets in an attempt to lead healthier lives, a decision inspired by the highly popular Atkins diet, which encouraged eaters to consume as much red meat as they wanted as long as they stayed away from bread and pasta.

Pollan traces the decline in American consumption of bread and pasta during the Atkins fad of 2002. After three decades of avoiding red meat because of the Carter administration’s warnings against it, suddenly Americans embraced the idea of eating as much meat as they wanted—so long as they abstained from the carbohydrates they’d previously been shoveling down as a substitute. Since people were eating less bread and pasta, “bakeries and noodle firms” plunged into bankruptcy. “So violent a change in a culture’s eating habits is surely the sign of a national eating disorder,” Pollan writes, suggesting that if American culture had actual “traditions surrounding food and eating,” the nation wouldn’t feel the need to frantically change its eating behaviors to reflect the day’s most recent diet craze. And not only would a country with a “stable culture of food” be less vulnerable to harebrained culinary fads, he writes, it would also “not be nearly so fat.”

Other countries—like Italy or France—approach the question of what they should eat for dinner with more simplicity, allowing themselves to follow the “quaint and unscientific criteria” of “pleasure and tradition.” Of course, this means that although they sometimes eat technically “unhealthy” foods, they ultimately “wind up actually healthier and happier in their eating” than Americans. Pollan notes that Americans call this the “French paradox,” but suggests that it probably makes more sense to “speak in terms of an American Paradox—that is, a notably unhealthy people obsessed by the idea of eating healthily.”

One of the central preoccupations of The Omnivore's Dilemma is the problem of making dietary choices. Many humans today have too much to eat, both because they have evolved to eat a wide variety of foods and because wealthy countries like the United States produce an abundance of food. As Pollan shows, the natural evolutionary advantage of omnivorousness—being able to choose between many dietary options—creates difficulties in human culture and society. In Pollan's diagnosis, the remarkable complexity of eating in modern-day America is partly a result of this abundance of choice.



Pollan points out that Americans are remarkably susceptible to dietary fads, and he suggests that this is another result of the omnivore's dilemma (especially as his book will specifically focus on the "dilemma" in contemporary America). Faced with a plethora of choices about what to eat, human culture has stepped in with expert advice, advertising, and a variety of other cultural rituals around diet and eating. The problem is worsened in the United States, which in Pollan's account lacks a stable tradition and set of values relating to food. In this sense, what looks like a "natural" impulse—the desire to simply satisfy human appetites—is in fact reflective of human social conditions.



Pollan notes that pleasure offers one means of negotiating the omnivore's dilemma. In Italy and France, for example, people eat technically "unhealthy" foods, guided not by the latest scientific trends on fats and carbohydrates but instead following the dictates of cultural tradition and what they find pleasurable. If Americans had such a stable core of traditions around eating, Pollan suggests, they would be healthier as a nation.



As omnivores, humans can eat any kind of food. Unlike koalas (for example), who are “hardwired” to only eat eucalyptus leaves, humans have the entire spectrum of food from which to choose. And although this kind of variety is something of a luxury, it also comes with its own complications. “When you can eat just about anything nature has to offer,” Pollan notes, “deciding what you *should* eat will inevitably stir anxiety, especially when some of the potential foods on offer are liable to sicken or kill you.” This, he explains, is what’s known as the omnivore’s dilemma, an idea outlined by a psychologist named Paul Rozin. Juxtaposing the koala’s highly specific eating habits with omnivores like humans and rats, Rozin upheld that “a vast amount of brain space and time must be devoted to figuring out which of all the many potential dishes nature lays on are safe to eat.”

Continuing his explanation of the omnivore’s dilemma, Pollan points out that humans have to depend upon their “prodigious powers of recognition and memory” in order to stay away from poisons. In addition to memory, taste buds contribute to a human’s ability to avoid sickening food, since human taste “predispose[s] us toward sweetness, which signals carbohydrate energy in nature, and away from bitterness, which is how many of the toxic alkaloids produced by plants taste.”

Thankfully, humans are better equipped to tackle the omnivore’s dilemma than other animals, like rats. Whereas rats are left to their own devices when it comes to figuring out whether or not something is safe to eat, humans can rely somewhat on each other, since the culture surrounding food is made up of a history of “human tasters,” forerunners who have warned the population away from certain foods. Pollan writes: “Our culture codifies the rules of wise eating in an elaborate structure of taboos, rituals, recipes, manners, and culinary traditions that keep us from having to reenact the omnivore’s dilemma at every meal.”

The human ability to eat a variety of foods is arguably what facilitated the dominance of the species over other animals, since the need to make such decisions may have led to the development of the famously “big brain” in humans. Paradoxically, however, this evolutionary advantage also has a crucial weakness: humans often simply don’t know what to eat, when faced with such an abundance of choice. Human culture thus has developed to fill the gap, creating regional cuisines, rituals around preparing and eating food, and other rites and traditions that help people decide what to eat.



Prehistoric humans needed to develop a range of natural tools to help them stay away from foods in nature that could harm them, all of which requires an extraordinary amount of brainpower. In this sense, the omnivore’s dilemma has made human culture what it is today, with its preoccupation with the correct preparation and eating of food.



Pollan explains that it would be impossible for a person to evaluate all the available information about which foods are safe to eat every time they sat down to a meal, as that would be ludicrously inefficient. This is where cultural memory comes in, allowing humans to pass down knowledge about food from generation to generation. Human cuisine thus represents a compromise between nature and human intervention.



Unfortunately, what Pollan refers to as “the cornucopia of the American supermarket” has essentially reintroduced the average consumer to the omnivore’s dilemma. Faced with so many choices, shoppers must suddenly confront “the extraordinary abundance of food in America,” an endeavor that complicates the otherwise straightforward decision of what a person should eat for dinner. Worse, “many of the tools with which people historically managed the omnivore’s dilemma have lost their sharpness” in America, since this is a “relatively new nation drawn from many different immigrant populations,” meaning that there are numerous cultures and traditions surrounding food in the country. In turn, it follows that “Americans have never had a single, strong, stable culinary tradition” to use as a guide when it comes to the omnivore’s dilemma.

Pollan notes that, faced with this resurgence of the omnivore’s dilemma, he decided to “go back to the very beginning” of the various “food chains that sustain us, all the way from the earth to the plate.” He explains that humans are like any other creature in that they “take part in a food chain,” so that “we are not only what we eat, but how we eat, too.” Unlike other creatures, though, we’ve found ways to actually *change* the various food chains in which we participate—indeed, even the process of cooking “opened up whole new vistas of edibility,” and agriculture has enabled the human race to cultivate especially “favored food species” that we depend upon. Plus, humans have found ways to “reinvent the [...] food chain, from the synthetic fertility of the soil to the microwaveable can of soup designed to fit into a car’s cup holder.”

The Omnivore’s Dilemma, Pollan asserts, focuses on three food chains that sustain humans: the industrial, the organic, and the hunter-gatherer. Although each one is different, they all essentially connect humans—through what they eat—to “the fertility of the earth and the energy of the sun.” Of course, this is more obvious in certain food chains than in others, but Pollan assures readers that even a Twinkie is connected to the earth’s fertility.

In Pollan’s account, human culture helps people solve the problem of the omnivore’s dilemma by accumulating shared traditions and knowledge about food. But because the United States is almost entirely a nation of immigrants, the country lacks a stable cuisine and rituals around eating (unlike, say, Italy or France). Here the productive exchange between nature and human culture has broken down, leaving Americans often at a loss when it comes to making decisions about how to eat in a country with a vast overabundance of food.



Pollan finds that human culture has significantly altered the earth’s natural food chains. People today are facing very different dilemmas around food than their prehistoric ancestors, who never had to contend with microwaveable soup cans. However, Pollan seeks to recover the ways in which humans are still part of a global food chain. Everything Americans eat today can be traced back to the soil and the energy of the sun, even if the interconnectedness of living things on the planet has been obscured by human intervention.



It might seem impossible to imagine that a Twinkie, with its highly synthetic qualities, has anything to do with a farm. But Pollan asserts that everything people eat is connected to a food chain, even if those connections aren’t immediately apparent.



Pollan states that “all life on earth can be viewed as a competition among species for the solar energy captured by green plants and stored in the form of complex carbon molecules.” A food chain, then, is a “system for passing those calories on to species that lack the plant’s unique ability to synthesize them from sunlight.” Interestingly enough, this concept has been significantly altered by the industrial revolution, since industrial agriculture has allowed farmers to grow crops that subsist on energy from fossil fuels instead of solely on energy produced by the sun. In turn, humans have been able to significantly increase the amount of food the earth can grow, which has enabled the human race to multiply in number while also further complicating the omnivore’s dilemma.

Pollan explains that each section of *The Omnivore’s Dilemma* follows “one of the principal human food chains from beginning to end: from a plant, or group of plants, photosynthesizing calories in the sun, all the way to a meal at the dinner end of that food chain.” The first section focuses on the industrial food chain, since this is the one from which humans primarily eat in contemporary times. In addition, the industrial food chain is the most complicated, despite the fact that it is largely dependent upon just one plant: *Zea mays*, “the giant tropical grass we call corn, which has become the keystone species of the industrial food chain, and so in turn of the modern diet.”

The second section of *The Omnivore’s Dilemma*, Pollan writes, will track the pastoral food chain, which is made up of “some of the alternatives to industrial food and farming.” This includes the foods that are called “organic,” “local,” “biological,” and “beyond organic.” Because alternative agriculture is quite varied and multifaceted, Pollan admits that he had to alter his original plan to follow just one meal throughout the pastoral food chain. As such, he decided to also follow a meal along a food chain he likes to call the “industrial organic,” ultimately offering up an account of the variations within the greater pastoral—or organic—food chain.

In the last two hundred years, humans have developed technology capable of altering food chains that have existed for thousands of years. Humans have always manipulated the food chains around them, but modern agriculture has significantly increased the amount of food humans can grow, a change that represents an impressive application of human effort and ingenuity to the natural world. Industrial agriculture represents the culmination of a long history of human intervention in the earth’s food chains.



Paradoxically, although the food chain that produces a Twinkie or a McDonald’s meal looks complex, it is also dependent on a single source. Most processed food, Pollan shows, can be traced back to America’s vast cornfields, demonstrating that all industrial food systems are in some ways linked to a more fundamental and basic food chain: the growing of crops from American soil.



“Organic” food claims to simplify the food chain that leads to American supermarkets, growing food without the use of artificial fertilizers and other synthetic agents. As Pollan investigates this food chain further, however, he finds that it has more connections with other nodes of the industrial food system than the label “organic” might suggest.



The book's final section, Pollan explains, "follows a kind of "neo-Paleolithic food chain," one that he follows from "the forests of Northern California" to a dinner he made himself with ingredients he "hunted, gathered, and grew" himself. He admits that his interest in following this food chain was "less practical than philosophical," as he wanted to gain insight into contemporary eating habits by harkening back to the ways hunter-gatherers used to eat. As a result, he was faced with several difficult questions regarding "the moral and psychological implications of killing, preparing, and eating a wild animal." And although these questions were tricky to navigate, he upholds that the process of hunting and gathering his ingredients ultimately led to what he thinks of as the "Perfect Meal," since it gave him the "opportunity [...] to eat in full consciousness of everything involved in feeding [himself]."

Pollan believes there is a "fundamental tension between the logic of nature and the logic of human industry." This means that, however advanced we've become at producing mass quantities of food, there's no ignoring the fact that many of these practices are at odds with nature, which otherwise places limitations on the amount of food the earth can produce. Ultimately, this leads to "many of the health and environmental problems" running rampant today, since humans are essentially "oversimplify[ing] nature's complexities, at both the growing and the eating ends of [the] food chain."

The way we eat, Pollan states, "represents our most profound engagement with the natural world." It also represents the relationships we have with other species, whether those species are plants, animals, or fungi. We have coevolved with these species, but many of them have also evolved "expressly to gratify our desires," since we've altered them to serve our needs. Unfortunately, industrial food chains have obfuscated the connections humans have with nature and other species. Pollan is confident that "if we could see what lies on the far side of the increasingly high walls of our industrial agriculture, we would surely change the way we eat."

CHAPTER 1: THE PLANT: CORN'S CONQUEST

1. *A Naturalist in the Supermarket.* The modern supermarket—fluorescent-lit, climate-controlled, and sterile—doesn't seem to be a place teeming with nature. However, it's a manmade landscape with incredible biodiversity—a cornucopia of different kinds of produce, meats, and processed foods (such as cereals, Pop-Tarts, and non-dairy creamers) that are derived from innumerable plant and animal species that occupy different positions on the food chain.

For Pollan, preparing a meal entirely composed of ingredients he hunted and foraged himself offered a means of fully investigating the connections between what humans eat and the resources of the natural world. It also offered him a connection with prehistoric humans, who had no choice but to eat with more awareness of where their food came from. And it was the only meal that allowed him to eat in "perfect consciousness" of all the processes involved in creating a meal fit for human consumption.



Pollan points out that although humans have become more efficient at feeding themselves than ever before, there is a tension between human desires for maximal productivity and the earth's natural capacity to feed its inhabitants. At a certain point, human intervention pushes the earth to grow more food than it is naturally equipped to produce.



One of Pollan's central contentions in The Omnivore's Dilemma is that the industrial food system has a vested interest in obscuring the connections between humans and the world around them. By encouraging people not to think about where their food comes from, they are able to continue carrying out ethically and environmentally problematic practices.



A supermarket may seem far removed from nature, but as Pollan shows, even the most processed foods are connected to the fundamental food chains that sustain human life. Even a Pop-Tart, for example, has its origins in nature.



Walking through the supermarket, Pollan is astounded by the variety of plant and animal products. He notes that, to a naturalist, biodiversity is a “measure of a landscape’s health,” which might mean that the supermarket’s biodiversity indicates its “ecological vigor.” For the modern-day American consumer, the supermarket offers a world of choice—in, for example, the ready availability of formerly exotic fruits like kiwis, passion fruit, and mangos, which would have been unimaginable even a few decades ago.

With few exceptions, all supermarket foods can be traced back to a plant. For produce, this tends to be easy to trace, since each item came directly from a farm. The meat, however, has a slightly more complicated path, since the animals were often born, raised, and killed in different places—not to mention that they were fed with plant products whose origins are difficult to determine. Finally, processed foods are so far from their natural state that only a “fairly determined ecological detective” can connect such foods to their origins in nature.

Pollan says that he became curious about tracing the origins of his food because of his preoccupation with the question of what he should eat. This question actually rests on two fundamental questions: “What *am* I eating? And where in the world did it come from?” Pollan notes that, until quite recently, answering this question wouldn’t have required a journalist like himself. From this observation, he extrapolates a definition of industrial food: “Any food whose provenance is so complex or obscure that it requires expert help to ascertain.”

Pollan sets out to trace the industrial food chain to find the origins of modern processed foods and fast food, expecting to travel far and wide. However, he quickly realizes that the focus of his investigation will be on one species: **corn**, or *Zea mays*, which is the (“remarkably narrow”) foundation of the “great edifice of variety and choice that is an American supermarket.” Corn is the primary source of food for fish and livestock, and its derivations play an outsized role in processed food, from soda to Cheez Whiz to ketchup. In fact, corn is an ingredient in more than a quarter of the forty-five thousand items in the average supermarket—even the non-food ones, such as trash bags, cosmetics, and the building materials of the supermarket itself.

The supermarket provides a prime example of the ways the ancient evolutionary “omnivore’s dilemma” perpetuates itself in modern human culture. Humans still face an abundance of dietary choice, although for different reasons. A globalized economy and food system have made available a previously impossible diversity of foods from which to choose.



Pollan reminds readers that all supermarket food comes from a specific place—a farm, pasture, or factory. In this section, he plans to trace the agricultural origins of processed foods, a group of products that can seem impossibly far removed from anything in nature. And yet all foods have to come from somewhere, Pollan points out, and all foods are connected to a food chain.



Pollan comments on the absurdity of a food chain so complex that it requires the efforts of a professional journalist like himself to unravel all the connections between the farm and the supermarket. Prehistoric food chains were simple, often involving simply a hunter and their prey or a relatively straightforward agricultural model. By contrast, modern food chains are byzantine and often mysterious.



It is a marker of the deep connections between all components of the industrial food chain that even a bag of Cheez Whiz can be traced to an Iowa cornfield. In this way, a very complex food chain has an origin in more traditional agriculture, supporting Pollan’s proposition that every food is connected to a larger ecosystem. Pollan seeks to uncover the story of how a single plant—corn—could be connected to the production of so many foods eaten in the United States today.



2. *Corn Walking*. Pollan notes that some Mexicans refer to themselves as “the **corn** people,” in recognition of corn’s important role in their diet and life. Though Americans do not have a similar self-conception, Pollan argues that corn is just as central in the United States, if not more so. Americans’ failure to recognize this, Pollan suggests, is in part because corn’s presence in most foods is neither straightforward nor intuitive, and in part because industry has succeeded in convincing Americans that the foods they eat “represent genuine variety rather than so many clever rearrangements of molecules extracted from the same plant.” In reality, Americans consume far more processed corn than they realize.

Corn is different from other plants because of its ability to photosynthetically process carbon into energy at a more efficient rate, making corn able to grow in more various and difficult conditions than many other plants. Corn’s efficiency in capturing and using energy helps explain its dominance in the plant world and also makes its molecules identifiable, such that they can be found in the bodies of people who ingest a lot of corn. Scientists comparing the molecules found in human bodies have determined that, because so many of the things Americans eat come from corn, Americans on average end up eating even more of it than Mexicans, who have a much more varied diet.

3. *The Rise of Zea mays*. Since **corn** is native to Central America, it’s worth explaining how the plant conquered agriculture in the United States. When European colonizers came to the Americas, they preferred to grow wheat, the grain to which they were accustomed. At first, it seemed like corn might not survive the collapse of the Native American communities who fostered it in North America, but corn beat out wheat and other European grains because of its ability to grow in different varieties of North American soil, its tremendous food yields, and its diverse uses (including as alcohol, twine, and even currency).

It’s worth noting, too, that **corn** sustained European colonists and helped them vanquish indigenous Americans, and it also fueled the slave trade, both as food for slaves and as a currency with which traders bartered for enslaved Africans. In fact, corn’s ability to be eaten both fresh and dried *and* used as a commodity has been key to its success, but also makes it, in Pollan’s words, “the protocapitalist plant.”

Pollan goes so far as to argue that Americans are “corn people” who consume a diet far more saturated in corn than they would ever know or acknowledge. He attributes this widespread ignorance to a broader lack of consciousness about the origins of food and the interconnectedness of food chains in contemporary industrial agriculture, which often deliberately obscures the origins of its food in order to give the impression of greater dietary variety.



Pollan explains that efficiency is an evolutionary advantage. In the case of corn, the plant’s ability to photosynthesize at a greater rate than its competitors made it a crop of choice for humans, who valued its high energy content. The efficiency of corn in turn made it efficient for humans, who could gain access to a highly valuable source of protein by cultivating corn and allowing it to take over their grasslands.



The dominance of corn in North America was far from assured. But the plant was so evidently more efficient than its competitor (wheat) that it soon took over agriculture outside of Central America. By producing larger yields than other plants, corn became an integral part of human agriculture. The story of corn’s triumph shows just how important efficiency is to the survival of a species.



Corn’s efficiency also has a darker side. As Pollan shows, the crop has been particularly well-suited to feeding and supporting legions of colonizers, slave-traders, and industrialists, who (not coincidentally) similarly valued the logic of profit and efficiency over other values.



4. *Married to Man*. Just as humans have relied on **corn**, though, corn grew to rely on us. In its current form, corn needs humans to survive, since the husk needs to be peeled away from the kernels in order for the corn plant to reproduce. This is quite unusual for a grassy plant. Furthermore, since corn's pollen needs to travel a long distance to reproduce, it's easy for humans to interfere in reproduction, making adjustments to the crops along the way.

5. *Corn Sex*. All of this has led **corn** to adapt to "the world of industrial consumer capitalism," as Pollan writes, becoming compatible with machines, petrochemical fertilizers, and increased demand for crop yield. Corn has even become a form of intellectual property, as corn breeders discovered a way to make strains of corn whose plants are exact replicas of one another (aiding standardization and mechanization) but whose seeds are essentially sterile, meaning that each crop only lasts a single season, ultimately forcing farmers to buy new seeds every year, which guarantees profits for corporations. As such, Pollan argues that corn's status as a capitalist plant has been firmly established.

The co-dependence of corn and humans suggests the close linkage between nature and human agriculture. Corn was once a wild grass, but is now domesticated. Human intervention has quite literally altered nature itself, creating varieties of crops that couldn't sustain themselves without the efforts of human farmers.



In Pollan's account, corn has become so closely intertwined with human culture and economic structures that it's hard to tell whether it's a product of nature or of human intervention. The genetically-engineered corn of modern-day American agriculture is probably somewhere in between—corn is a very old crop, but it has been transformed in ways that previous generations could not have imagined.



CHAPTER 2: THE FARM

1. *One Farmer, 129 Eaters*. Pollan visits George Naylor on his 320-acre farm in Iowa, which has been in his family since his grandfather bought it in 1919. The soil is rich—in Naylor's grandfather's day, it produced a variety of plants and animals that made up enough food for his family plus twelve others. Today, George grows only **corn** and soybeans, but he produces enough to feed 129 people. Unfortunately, though, the farm survives solely due to the support of his wife's job and government subsidies.

Despite the fact that Naylor's farm produces enough **corn** to feed 129 people, his crops aren't sold directly as food. Indeed, he sells commodity corn, which must be "processed or fed to livestock before" a person can eat it. By the time it reaches consumers at the other end of the food chain, Naylor's corn has become one of many ingredients in industrially-produced foods. Furthermore, the consumers know nothing about the origins of this food. "Ask one of those eaters where their steak or soda comes from," Pollan writes, "and she'll tell you 'the supermarket.'"

Naylor's farm is very efficient in the production of corn, but this success leads, paradoxically, to inefficiency. The more corn he grows, the less money he makes, since the commodity has become so plentiful that it is now very cheap. His farm wouldn't survive without the financial support of the government.



Pollan's investigative journalism reveals that corn is in fact the basis of a wide variety of food chains in the United States, from the beef sold in supermarkets to the sodas people purchase with their fast food meals. However, industrial agriculture has obscured the profound and deep connections between corn and processed food.



2. *Planting the City of Corn.* Pollan helps Naylor plant **corn**, endlessly going over rows and rows in the tractor and marveling at the technological advances that allow Naylor's farm to be so much more productive than his grandfather's would have been. For one, F-1 high-yield corn can be planted much closer together than the corn his grandfather planted (Naylor eschews GMO corn, but the F-1 variety is still very technologically advanced).

The F-1 variety of **corn** can be planted so close together because every plant is genetically identical to the other. Whereas non-hybrid corn stalks would grow spindly from jostling each other for sunlight, genetically engineered corn is able to share resources like sunlight, water, and soil. The density of corn planted in Iowa mirrors the population density of many urban centers, Pollan asserts.

3. *Vanishing Species.* The growing profitability and efficiency of **corn** over the years is what helped it dominate the landscape, as farmers have done more and more to facilitate and accommodate corn's growth. As corn became increasingly profitable, farmers grew more and more of it, which led to a decline in its price. Instead of discouraging farmers, this caused them to grow more corn—its cheapness made it the choice ingredient for animal feed, which then consolidated the industrial livestock industry and put smaller farmers out of the animal business. Instead of raising animals, they grew more corn.

By now, expanding cornfields have pushed people out, leaving emptied towns in Iowa. This is because it requires far less human labor to grow **corn** and soybeans than to farm the diversified holdings of the past. As a result, George Naylor's local town is a "ghost town"—the middle school can't even field a football team.

4. *There Goes the Sun.* The **corn** boom was aided by an agricultural revolution brought about when ammonium nitrate that was left over from World War II was converted to use as chemical fertilizer. This synthetic nitrogen ended humanity's dependence on naturally-occurring nitrogen, which is necessary to form the building blocks of life. Fritz Haber, who first developed the method of "fixing" nitrogen, or combining it with hydrogen to make it usable to grow food, used his technology to massively increase soil fertility, growing more food for an expanding population. Unfortunately, Haber's work also helped sustain Nazi Germany. Later in life, he collaborated with Hitler and used his scientific skills to create explosives, chemical weapons, and poison gas.

Contemporary American farms can produce far more corn than any other time in human history. Human technology has intervened in natural agricultural processes, employing genetically-engineered seeds that raise crop yields and make it possible to feed 129 people from a single cornfield.



Human intervention resolved an old agricultural problem: corn stalks can't grow too close together, because they'll compete for sunlight. Genetically-engineered corn, however, has no such problem, and the density of cornfields now resembles the density of human cities.



Logic might lead one to expect that more efficiency in farming is a good thing. When the farmer produces more crops, there is more food for everyone and the farmer prospers. However, this hasn't been the case in Iowa. Farmers produce too much corn, turning their farmers into "monocultures"—single crop farms that have no room for other crops and are entirely financially dependent on the price of corn.



The efficiency of growing corn should have made rural towns in Iowa prosper. But on the contrary, mechanical labor in the monoculture of corn has taken over many human jobs, impoverishing the community.



The career of Fritz Haber points to the dark side of twentieth-century technological advances and the increasing human capacity to meddle with natural processes. Haber's inventions significantly improved soil fertility, allowing agriculture to feed far more people. But his scientific skills were also used for violent purposes in World War II, demonstrating how quickly human interventions in nature can lead to unforeseen and disastrous consequences.



Haber's method of fixing nitrogen relies on petroleum, which began to be pumped into cornfields in large amounts to increase the crop's yields. Farmers no longer need to rotate crops to preserve the fertility of the soil, nor rely on **corn's** natural processes of extracting nitrogen with solar energy. The new farming methods using synthetic fertilizer and pesticides created a system that used fifty gallons of oil on every acre of corn, an incredibly ecologically inefficient system, but an economically viable one as long as fossil fuels and corn are both plentiful. Unfortunately, the runoff from these petrochemical additives are poisoning the country, draining down the Mississippi into the Gulf of Mexico, where the chemicals have killed off a large swath of aquatic life.

5. *A Plague of Cheap Corn.* George Naylor explains to Pollan how **corn** came to be so heavily subsidized by the government. Policies enacted during the Great Depression to ensure a steady supply of corn set a market price and worked with farmers to keep it there until the 1950s. After that, the government began to resent the power of farmers, who had become exempt from traditional market forces.

6. *The Sage of Purdue.* President Richard Nixon's secretary of agriculture sold 30 million tons of American grain to Russia in the hopes of driving up prices and securing reelection for Nixon in 1972. The resulting scarcity encouraged farmers to grow more, and the government began subsidizing the growth of **corn** (up to a price that has steadily decreased since) so that farmers could sell it regardless of the market price.

7. *The Naylor Curve.* As **corn** prices have declined, farmers have continued to produce more in order to make ends meet, which only makes the cycle worse. It is inescapable, since the entire infrastructure of modern farming is now geared towards corn and soybeans, and the longer those crops are grown, the more the soil is worn out, and the more chemical fertilizer it needs. Artificially cheap corn is still a major investment by the government, which spends \$5 billion a year on corn subsidies, to the benefit of the buyers of cheap corn—the giant food companies that use it. Naylor, who is barely making ends meet by keeping his farm expenses to a minimum, introduces Pollan to a neighbor who is growing a larger quantity of **corn**, but has taken on a second job to pay for all of the equipment he requires. By the measure of pure yield, the neighbor is doing better, but on a more comprehensive comparison, Naylor is more successful.

Haber's career also suggests that human intervention in nature can have hidden negative effects. His method of fixing nitrogen led to positive strides for human prosperity, in that new farming methods made crop yields much larger and more predictable, and did away with the uncertainty and food shortages that had affected agriculture for much of human history. However, the use of these new synthetic fertilizers has also had serious negative impacts on the environment and on the health of the natural world.



The American government has an interest in subsidizing cheap corn because it prevents food shortages. However, this drive to maximize efficiency in the food system has led to the financial inefficiency of farmers being given money by the government to make up for the shortfall in their incomes.



Because the government wants corn to remain at a very low price (which is useful to food processing companies), it has to artificially fix the price of corn by giving farmers money to grow it. The result is an economic cycle in which the government must continually financially support the flow of cheap corn.



As Pollan shows, the inefficient system of overproduction of corn and government subsidies is now firmly entrenched in American agriculture. Food companies rely on cheap corn and farmers rely on government funds to keep them going, in a vicious cycle that ironically began as an effort to make American agriculture more efficient and productive. For example, although the farms of Naylor and his neighbors are technically "successful" in terms of their production of corn—after all, they don't grow anything else anymore—they have to take outside jobs to make ends meet, since the price of corn is so low.



CHAPTER 3: THE ELEVATOR

Pollan visits the grain elevator where Naylor and other farmers in the surrounding area deposit their **corn** every year.

Disturbed by the amount of corn that's wasted on its way into the elevator, Pollan learns that this kind of corn is barely edible—it's commodity corn, which is a hard, industrial variety, a different kind of large-scale material altogether than the corn we eat.

Corn used to be traceable directly from its farms to its consumers, which made growers feel responsible for its quality and safety, but now that it's conveyed around the country anonymously by a giant network of middlemen, concerns about quality or individuality have disappeared. This began with the advent of railroads and grain elevators, which combine corn by region. Pollan now begins to understand Naylor's claim that he grows food for "the military-industrial complex."

In 1856, the government instituted broad categories for **corn**, including Number 2, which was commodity corn. This created a standard for the corn that erased the need for any further attention to the crop's quality or individuality, and resulted in farmers focusing only on the amount they were able to grow, making yield the measurement of success. The Iowa Farmers Cooperative and the U.S. Department of Agriculture pay Naylor for his corn. Instead of keeping the supply and price of corn relatively stable, as the New Deal system did, subsidizing payments incentivizes farmers to grow even more corn, further driving down the price. This creates a system in which yield is growing all the time, and the price is falling.

The cheapness and availability of **corn** causes people to continue finding new uses for it, which has driven its expansion into so many different products, and contributed to the obesity epidemic in America. Because of this, Pollan realizes that there is no way he will be able to trace one bushel of corn along the industrial food chain.

Pollan identifies the primary obstacle to tracing **corn** along its food chain: the giant food corporations, like Cargill and ADM. As the primary buyers of corn, they oversee its refinement into food products and exert a tremendous amount of power over the entire system. Because they are intermediaries themselves who don't deal directly with customers, they have very little, if any, incentive to be transparent. They decline to let Pollan in to follow the corn. Pollan knows, though, that three out of every five kernels wind up on factory farms, which have developed complex processes of forcing cows to eat corn—because all of the corn that's being produced needs to go somewhere.

When people think of corn, they probably think of golden ears of corn or corn on the cob. As Pollan finds out, however, commodity corn is a very different kind of foodstuff—a product of human science rather than the corn that naturally grows in fields.



Pollan finds that it's nearly impossible to trace the connections between the corn harvested on Naylor's farm and the corn-based products people buy in supermarkets. This is because a complex network of "middlemen" process the corn on an anonymous and vast scale, without attention to individual farmers or food products.



The story of corn's current dominance in American agriculture is a prime example of the consequences that can result from focus on profit and efficiency to the detriment of all other values. By focusing entirely on yield—the sheer volume of corn they were able to grow every year—farmers managed to increase productivity to new heights. However, this came at a heavy cost to the livelihoods of individual farmers, who grew poorer as the price of the crop decreased.



Counter-intuitively, the supply of corn drives the demand. There is so much corn on the market that food companies have to constantly find more and more uses for a commodity that is produced in inefficiently large amounts.



In Pollan's telling, large food companies have little interest in being transparent about all the uses they've found for this cheap corn. The result is a food system and web of connections that is almost entirely impenetrable to journalists, let alone the American public, making it difficult to tell exactly where all that corn ends up. Pollan, however, decides to trace one connection between the farm and the factory: the animal feedlot.



CHAPTER 4: THE FEEDLOT: MAKING MEAT

1. *Cattle Metropolis*. Pollan visits Poky Feeders, a cattle feedlot in Garden City, Kansas. He is interested in this particular feedlot for two reasons. For one, western Kansas is where the first feedlots in the United States were built in the 1950s. Also, Pollan plans to trace the fate of a particular steer here at Poky Feeders—one that he purchased in South Dakota the previous fall. He wants to understand how the meat industry transforms the country's surplus of **corn** into cattle feed, and subsequently into meat.

Poky Feeders is a Concentrated Animal Feeding Operation (CAFO). The lives of cattle kept in these “densely populated new animal cities” bear little resemblance to their lives on the small family farms of the past. The cattle here subsist chiefly on **corn**—which is ironic, Pollan points out, since cows have evolved to subsist on **grass**. The only reason why cattle at CAFOs eat corn is because it's cheap and abundant, although it causes significant damage to their health.

When animals lived on small farms, the “very idea of waste cease[d] to exist,” since there was a closed ecological loop: animals ate the waste products of the crops, and the waste products of the animals could in turn be fed back to the crops. A cattle feedlot, by contrast, must use artificial fertilizers to induce fertility. This produces significant amounts of animal waste, which leads to water pollution and other ecological ills.

2. *Pastoral: Vale, South Dakota*. The first stage in the production of a hamburger is the birth of a calf, which usually takes place on an independently owned ranch somewhere in the western United States. Although there are only four major meatpacking companies that slaughter and market the beef, these companies choose to leave the initial raising of cattle to the ranchers, since it's a financially high-risk operation. In South Dakota, Pollan visits Blair Ranch, which is owned by Ed and Rich Blair. At Blair Ranch in 2001, steer number 534 was born. This calf spent the first six months of his life with his mother, 9534, feeding on mostly native **grasses**.

The food chain that leads from the cornfield to the supermarket can seem impossibly complex. To help him see the connections between different nodes of the food chain, Pollan chooses to narrow his scope by focusing on a single animal: a steer that will be fattened and slaughtered for beef.



In evolutionary terms, it makes little sense to feed corn to feedlot animals, since cattle have evolved to eat corn rather than grass. In terms of efficiency and utility, however, it makes a great deal of sense, since corn is cheap, abundant, and contains a great deal of protein that will help fatten an animal more quickly.



The efficiency of the animal feedlot produces inefficiencies of its own. For example, corn-fed animals in factories have a waste problem, since their manure has nowhere to go. By contrast, free-ranging farm animals use their manure to fertilize the pasture and make the soil more productive.



In some ways, not much about the lives of modern American beef cattle is “natural.” As Pollan shows, they spend much of their lives in crowded factories, eating a diet they have not evolved to eat. However, most cattle still begin their lives on more traditional ranches, where they're fed on grasses. Even the industrial food system, then, involves a compromise between nature and human intervention.



Pollan points out that a cow's reliance on **grass** makes superb evolutionary sense. Cows fertilize the land with their manure, and their unique digestive system allows them to convert grass into high-quality protein. This is a "sustainable, solar-powered food chain" that transforms sunlight into protein. Why, then, are feedlot cattle not fed on grass? The answer, in short, is that it takes too long for a grass-fed steer to reach slaughter weight. Rich Blair points out that in his grandfather's time, a steer might live four or five years before it was slaughtered. Now, the average feedlot steer is slaughtered at around fourteen months. The steer can only reach slaughter weight—1,100 pounds—at that age with a large quantity of **corn**, protein supplements, and drugs.

When Pollan made the acquaintance of steer number 534, the calf had just recently been weaned from his mother. At this point in their lives, the calves on the Blair Ranch are herded into a "backgrounding pen," where they are prepared for life on the cattle feedlot. They are confined to a pen, taught to eat from a trough, and become accustomed to eating **corn**. Ed Blair suggested that Pollan should buy one of the calves, if he really wanted to follow a steer through his entire life cycle. Pollan chose steer number 534 for the distinctive three white spots on his face, which would make him easier to spot in a crowd.

3. *Industrial: Garden City, Kansas.* Pollan notes that traveling from Blair Ranch to Poky Feeders feels a lot like going from the country to the city. However, without the benefit of modern sanitation, this city has more in common with fourteenth-century London. Having started out on George Naylor's farm, Pollan realizes that this city is not just built on a mountain of **corn**. It's also floating on an "invisible sea of petroleum"—the fossil fuels used to produce all that cheap corn.

Pollan starts his tour at the feedmill, which processes a million pounds of feed each day. There the **corn** is mixed with various other ingredients: liquid vitamins, fat, and protein supplements. This feed fattens quickly; it also gives a "marbled" (i.e. intramuscular fat) texture to the beef that is popular with American consumers. But although "the economic logic of corn is unassailable," it may be causing health problems for humans as well as cattle. Pollan points out that hunter-gatherers don't have our rates of heart disease, and that many of the health risks associated with eating beef are problems with corn-fed beef, specifically.

The industrial food system has taken a cow's natural life cycle and made it as efficient and productive as possible. With a diet of corn and supplements, a steer will be ready to slaughter at an earlier age than it would be otherwise. However, as Pollan shows, the grass-based food system actually has significant advantages over a corn-based food system, especially in terms of long-term efficiency. For example, feeding cattle on grass creates no waste (unlike corn) and converts energy directly from the sun into protein.



Feedlot cattle like steer number 534 are not naturally adapted to life on a factory. Consequently, the Blair ranch has to take time to teach them to adapt themselves to a regimen of industrial eating and confined space. But human intervention can only go so far—a steer can be taught to eat corn, but corn will still not be as nutritious for the animal as a diet of grass would be.



Pollan realizes that there are connections not only between cornfields and animal feedlots, but also between these factories and fossil fuel mining operations. Artificial fertilizers and other yield-enhancing technologies require petroleum, so the industrial food system is also related to the fossil fuel industry.



Pollan argues that the unilateral focus on efficiency in the production of corn feed ignores the health risks that eating corn might pose, not only to animals, but to humans as well. The artificial supplements in this corn feed will also make their way into the bodies of the humans who consume the beef of steers like number 534. In this sense, corn is intimately connected to the human body as well as the bodies of the animals who are made to eat it.



Cattle are fed **corn** because it is the cheapest source of calories. But Pollan argues that this is not necessarily a sound justification. After all, cattle feedlots used to feed rendered cow parts back to cows because it was a cheap source of protein—until they realized that this was spreading bovine spongiform encephalopathy, or mad cow disease. This should not necessarily be surprising, since eating the flesh of one’s own species nearly always carries the risk of infection. In this sense, the cattle feedlot is flouting age-old “evolutionary rules.”

Dr. Mel Metzin, the feedlot’s veterinarian, explains that most of the cattle are sick, in one way or another. A concentrated diet of **corn** causes digestion problems including bloating and diarrhea, which can sometimes lead to suffocation, abscessed livers, and ulcers. Cattle rarely live more than 150 days on this diet, which Dr. Mel thinks is about the limit the cattle can tolerate. The cattle are kept healthy for that long with antibiotics like Rumensim (which prevents bloat) and Tylosin (which lowers the incidence of liver disease). Ironically, the cattle wouldn’t need these antibiotics were it not for their diet.

Pollan visits pen 63, the new home of steer number 534. The pen overlooks a “manure lagoon” of animal waste; local farmers won’t use the manure because it’s too polluted with chemicals. When Pollan finds steer number 534, he notices that the steer’s eyes are bloodshot from the fecal dust. However, he’s put on weight, as the feedlot intended. Pollan observes that the same diet that undermines the steer’s health will also undermine “the health of the humans who will eat it.”

Humans and cattle are also interconnected by the bacteria in cow manure—one strain of which, *E. coli*, causes a kidney disease that can be fatal to humans. But although scientists have shown that the risk of *E. coli* can be reduced by up to 80% by switching a steer’s diet to hay or **grass** before it’s slaughtered, the meat industry considers such a solution impractical. Instead, they prefer to sterilize the manure.

Pollan reflects that steer number 534 is not just connected to the production of cheap **corn**—he’s also the result of a chain of production that begins with petroleum (which is used to manufacture his feed). One economist estimates that a steer like number 34 will have consumed in his lifetime the equivalent of thirty-five gallons of oil. But although Pollan feels revolted by the conditions at the feedlot, he admits that he will probably start eating beef again. In this sense, eating feedlot beef requires “an almost heroic act of not knowing” or “forgetting.”

Pollan is disturbed by the way humans compel animals to overcome deeply-held aversions developed over thousands of years of evolution. Most animals, for example, are innately revolted by eating the flesh of their own species—but human intervention nonetheless forced cattle to ignore this natural instinct in favor of human priorities and interests.



A corn-based diet is so unhealthy for cattle that many are constantly sick, in a prime example of the destructive impact of human over-meddling in natural processes. Indeed, cattle who eat corn are only kept alive through the application of yet more human-devised drugs, demonstrating that the cycle of human intervention in the natural world is often hard to escape once it has begun.



Pollan reflects on the interconnectedness between what this animal eats and what humans eat. Steer number 534 is reaching slaughter weight earlier than he would have done on the pasture, but the chemicals that have meddled with his digestive system may also meddle with the humans who will eat this corn-fed beef.



The meat industry is so focused on efficiency that it would rather sterilize manure—a messy and not wholly reliable practice—rather than switching to a diet that would be healthier for the animals who live in American factory farms, simply because the former solution is more immediately cost-effective.



Pollan introduces the idea—central to the book—that eating industrial food requires acts of “forgetting.” Food companies rely on people choosing to forget where their food comes from and not inquiring much further into these troubling connections between the treatment of cattle and their own health.



CHAPTER 5: THE PROCESSING PLANT: MAKING COMPLEX FOODS

1. *Taking the Kernel Apart: The Mill.* About a fifth of the **corn** produced in the United States goes to “wet mill” plants owned by companies like Cargill and ADM for processing. A scientist explains the process to Pollan: the corn is separated into its botanical parts in an energy-intensive process that uses ten calories of fossil fuel energy for every calorie of processed food produced. The corn starch is broken down into glucose, or corn syrup—much like when you chew a cracker until it becomes sweet. By the 1970s, these plants started producing high-fructose corn syrup, a blend of glucose and an even sweeter molecule called fructose.

The remaining slurry of starch is fermented into alcohols like ethanol, which is used in automobile fuel. By the end of the process, nothing of the **corn** remains. Unlike the feedlot, there is no waste here. But this isn't a “natural” ecological closed loop. Humans have adapted into “industrial eaters” who can consume all of this surplus biomass in the form of processed foods.

2. *Putting It Back Together Again: Processed Foods.* For most of human history, people have tried to “liberate food from nature”: to can, salt, and preserve foods so that they could be eaten out of season. Processed foods are thus the natural culmination of a long history.

Two plants—**corn** and soybeans—provide most of the ingredients in processed foods. At the same time, paradoxically, most processed foods have a baffling number of ingredients—even if they're all derived from the same plants. This shields food companies like General Mills from the ups and downs of farm yields. Since processed foods are “complex food systems” with many different ingredients, it's straightforward enough for companies to substitute a scarcer ingredient with another. By making their foods from many ingredients derived from corn and soybeans, companies like General Mills also preserve much of the profit for themselves, since they create the products in their factories and brand them with their name.

Food companies also have to contend with the problem of consumer demand, since there's only so much food people can eat. They need to either incentivize people to eat more, or they need to get people to pay more for the same commodities. The industry pursues both strategies by “adding value” to their products. For instance, some General Mills cereals claim to have health-enriching ingredients like vitamins. Some food companies have even gone so far as to claim that processed foods are healthier than whole foods, since they contain more ingredients and nutrients than, say, a simple apple or orange.

The connections between corn and processed food are not entirely clear because the ingredients in these foods are not, strictly speaking, corn at all. As Pollan shows, food companies use chemical processes to break down corn into its constituent parts, producing new commodities like high-fructose corn syrup. It is these products that will ultimately make their way into supermarket foods, after a long journey from the cornfield through the processing plant.



These industrial processes are efficient, but in a very different way than the efficiencies found in nature. Food companies have to work hard to come up with artificial new ways for Americans to consume all that extra corn, so that none of it goes to waste.



Although processed foods are far from “natural,” Pollan suggests that there is something natural about the human instinct to create preservable foods that can be eaten out of season.



For thousands of years of human agriculture, corn provided one ingredient—which was, well, corn. But in today's industrial food system, Pollan shows, the chemical elements of corn can be broken down and recombined into seemingly endless new combinations, like corn syrup. The ability to turn a single ingredient into many ingredients is a marker of the way human intervention and new technologies have drastically changed the way people eat today.



The industrial food system prizes efficiency, but it also has a potential waste problem. After all, farmers produce too much corn—so to solve the problem and maximize profits, food companies have to somehow incentivize people to eat more corn. This counterintuitive solution—since surely it would make more sense to simply eat less food—demonstrates the industry's focus on profit and utility over health.



CHAPTER 6: THE CONSUMER: A REPUBLIC OF FAT

In the early nineteenth century, Americans were also confronted with a surplus of **corn**. Farmers responded by making the economically sound calculation to distill their excess corn into cheap whiskey. The result was an epidemic of alcoholism that eventually culminated in Prohibition a century later. Pollan compares America's alcohol crisis in the early nineteenth century to the obesity epidemic today. Now three of every five Americans are overweight, and a child born in 2000 has a one-in-three chance of developing diabetes.

Pollan dates the upswing in **corn** consumption to the 1970s, when President Nixon's Secretary of Agriculture, Earl Butz, instituted a policy of driving up agricultural yields in order to drive down the price of corn. The result was that food became cheap and plentiful. People started eating more—and with the invention of high-fructose corn syrup, they had even more incentive to buy those appealingly sweet fast foods and eat through the corn surplus.

In 1980, **corn** became an ingredient in Coca-Cola; by the mid-1980s, many soft drinks used high-fructose corn syrup instead of sugar. The companies then began "supersizing" their sodas, since the new ingredients were so cheap. At McDonald's, executives knew that people were reluctant to order a second serving of fries, for fear of looking gluttonous. So they started offering larger portions, like the Big Mac, which allowed people to order more food in a single serving. Sales increased dramatically as a result.

One might think that people would stop eating these "gargantuan" portions when they feel full. But this isn't the case. In an environment of food scarcity, humans evolved to feast whenever the opportunity presented itself, storing up reserves of energy against future famine. (Of course, in today's environment of food overproduction, famine never comes.) The nutrients in these supersized portions—namely, sugar and fat—make the problem worse, since humans are also evolutionarily predisposed to prefer those tastes. In this way, processed foods are able to manipulate the omnivore's evolutionary impulses.

By comparing the contemporary American obesity epidemic to the public health problem of alcoholism in the nineteenth century, Pollan can point to different scenarios in which the drive to maximize profits and efficiency leads to a variety of public health problems and social ills. In both cases, the explosion in consumption was linked to industrial attempts to get people to consume more of that excess corn.



People may have convinced themselves that they want to buy more sugary foods, but Pollan suggests that these consumer desires are actually the result of savvy manipulation by the industrial food system. In order to solve the problem of excess corn, these companies have a vested interest in getting people to eat more.



People's reluctance to appear "gluttonous" suggests that there is indeed a natural human resistance to eating these "super-sized" portions produced by fast food companies. It is only through the intervention of calculated marketing strategies that people can be induced to order more food than they might otherwise be inclined to eat.



The "super-sized" portion is unnaturally large, but it also has a powerful ally in human evolutionary biology. Because people evolved to feast in expectation of future famine, eating large amounts of fatty and sugary (i.e. high-calorie) food will give people feelings of pleasure and enjoyment. In this way, "fast food"—a modern creation—taps into a very old human impulse passed down from prehistoric times.



The problem has gotten worse since the 1970s, Pollan argues, because the price of a calorie of sugar or fat has plummeted since then. This means that obesity and diabetes become more prevalent further down the socioeconomic scale, because energy-dense foods like a Big Mac are now the cheapest on the market. But despite all the public concern about the obesity epidemic, Pollan points out that the government is still subsidizing the cheap **corn** that guarantees that “the cheapest calories in the supermarket will continue to be the unhealthiest.”

CHAPTER 7: THE MEAL: FAST FOOD

Pollan decides to visit a McDonald’s with his son Isaac and wife Judith, in order to see the final stage of the line of production he’s been tracking for the first part of *The Omnivore’s Dilemma*. He notes that the menu engages in clever marketing strategies that target different demographics in the family. Pollan orders a cheeseburger; Judith orders a Cobb salad; Isaac orders chicken nuggets. The family eats their meal in the car, which, as Pollan notes, is now fairly common: 19 percent of American meals are eaten in the car. Besides, “**corn** was the theme of this meal,” and the Pollan family car is also consuming ethanol.

Pollan reminisces about his love of fast food as a child. Fast food has “a fragrance and flavor of its own,” one intimately connected to pleasurable memories, “the smells and tastes of childhood.” Pollan’s own child, Isaac, loves his McNuggets—although McNuggets have come under scrutiny recently, after a lawsuit pointed out that they don’t have much chicken in them at all. Pollan marvels at the number of ingredients in one nugget, including TBHQ, an antioxidant derived from petroleum. When he tries the nugget, he tastes mostly salt and chicken bouillon, something that “seemed more like an abstraction than a full-fledged food.”

Observing that the relationship between his cheeseburger and beef also seemed largely “notional,” Pollan suggests that the appeal of fast food is that it allows people to forget they’re eating animals at all. It also obscures the process of food production so that people don’t know just how much processed **corn** they’re eating. With the help of a scientist, he realizes that most of his family’s McDonald’s meal is corn, from the soda (100%) to the chicken nuggets (56%). What looks like a meal of “impressive variety” is in reality made from a single ingredient.

Most people tend to make food choices that maximize efficiency—in other words, they will buy food that offers the most calories for the least money. Unfortunately, these choices also tend to exact a toll on human health. In today’s food environment, cheap food is often unhealthy, meaning that the obesity problem disproportionately affects poorer Americans.



Fast food companies have become very effective at marketing, which is a necessary tool in getting consumers to eat more and thus boosting their profits. These strategies are mainly rhetorical, however, since even Judith’s salad in fact contains a higher number of calories than is desirable for humans to consume in a single day. Here, again, what is good for fast food companies is not necessarily what is good for human health.



In Pollan’s account, fast food gives pleasure to the eater in large part because of its nostalgic qualities. People enjoy eating fast food because it reminds them, for instance, of happy times in their childhoods. But Pollan suggests that this is more an illusion than a reality, since the chicken McNugget in fact has little relation to “real” chicken found in nature. This is what he means when he asserts that the McNugget is more an abstraction than a real food.



Processed food is so appealing, Pollan argues, because it thoroughly obscures the food production process and the interconnectedness of the world’s food chain. A McNugget doesn’t seem to come from anywhere at all, thus allowing the eater to forget that they are consuming an animal that has lived and died somewhere to produce this meat.



Pollan poses the question of whether eating all this **corn** is a bad thing. From the perspective of food processing companies, corn is good business. From the perspective of American consumers, it offers cheap food in a variety of attractive forms—although at the high cost of diabetes and obesity. For the rest of the world, however, corn consumption on this scale is a “disaster,” since processing corn into fast food uses up a lot of energy that could have fed thousands of hungry people. And from the farmer’s perspective, the overproduction of corn exacts a serious toll on his soil and his livelihood. Pollan suggests that people consume all this corn so quickly because it doesn’t taste like much of anything at all—people eat so fast not just out of nostalgia, but because they’re trying to “catch up to the original idea of a cheeseburger.”

For Pollan, the overconsumption of corn in the modern industrial food system is clearly a bad thing—for the environment, for farmers, for the health of Americans, and for global inequality. It is an efficient system for business, but an inefficient system for everyone else. Perhaps most surprisingly, he is even quite skeptical about the pleasures of fast food. Conventional wisdom would suggest that people eat this food because it tastes good, but he argues that fast food is more an idea than anything else. It gives superficial pleasures, but those are ultimately fleeting.



CHAPTER 8: ALL FLESH IS GRASS

1. *Green Acres*. After a long day shoveling hay, Pollan is exhausted. He’s begun working on an organic farm in Virginia, Polyface Farm, which is owned by Joel Salatin. Joel is a self-described “Christian-conservative-libertarian-environmentalist-lunatic-farmer,” an independent businessman who grows his own food and slaughters his own animals without corporate oversight. Pollan has visited this farm to see how Salatin’s vision fits in to the modern landscape of food production.

Pollan now shifts his attention to a different food chain—one not connected to the industrial system. Joel Salatin is clearly independent-minded, but Pollan is seeking to find out whether his radical vision can be adapted to other situations and understood within the larger context of how Americans eat today.



Pollan describes Polyface Farm as “pastoral,” with its idyllic meadows, woods, and rivers. For Pollan, this Virginia farm recalls the pastoral ideal of Thomas Jefferson, who dreamed of a nation of small, self-sufficient farms like this. Pollan’s time with the independent-minded farmer Salatin shows him that the pastoral ideal is alive and, “if not well exactly, still useful, perhaps even necessary.”

Thomas Jefferson’s dream of a “pastoral” nation of farmers reflects a nostalgic vision of going back to nature. Even in the eighteenth century, the pastoral ideal was based on an idea of “natural” food production that may reflect an ideal as much as it does an actual reality.



2. *The Genius of the Place*. Salatin describes himself as a “**grass** farmer,” because grass is the foundation the complex ecosystem at Polyface Farm. Although the farm only occupies 1000 acres, it produces thousands of pounds of beef, chicken, pork, eggs, turkey, and rabbits. Even more astonishingly, this impressive rate of production doesn’t impoverish the soil. Because Salatin raises his animals on hay, his farm is sustainable. The cornerstone of Salatin’s philosophy is that humans don’t have to destroy the earth to have a rich and satisfying meal.

Industrial food systems are often based on an idea of food production as a “zero-sum game”—which is to say, in order to feed themselves, people have to impoverish the natural world around them. By contrast, Salatin operates on very different principles. His system of grass farming recognizes that the health of the environment also impacts the health of humans.



Humans have had a long co-evolutionary relationship with **grass**. In the hunter-gatherer period, people cultivated the grass to attract and nourish the animals they depended on for sustenance. For grass, this relationship was symbiotic, because humans cleared the land of trees, protecting the grass's access to water and sunlight. In the agricultural period, "annual" grasses like wheat, rice, and **corn** began growing nutritionally dense seeds that humans could harvest and eat directly. (They are called "annuals" because they put their energy year-round into making seeds, rather than storing energy underground in roots during the winters.)

3. *Industrial Organic*. Pollan notes that Salatin's farm is in many ways the opposite of Naylor's: pastoral rather than industrial, biological rather than mechanical, a polyculture (i.e. a farm that grows many plants) rather than a monoculture. Polyface Farm has been described as an "organic" farm, a word implying that nature, rather than industry, is "the proper model for agriculture." However, Pollan points out that these words—natural, organic, sustainable—turn out to be more complicated than they seem. For example, Salatin's farm is technically *not* an organic farm, although his methods are sustainable. Moreover, there are "industrial organic" farms that meld the two methods.

Salatin doesn't label himself an organic farmer, and has no use for the government's organic food standards. Instead, he calls himself "beyond organic"—someone who wants to "opt out" of the entire system of control by government and agribusiness. When Pollan asked if Salatin could ship him some of his food, Salatin refused on the grounds that shipping food is not sustainable. Pollan then agreed to visit Polyface Farm in person. Before his visit, however, Pollan spent several weeks touring alternative and "industrial organic" farms to investigate Salatin's claim that the originally revolutionary organic food movement has now compromised its ideals.

CHAPTER 9: BIG ORGANIC

1. *Supermarket Pastoral*. Pollan writes that shopping at Whole Foods is a "literary experience," since many of the organic products feature long, wordy labels explaining how the food was produced. Pollan explains that the organic movement began as an effort to provide more information about where food comes from. In contrast to industrial food, which deliberately obscures the chain of production, organic food claims to tell the consumer exactly how their food was produced. Pollan calls these narratives "Supermarket Pastoral," a way of buying food on a large and convenient scale that also claims to connect consumers to the land.

As Pollan shows, grass has coevolved with humans, and its spread was a result of a combination of natural processes and human intervention. People figured out that they could deliberately cultivate grasses and harvest the seeds, which were a nutritionally dense and important source of energy for humans.



At first glance, Salatin's farm might seem to entirely fit the Jeffersonian pastoral ideal of humans in harmony with nature. However, Pollan points out that the story is more complicated than that. Nearly all farms, no matter how "organic" or "sustainable," are in some ways involved with the industrial food system that transports large amounts of food around the country. In this sense, there is probably no farm that is entirely a product of nature rather than human culture.



Pollan is surprised that Salatin refuses to FedEx some of his food, since all the food chains that he has come into contact with so far are perfectly happy to ship food over long distances. This is because it is more efficient and maximizes profits—by producing and distributing food on a vast scale, food companies can enrich themselves. Salatin's farm, however, clearly operates on other principles, refusing to compromise its waste-reducing ideals and the freshness of its foods in order to increase profits.



One would think it is a good thing that organic food tries to put consumers more in touch with nature by connecting them to the origins of their food. But Pollan argues that this supposed transparency about the interconnectedness of the food chain—knowing, for instance, the name of the chicken that produced one's eggs—is in fact more of a literary exercise. Organic food, he suggests, uses marketing techniques like any other large company.



Ironically, the organic food label is itself an “industrial artifact,” a substitute for actual first-hand experience and engagement with those farms. Pollan decided to try to figure out just how much the fiction of Supermarket Pastoral holds up under scrutiny. He found that the story didn’t persuade in practice, since like the industrial food industry, the organic food industry also needs to produce food on a large scale and ship it across long distances. Consequently, it has had to compromise many of its ideals.

2. *From People’s Park to Petaluma Poultry*. Pollan tells the story of People’s Park in Berkeley, California, a vacant lot seized by a hippie collective in 1969 and cultivated as an organic vegetable garden. Pollan explains the links between the organic movement and the radicalism of the 1960s, which saw growing organic food as a way of effecting social change, rejecting the “plastic food” of the previous generation, and dismantling the food-industrial complex. For the magazine *Organic Gardening and Farming*, one of the first alternative farming publications, “organic” would mean stronger bonds of collaboration and cooperation between individuals and between people and the natural world.

One of these early reformers was Gene Kahn, founder of Cascadian Farm near Seattle. Although Kahn was one of the pioneers of the organic food movement in the early 1970s, he sold his farm to General Mills and is now a vice-president. When he was first starting out, Kahn relied on the writings of Sir Albert Howard, an English agronomist who warned against the dangers of artificial fertilizer in the 1940s. Howard voiced strong critiques of the idea that farming can be broken down into its chemical components, and that all plants need to grow are the three major nutrients nitrogen, phosphorous, and potassium (“NPK”). He argued that chemistry is not the same as biology, and that there is more to humus (the ingredient that makes soil fertile) than a simple collection of chemical components. Howard called for farmers to redesign their farms according to the laws of nature rather than science.

Pollan visits Cascadian Farm with Kahn, who explains how he began his “corporate adventure.” In 1990, consumers panicked when they discovered that many apple farms were using a potentially dangerous chemical, Altar, and the demand for organic fruit soared. Kahn borrowed heavily to produce more organic fruit, but demand soon dropped off again. Badly financially overextended, Kahn was forced to sell a large stake in his farm to Welch’s, a food corporation. Kahn began integrating his farm with agribusiness, betting that he could integrate organic products into large-scale food distribution chains. He tells Pollan that for most people, food is “just lunch” and not about “communion,” explaining why he chose to take a more pragmatic and less ideological approach.

Pollan calls these marketing techniques “Supermarket Pastoral” because they gesture to a fiction of farms in communion with nature. In practice, organic food is often the product of industrial systems that, like the fast food industry, prioritize efficiency over the quality of food and the experiences of animals.



In Pollan’s history of the organic movement, early proponents saw naturally-grown food as a way of reminding people of their co-dependence and mutual reliance on nature. By growing a communal garden, for instance, 1960s activists aimed to remind people where their food comes from and get people to invest in a common project. In this sense, organic food was designed to remind people of their interconnectedness with others as well as with nature.



Howard’s writings warned that it was dangerous for humans to try to bend nature to their will. For him, this was an example of hubris, or overconfidence. In the early days of agricultural science, people thought that farming could be manipulated to grow ever larger crop yields, simply by thinking of food production as a scientific process like any other, with chemical components. By contrast, Howard thought that farmers should tread carefully when it comes to human intervention in nature, thinking instead of growing food as a natural process that should be meddled with as little as possible.



Kahn initially sold his organic farm to General Mills under financial duress, after he found himself with an unsold surplus of fruit. However, he has since come to feel that there are significant benefits to organic farms that collaborate with larger companies. For Kahn, the partnership with General Mills allowed him to sell organic food to many more people—who, in Kahn’s view, simply aren’t going to care that much about where their food comes from. Kahn thus represents a pragmatic compromise between the ideals of the organic food movement and the practical realities of American capitalism.



In the 1990s, major food companies began selling organic products. Kahn's venture expanded and absorbed several other small farms, reconstituting the company as Small Planet Foods. The Department of Agriculture had previously been hostile to the organic movement, seeing it as a critique of their support of synthetic fertilizers and large-scale production, but by the 1990s they began supporting it and codified a national standard for the designation "organic."

The federal standard caused much controversy between "Big Organic" and "Little Organic." On the one hand, people like Kahn advocated for looser standards that would allow the use of synthetic ingredients and thus the production of, say, organic TV dinners. Other farmers argued that the organic movement was philosophically rooted in whole foods, and that there should be no such thing as an "organic Twinkie." In the end, "Big Organic" won out, and the 1990s standards allowed for the use of synthetics. They also allowed factory conditions on "organic" farms that looked more like industrial farming than the original farming collectives of the 1970s. Although organic farm animals must have "access to pasture" and "access to outdoors," these phrases and standards are so vague that they are nearly impossible to enforce.

3. *Down on the Industrial Organic Farm.* According to Kahn, the industrialization of organic farming is a victory. Every farm managed by an organic farmer represents land that won't be doused with chemicals. When Pollan decided to visit some of these organic farms in California, however, he found farms that looked much like the industrial farms that the movement had originally condemned. For example, Greenways, an organic produce operation owned by a much larger conventional farm, uses a similar factory model but eliminates the use of chemical fertilizers. However, Greenways compromises on organic methods, since it still uses other forms of chemical inputs.

Although smaller organic farms are often more productive by acre, a large company like Whole Foods—which needs a large-scale supply of produce—will only contract with bigger organic farms. Pollan suggests that it seems impossible to reconcile the ideals of organic farming with the needs of an industrial food chain. Although Kahn set out to prove that organic farming could work on a large scale, large-scale organic farming often doesn't look very organic at all.

Just as Kahn compromised with General Mills, the organic food movement at large compromised with the Department of Agriculture. By codifying a set of natural standards for "organic food," the American government integrated organic farming into the mainstream.



The compromises between small organic farms and larger corporations were not always harmonious. At stake was the question of whether, if the organic movement compromised its original ideals, it would even be "organic" at all anymore. People like Kahn argued that the organic movement could be flexible and adapt to the demands of large-scale corporate food production. Others argued that such a system was anathema to the values and principles on which the organic movement had been founded in the first place.



Kahn would argue that all his compromises were for a good cause: decreasing the amount of synthetic fertilizers used on American farms. However, when Pollan visits these "industrial organic" farms, he isn't so sure. He points out that these farms often use the same industrial farming methods, but just without chemicals—so their farming has similarly negative impacts on the environment. The compromises of the organic movement may have made it in many cases indistinguishable from other industrial farms.



For Pollan, the case of Gene Kahn and his farm shows just how difficult it is to meld organic farming principles with the demands of a large food corporation—which will always require shipping large amounts of food across long distances. "Scaling up" the organic food movement requires more compromises than some are able to stomach.



Pollan tells the story of another originally small-scale organic operation, Drew and Myra Goodman's Earthbound Farm. They began as a roadside farm stand in the 1980s, selling bags of "spring mix" lettuce. They have since grown into a \$350 million company that has sold through Costco and Lucky's. Although Earthbound technically uses organic methods, they grow food on an industrial scale and rely on teams of immigrant workers. Pollan reflects on the gap between people's idea of lettuce as a simple, earthbound food and the complex production chains that produce a plastic box of mixed lettuce. Pollan concurs with some small organic farmers who have argued that farming on this scale should be given a new word and not called "organic" anymore, since the movement has evolved so far beyond its original ideals.

4. *Meet Rosie, the Organic Free-Range Chicken.* Pollan visits Petaluma Poultry, an organic farm in California and the home of Rosie, the "free-range" chicken he bought at Whole Foods. Compared to industrially-farmed chickens, Rosie supposedly has a better life: she gets a few more inches of living space, and lives a few days longer because she isn't given hormones to stimulate artificial growth. She also has "access to pasture"—a fifteen-foot grassy yard outside the shed where she lives. But the organic farm managers don't want the chickens to go outside, since they are vulnerable to infection (they're all genetically identical and live in crowded quarters). Although Rosie is nominally allowed to go outside, she won't take the option to explore the yard. This is because the birds aren't allowed to go outside until the age of five weeks (at which point they're settled in their habits) and all the food and water is kept indoors.

5. *My Organic Industrial Meal.* Pollan cooks a meal at home for his family: Rosie the organic chicken, along with some fresh organic vegetables sold by Cal-Organic farms—a large-scale operation owned by the corporation Grimway—and a spring salad mix from Earthbound Farms. Pollan points out that all this organic food came from big producers that provide organic fruits and vegetables all year round, even when such produce is out of season. The industrial food chain even allows Pollan to buy organic asparagus from Argentina—a food grown thousands of miles away, packed and chilled, and flown by jet to California. Pollan wonders whether such an elaborate food chain can really be considered "organic." Worse, the "jet-setting Argentine asparagus" tasted flavorless, despite its \$6 price tag.

As Pollan observes, few foods seem simpler and more natural than lettuce. However, what looks like a straightforward farming process in fact involves a complex chain of production to grow the various lettuces that constitute a "spring mix." Indeed, a plastic box of lettuce is so far from naturally grown and sold—since it requires large amounts of lettuce to be farmed and shipped over long distances—that Pollan questions whether a box of lettuce sold at Whole Foods three thousand miles away from its original site of production can really count as "organic."



Rosie is supposedly a free-range chicken, meaning she should be allowed to go outdoors. But in this case, the natural impulse of a chicken to roam outdoors has been checked by human intervention. Since Rosie has been raised since birth in small, crowded quarters, she won't take the opportunity to explore the yard when it is offered to her. In a sadly ironic twist, Rosie is no more free-range than any other industrially-raised chicken. Pollan comes to the conclusion that, in the case of Petaluma Poultry, the idea of a "free-range" chicken is a fiction rather than a real principle for these organic farms.



The original organic movement defined "organic" food as sustainably and locally-produced produce. But while activists imagined a world of small farms that would feed their communities, the modern organic movement grows and ships food over long distances—such as asparagus grown in Argentina and shipped to the United States at significant cost to the environment and the consumer. In Pollan's opinion, such compromise of the movement's founding ideals compromises the integrity of the very idea of "organic" food.



Pollan ponders the question of whether organic food is necessarily “better.” He thinks that organic produce does generally taste better, although not in all cases (if, for instance, it’s been frozen and shipped for miles, that will certainly have a negative impact on its flavor). He also believes that the food is probably healthier because it contains no pesticides, artificial growth hormones, or chemical fertilizers. The research on whether organic food is more nutritious is mixed. It does seem that organic food contains more polyphenols, compounds that plants develop to fight off pests and disease. These polyphenols are healthy for humans, and industrial produce has fewer of them because they don’t have to fight as hard for survival. Organic farming is also unequivocally better for the environment, for public health, and for farmers.

Pollan concedes that less human intervention in nature is probably a good thing. Food grown without pesticides and chemical fertilizers will almost always be healthier for the environment and for humans to eat. Organic food seems to offer more of the naturally-occurring compounds that help plants fight off disease—compounds that don’t develop in genetically-modified plants, which have been scientifically engineered not to contract diseases. In this case, allowing plants to fight off disease on their own might actually be healthier for humans.



At the same time, an organic factory meal does “leave footprints on the world,” as Pollan puts it. Conditions for animals on organic CAFOs are often only marginally better than that of their industrial counterparts. Although organic farmers don’t use chemical fertilizers, they tend to use more diesels to till their soil. And an organic meal is still “drenched in fossil fuel,” since the industry uses a tremendous amount of energy to freeze and ship their food around the world.

Ultimately, Pollan decides, an organic food industry is something of an oxymoron. Although organic farmers found innovative ways to change the food chain’s reliance on synthetics, in the end they made compromises and succumbed to the logic of capitalism: the need to provide large amounts of food and sell it over vast distances.



CHAPTER 10: GRASS: THIRTEEN WAYS OF LOOKING AT A PASTURE

1. *Monday.* Pollan points out that we tend to think **grass** is a monolith (i.e. that it’s all one thing, just a sea of green). But to a cow or a grass farmer like Joel Salatin, a pasture of grass is a “salad bar” filled with different varieties of grasses. Pollan explains that grass farming was imported to America from New Zealand, with help from publications like the *Stockman Grass Farmer*. One of the central principles of grass farming is that farmers can capture the energy of the sun through photosynthesis—by raising animals to eat grass, thus passing the energy up the food chain.

As Pollan learns from Joel, grass is part of a far more complex ecosystem than is commonly acknowledged. At the same time, however, grass is also the foundation of a very basic and fundamental food chain: the transfer of energy from the sun to grass via photosynthesis, and from the grass to the animals who will eat it.



Joel raises his **grass** by “management-intensive grazing,” a technique that relies on the farmer’s strategic abilities. He explains to Pollan that he moves his animals to graze a pasture when the grass is at its most productive. Joel then moves them on to a different pasture in order to give the grass a chance to recover, rather than giving the cattle a “second bite” of desirable grasses—which allows those species to replenish itself rather than dying off. His calculations rely on the unit of the “cow day,” which is the average amount of forage a cow will eat in one day. As a result of these techniques, Polyface Farm is incredibly productive in terms of the amount of grass grown per pasture.

Joel’s approach to grass farming represents a compromise between nature and human intervention. He raises his cows to eat grass, as they have evolved to do, but he does not let them graze entirely freely. Instead, he carefully calculates the amount of grass he can allow them to eat without exhausting the local grass species. He then moves the herd accordingly. This compromise clearly works, since Polyface Farm is such a productive and healthy ecosystem.



2. *Monday Evening*. Joel uses a “mob and move” technique in which he moves groups of cattle to a new pasture every day. This simulates the migration patterns of ancient animals and allows the **grass** to recover from grazing, since grasses evolved to thrive from exactly this sort of intensive but rotational grazing. Joel moves the cattle from place to place simply by setting up new electric fencing, a task that only takes fifteen minutes to accomplish. As Pollan watches the cows enjoy their evening meal, he reflects on the simplicity of this food chain: the cows eat the grass, which has photosynthesized energy from the sun. It couldn't seem more different from steer number 534's dinner at Poky Feeders, with its impossibly complex industrial food chain.

But although this food chain might look simple, Pollan argues that it's actually not. When a cow eats the **grass**, it sets off a chain reaction in which the grass produces new and nutritious topsoil. This stimulates more growth, as the carbohydrate energy from the roots is redirected to produce new shoots of grass. This is the “critical moment” when over-grazing would destroy the grass's growth. But because Joel Salatin rotates his cattle, the pasture maintains biodiversity: favored grasses aren't eliminated by overgrazing.

A diverse polyculture of **grass** is significantly more productive, removing thousands of pounds of carbon from the atmosphere each year. In fact, if more pastures were grazed like Joel Salatin's instead of being used to grow animal grains, farmers could grow enough grass to significantly offset fossil fuel emissions. This is such an appealing vision that researchers have been trying to develop nutritious grasses that humans could eat directly.

According to Pollan, eating animals that eat **grass** is about as close as humans can get to a “free lunch,” since this is a solar-powered and sustainable food chain. He wonders how and why humans ever moved away from grass-fed beef to corn-fed beef, since an acre of well-managed grass is actually more productive than an acre of **corn**. He comes to the conclusion that corn is more compatible with an industrial food chain than grass, which requires more human labor and local expert knowledge. And while corn is a commodity with industrial value (it can be used, for example, in the production of ethanol), grass isn't useful for other commercial purposes, and thus receives no subsidies from the government or agribusiness.

At Polyface Farm, it is clear that all elements of the food chain are connected and rely on one another. The grass thrives under rotational grazing, and the cows thrive from eating grass, which is more nutritious for their digestive systems. Pollan thinks Joel's approach compares very favorably to industrial farming strategies, which don't make much intuitive sense. Instead of simply allowing animals to follow their natural instincts, they employ complex and obscure production techniques.



Pollan gives credit to Joel for the mental effort and ingenuity he employs in designing his farm. There is art as well as nature to his approach. If Joel didn't regularly rotate the cows on a predetermined schedule, for instance, the grasses would die out from overgrazing and the overall biodiversity of the farm would suffer.



One of the most appealing facets of grass farming is that it sets off a positive set of chain reactions for the environment. Like industrial farming, grass farming affects the environment—but rather than releasing toxins, it helps clear the atmosphere of fossil fuels.



To Pollan, it is clear that grass farming works better for nature. He wonders, then, why farmers feed corn to their animals rather than grass. Ultimately, he comes to the rather grim conclusion that corn has beat out grass as the animal feed of choice on industrial farms only because it is better for humans (and even then, only in the short term)—corn is cheaper and more portable, and it has a vast array of financial and business interests behind it. In this sense, human desires are winning out over the needs of natural ecosystems.



3. *Monday Supper*. Pollan sits down to supper with Joel Salatin, Joel's wife Teresa, Joel's daughter Rachel, and a few other family members and farmhands. He notices that everything they're eating has been grown on the farm, and that the Salatins are living largely "off the grid": they homeschooled their children, rarely watch television, and lead a self-sufficient life. In this sense, they represent the Jeffersonian ideal of the independent American farmer.

Joel tells the story of his family's history of alternative farming. His grandfather was one of the charter subscribers to the first organic farming magazine. His father raised chickens in Venezuela and was forced to flee after the coup; he received a small settlement that he used to buy Polyface Farm and a herd of cattle. The land had been over-tilled by tenant farmers, so Joel's family has spent decades revitalizing the soil's fertility. Joel's father worked as an accountant and farmed recreationally, which gave him the freedom to experiment with non-traditional agriculture. Instead of growing **corn**—which he thought was a recipe for financial ruin, given the experiences of many of his clients—he turned to **grass** farming. Although Joel's father has since died, Joel thinks he would be proud to see Polyface Farm today.

Pollan enjoys dinner with the Salatins because they embody an ideal of the independent farming family—an ideal that has a long history in the United States. For Thomas Jefferson, for instance, an ideal nation would be composed largely of self-sufficient farms like Polyface.



For generations, Joel's family has been on a mission to promote more sustainable farming practices that revitalize the biodiversity of grass pastures and restore the balance between humans and nature. Perhaps precisely because he farmed recreationally and so was not beholden to larger corporate interests, Joel's father felt free to experiment with grass farming rather than succumbing to the lure of corn's "efficiency." In fact, Joel's father saw that corn farmers tended to impoverish themselves by producing only a single crop.



CHAPTER 11: ANIMALS: PRACTICING COMPLEXITY

1. *Tuesday Morning*. Pollan wakes up late in the morning and hurries to his morning chores. He explains that Polyface Farm uses a novel method of raising broiler chickens in movable pens. Typically the land around a chicken farm will become hard and barren, since the chickens over-fertilize the ground. But because Joel moves his chickens every day, they spread their manure evenly, returning fertility to the soil. He transports his chickens in a tractor that he calls the Eggmobile. When the cattle leave piles of manure behind, he brings the chickens to eat the larvae that have developed in the manure. This both sanitizes the pasture and gives the chickens a valuable source of protein.

The logic of food production at Polyface Farm is very different than that of an industrial food chain. The relationship between cows and chickens is more of a "loop" than a hierarchy. Joel expresses the view that "everything is connected to everything else." For example, one creature's waste becomes another creature's food. This is a very different model of efficiency than the simplification and cost-cutting of factory farms, but it is also efficient in that it produces more and wastes less. Joel refers to each of his "stacked" farm enterprises as a "holon"—a word derived from Greek, meaning a whole that is also a part of something else.

Joel's method of farming emphasizes the interconnectedness of animals and the environment around them. He recognizes that chickens will impoverish the soil if they are allowed to over-fertilize the ground. Instead, then, he promotes a more symbiotic relationship by regularly rotating the chickens and allowing them to eat larvae from manure left behind by the cattle. In this way, what could be a source of waste instead becomes a source of fertility.



In a sense, Joel's methods mirror the tactics of industrial farming. Both are concerned with reducing waste and increasing efficiency—which is to say, producing as much food as possible per square acre. However, Joel approaches the issue of efficiency very differently. Instead of creating an industrial waste disposal system, he uses the natural interconnectedness of ecosystems—some animals eat what grows from the waste of other animals—to find a more sustainable system.



In the Raken House, Joel raises chickens and rabbits together. Under normal circumstances the ammonia fumes in the rabbits' urine would leave them vulnerable to infection—but instead of feeding them antibiotics, Joel turns the rabbit urine into a fertilizer that feeds the worms in the woodchips, which are then consumed by the hens. In another example of a “holon,” Joel practices rotational grazing with his turkeys. He lets the turkeys eat the **grass** in his grape vineyard, since they help fertilize the trees and vines. Finally, he uses these “stacking” techniques to create a very rich compost from cow manure and **corn** that he then feeds to his pigs.

As Pollan watches the pigs happily feast on the cow manure, he reflects on the difference between the lives of these pigs and those of pigs raised on industrial CAFOs. He is particularly drawn to their spiraled pigtailed tails, since industrial pigs have only a stub of a tail: the farmers snip them off. There is a “horrible logic” to this, Pollan knows. Confined in close quarters without sunlight, pigs in CAFOs will bite the tail of the pig near them. The pigs are so demoralized that they won't resist their aggressor. By leaving only a more sensitive stub of the tail behind, the farmers render the assault more painful, ensuring that the pigs will resist. In contrast to this efficient but inhumane solution, Pollan reflects on the way that Polyface Farm allows pigs to celebrate their “pigness,” living their lives in a system that doesn't repress their natural impulses.

2. *Tuesday Afternoon*. By the afternoon, Pollan is exhausted, and he observes that most farmers probably aren't up for the sort of intellectual and physical labor involved in running a farm like Polyface. But Joel relishes the mental challenges of running a complex farm like this—an attitude that has often been lost in an industry where chemical solutions predominate. A farmer like Joel has little need of fertilizers, chemicals, and antibiotics, since he maintains the health of his animals and produces little waste. At Petaluma Poultry, by contrast, in which hundreds of chickens are raised together in close proximity, disease is a constant threat, and antibiotics are necessary to keep the chickens alive. Joel believes that health is the natural state on a farm, and problems like pests and disease are signs that the farmer is doing something wrong. Instead of using medicines, he can use his own resources to find creative and sustainable solutions.

An industrial farm might look at rabbit urine as a problem to be solved with antibiotics. Joel finds a more creative but still efficient solution by turning the waste into a natural fertilizer. Joel consistently refuses to treat natural consumption and waste cycles as impediments to productivity, instead seeing them as part of a larger web of interconnections that can make a farm stronger, more diverse, and more fertile.



At Polyface Farm, Pollan begins to develop a theory of animal pleasure and happiness. For Pollan, the pigs at Polyface are happy because they are free—not free in the sense of wild and untouched by human control, but free in the sense that they can indulge their natural impulses. On an industrial farm, the natural needs of a pig are repressed in the name of “efficiency.” At Polyface, by contrast, pigs can indulge in their essential “pigness” by living a life that allows them to engage in the activities they have evolved to do.



Crucially, Joel's farm is not a space free from human intervention. On the contrary, Joel is a very active and involved farmer, making many small and large decisions every day—like when, for instance, to move cattle and pigs to a new grazing spot, or when to slaughter animals. The difference is that his decisions are based on his individual experience and expertise, rather than the dictates of a vast corporate system. Polyface Farm shows that humans can intervene in nature in a way that is ethical, conscientious, and sensitive to the ways that animals' needs can overlap with human farming techniques.



Pollan praises the productivity of Polyface Farm, which produces thousands of pounds of eggs, chicken, and beef. But Joel notes that Pollan's calculation of the farm's productivity should also include the forest. These trees provide shade and hold moisture, cooling down the environment for the animals and reducing evaporation in the fields, thus providing more **grass** for the cows. The forest also improves the farm's biodiversity by helping control predators. And finally, the trees provide woodchips that make compost, which technically makes the beef not only "grass-fed" but "tree-fed" as well. Pollan realizes that for Joel, every living thing on the farm is part of a single ecological system.

Joel's assessment of his farm's efficiency or productivity is not solely limited to the amount of food he produces. He also points out that the health and biodiversity of his forest contributes significantly to the overall functioning of his grass-based ecosystem. In this way, Joel sees productivity as a measure not necessarily of numerical output, but of how efficiently all the elements of his interconnected food chain are working together.



CHAPTER 12: SLAUGHTER: IN A GLASS ABATTOIR

1. *Wednesday.* Joel insists on slaughtering his chickens on the farm, making their deaths as much a part of the farm system as their lives. Over breakfast before they process the chickens, Joel complains that he often runs afoul of government food safety regulations, which are designed for industrial slaughterhouses rather than a farm that slaughters its animals outside. Joel gathers a small group to help with processing the chickens, including some neighbors.

Joel's philosophy that "everything is connected" turns out to apply to the deaths of animals as well as to their lives. He believes that the slaughter of animals should not be kept out of sight and out of mind, but should instead remain an essential stage in an interconnected food chain and life cycle.



Pollan is apprehensive about slaughtering the chickens, but feels that a meat-eater should "take some direct responsibility for the killing on which his meat-eating depends." When the chickens have their throats slit, he finds the process disturbing, but is comforted by the fact that they don't seem to fear the blood or the farmer's knife. Pollan slaughters about a dozen chickens himself, becoming comfortable enough with the technique that it starts to feel routine. Still, he tells Joel that he wouldn't want to slaughter a chicken every day, and Joel agrees that routine animal slaughter is dehumanizing for the people who do it—which is why his farm only slaughters animals a few times a month.

Joel believes that the slaughter of animals is part of the natural life cycle of a farm. However, he also expresses the view that killing animals is difficult for humans and not conducive to their happiness. By making slaughter a ritualized event rather than a daily occurrence, he shows respect for both the animals who die and the people who have to carry out the taking of a life. For him, slaughter is not a bureaucratic act, but one invested with significance.



After being slaughtered, the chickens are plucked, gutted, and processed into the oven-ready broilers that are sold at market. After noon, customers begin to arrive to pick up their chickens. Pollan notes that this is the ethical power of Joel's method: people are free to come see how their food is made, providing assurance that the chickens are being cleanly and humanely slaughtered. Joel complains that he could sell his food more directly to consumers if it weren't for the thicket of government regulations preventing him from developing a more viable local food chain.

For Joel, the measure of accountability in his slaughterhouse practices is not government oversight, as in an industrial meat factory. Rather, it is the transparency of his methods. By allowing anyone to come and see the slaughter, he acknowledges the interconnectedness of the food chain by letting people see exactly where their food comes from.



As Teresa chats with customers, Pollan helps compost the chicken guts and waste. This is one of the “grossest jobs on the farm,” and Pollan is repulsed by the smells of rotting flesh. He reflects on the way that even the beauty of Polyface Farm is connected to the smell of death, since any eating of meat requires killing, bleeding, and evisceration. But for Joel, this pile of compost represents yet another part of the life cycle on his farm. Rather than being industrially processed and turned into cattle feed—which carries the risk of mad cow disease—this chicken waste will be converted into nutrients for the soil. Where Pollan sees blood and guts, Joel sees “biological wealth” that he can turn back into **grass**.

Pollan is disturbed by the violent end to what had seemed to him a happy and peaceful life for these animals. However, he also realizes that the death of these animals is intimately connected to new forms of life. For example, the compost left behind by these animal remains can be used to revitalize the fertility of the soil and produce more grass, which will in turn be consumed by more cattle. In this way, every animal is connected to another part of the food chain.



CHAPTER 13: THE MARKET: "GREETINGS FROM THE NON-BARCODE PEOPLE"

1. *Wednesday Afternoon.* Pollan is reminded that he came to Polyface in the first place because Joel refused to FedEx him a steak. This was a matter of principle—Joel doesn't ship food long distances and he doesn't sell to supermarkets, whether it's Walmart or Whole Foods. All his food is sold and eaten within a few miles of the farm. Joel believes in “relationship marketing,” or developing connections with the local community members who buy his food. These people sometimes drive more than an hour on country roads to buy Polyface food. They tell Pollan that they buy directly from Joel because they trust his food production process more than they trust their local supermarkets.

Joel refuses Pollan's seemingly reasonable request to ship him some food from Polyface Farm because he rejects the system of large-scale, long-haul production represented by the mailing of food across large distances. For Joel, shipping food breaks the continuity of an interconnected food chain, making it more difficult for people to know where their food comes from. Food from the supermarket, after all, could have come from anywhere.



Pollan asks Joel how he responds to the charge that artisanal food like his is inherently elitist, because it's significantly more expensive than supermarket food. Joel points out that his customers are all people of modest income who choose to buy locally. He also argues that his food is “honestly priced,” as opposed to the cheap food that passes on “hidden costs” to the environment and taxpayers. Pollan reflects that, among industrialized nations, Americans spend an unusually low portion of their disposable income on food. People are used to their food being cheap, which gives them more money to spend on other commodities like, say, cell phones. But it doesn't necessarily need to be that way.

After his conversations with Joel, Pollan begins to think that perhaps the problem is the expectations of American consumers, who now expect food to be cheap, convenient, and efficient. Joel rejects that expectation, pointing out that there are other values to which people might adhere when buying their food. His food is less easy and efficient to buy, but when people purchase his food, they know that are buying into an “honest” food chain that is transparent about its origins.



Pollan thinks that it's odd that something as fundamental to people's health as food is sold completely on the basis of price, as opposed to other information about its production. Instead of transparency, consumers get bar codes that obscure the origins of their food. He thinks that the industrial food industry relies on this ignorance, whereas what Joel offers is a direct relationship between consumer, farmer, and product. At the same time, however, there are some flaws in Joel's pastoral vision. For example, it would be difficult to maintain a similarly unmediated relationship in an urban area like New York City. When Pollan raises this issue with him, Joel expresses skepticism that there should be cities at all—showing the depth of the cultural gap between him and Pollan.

Pollan meets Bev Eggleston, a farmer who is trying to open an ethical meat processing meat factory but has been shut down by USDA regulations. In the meantime, he works as a food seller, driving grass-fed beef and other food products from farmers like Joel all over the region. Bev sells to farmer's markets and "metropolitan buyer's clubs," groups of city dwellers who band together to buy products from local farms. Joel explains that, thanks to internet, it's never been easier for people to "opt out" of the industrial system by connecting to other like-minded food consumers.

Pollan reflects on the difference between artisanal and industrial food systems. An industrial system is based on maximizing profits and efficiency, which it does by substituting human labor with fossil fuel energy and new technologies. By contrast, artisanal food systems are not designed to be efficient; they're designed to produce a unique, desirable product. Joel and Bev have come to believe that artisanal and industrial can't be mixed, since their aims are fundamentally opposed. This is why Joel's "relationship marketing" strategy has succeeded, while Bev's attempt to conform to industrial regulations has failed.

2. Tuesday Morning. In the morning, Pollan goes on a ride with Art Salatin, Joel's brother. Art is responsible for managing the sale and delivery of Polyface products to fine dining restaurants in the Charlottesville area. Many of the region's top chefs buy Joel's produce, both to support a local farm and for the superior taste of his meat, eggs, and vegetables. Art explains that one problem with selling Polyface produce is that people now expect food to be available all year long, even out of season. A globalized industrial food system has made people out of touch with seasonal food patterns. These chefs do their part of help educate people, serving food when it is in season and labeling their dishes "Polyface Farm Chicken."

Pollan is persuaded by Joel's arguments that people should look to values other than mere cheapness when choosing how and where to buy their food. However, he also notices that Joel is inflexible and uncompromising on how he thinks food should be produced and sold. A sustainable food chain like his might be practical in rural Virginia, where people can come to buy his food directly, but makes less sense in New York City. In order to feed larger amounts of people, Joel would no doubt have to make more compromises.



Bev and Joel have built a successful business by selling food to people who have "opted out" of a system that seems increasingly unsustainable and unethical to them. But while this is all well and good, Pollan thinks that this is not necessarily a solution that will work for everyone—not all city dwellers are going to be so uncompromising about where they get their food.



Joel and Bev's position implies that, with artisanal food, the point is the uniqueness and appeal of the product rather than its cheapness. This represents a very different system of valuation than the modern industrial food system's preoccupation with efficiency and convenience. People shouldn't buy food because it's cheap, Joel and Bev argue; they should buy it because it's nutritious and ethically-produced.



For Joel, part of the revolutionary appeal of local, sustainable food is a rejection of efficiency and convenience as a central measure of value. Instead, he recognizes that often food is not convenient—it isn't always possible to acquire certain foods when they aren't in season, for instance. In this sense, Joel helps educate people that fresh, seasonal food is more valuable when it comes from a local source rather than a location that requires flying it halfway around the world.



For Pollan, this alliance between chefs, farmers, and consumers to help each other “opt out” of the industrial food system is a political act. He thinks that food is a natural site for this rebellion against globalization, since it stands for the values of protecting local cultures, identities, and landscapes. When industrial agriculture fails, people often find ways to get around the system and produce food on their own. George Naylor, for instance, compared today’s farmer’s markets to the hidden plots of local farmers who worked around the restrictions of collectivist agriculture in the last days of the Soviet empire. In this sense, “local” food might offer a more sustainable long-term solution than “organic” food.

Pollan notices that a bumper sticker popular in the area reads “eat your view!”—meaning that people should eat locally in order to support farmers and preserve the landscape (or “view”) around them. Admittedly eating local presents many challenges, like eschewing fast, easy food and sourcing produce when it’s in season. But the mission of the local food movement is to remind people of their connection to farmers, suggesting that local, fresh, seasonal food is not only more ethical but simply tastier than its fast food alternative. In this way, “doing the right thing is the most pleasurable thing.”

Pollan asks Joel how he thinks the local food movement can triumph over the industrial forces amassed against it, since it remains a fringe presence in the American food system. Joel says that he doesn’t think local food needs to win; it just needs to allow American consumers the freedom to make a more informed choice about where and how they buy their food. The important thing is that the county has a diversified selection of food production chains that aren’t solely reliant on any particular commodity (which, like oil, might disappear one day). In this way, Pollan thinks Joel is “more of a Luther than the Lenin,” someone who wants to change the system gradually rather than destroy the opposing forces.

Joel never makes the argument that local food is more efficient. Rather, he makes the far more radical assertion that it is “efficiency” itself that needs to be rejected as an operating principle of the food system, if the world is to build a genuinely sustainable agriculture. For him, growing food and raising animals is slow, hard work. It is only by respecting the labor of local farms and communities that people can escape a globalized food system that prioritizes profits over all else.



One of the central goals of the “eat local” or “eat your view” movement is to remind people of their connection to farmers and the local ecosystems around them. In a global food system that often obscures those connections and makes farmers invisible, eating local provides a helpful reminder of the interconnectedness of American consumers to the farmers who grow their food.



Joel recognizes that there is no way to transform the industrial food system overnight. Instead, in keeping with his independent-minded principles, he wants to give people the chance to make an informed choice about how and where they buy their food. There can be a compromise between different food systems and values, as long as no one industrial system dominates and destroys all other competition and ways of thinking about food.



CHAPTER 14: THE MEAL: GRASS FED

Pollan decides to cook a meal for some friends in Charlottesville after a week working at Polyface Farm. He gathers some eggs, sweet corn, local produce, and chocolate for a soufflé (he notes that eating locally allows buying special commodities, like tea, coffee, and chocolate, not produced in one's region). Since chicken is the only meat in season, he also brings home chicken from the farm—but feels uneasy about eating it, after his experience in the slaughterhouse. Pollan decides to take a few hours to brine the chicken, removing the flavors of the slaughterhouse that had so disgusted him. He reflects that the tradition of salting and cooking meat is so widespread in many cultures partly because it distances the consumer from what is in fact a brutal transaction between human and animal.

Pollan makes the soufflé with his friends' young son, marveling at how easy the eggs are to bake, with their supple and creamy texture. He explains that everything, even the **corn**, is part of the same food system, since the corn was grown in chicken manure. He admires the sweetness of the corn, which is sweet in a fresher, more “earthy” way than the processed corn syrup made from industrial corn.

Although Pollan has made this meal before, he notices some differences. It isn't clear whether organic food is necessarily “better” than industrial food, but pastured (i.e. grass-fed) food certainly is. For one, grass-fed milk, beef, and eggs are lower in saturated fats and contain vitamins that are better for humans—which isn't surprising, since humans evolved to subsist on grass-fed meat and industrial food is a “biological novelty.” Pastured foods are also higher in omega-3s, essential fatty acids that contribute to brain cell development in humans. One consequence of the shift from a plant-based to a grain-based diet is that the proportion of omega-6s (an inflammatory found in grains like **corn**) to omega-3s in human bodies has increased. The result is higher incidence of blood clots, heart disease, and even behavioral and emotional problems in humans. In this sense, one of Joel's eggs (which contains omega-3s) and a supermarket egg (which doesn't) “aren't the same food at all,” in terms of nutritional value.

Pollan's dinner guests agree that the food is delicious and that the chicken tastes more like chicken—that is, like the idea of chicken people remember from their childhood. They have a long, leisurely meal, and Pollan reflects on the way that humans are unique in taking pleasure from “animal appetites” and transforming it into a social ritual, turning “eating” into “dining.”

Pollan notes that he takes care to distance this meal from his experience in the slaughterhouse. It made him uncomfortable to kill an animal with his own hands, so by cooking the chicken, he transforms it into something less like a dead animal and more like food. At the same time, however, this discomfort reminds him of the essential interconnectedness between humans and animals. It is easy to forget that grocery store meat came from a real chicken; not so with this chicken, which Pollan watched die with his own eyes.



This food that is undoubtedly better and tastier for being grown in a more natural way, without genetic engineering. Pollan notes that the corn is sweet in an earthier way than corn sweetened with artificial, human-invented compounds.



Joel's food has higher nutritional value for humans because it contains more of the essential compounds that humans have coevolved with animals to eat. Animals that are raised in a more natural and sustainable way will be, ultimately, healthier for humans to eat. For example, there is significant evidence that naturally-occurring fatty acids help stimulate human brain development more so than the artificial compounds in industrial food. This is one result of a farming philosophy that is more in touch with nature. In this sense, too, Joel's food is more “efficient”—humans will derive more valuable nutrients from one of Joel's eggs than a grocery store-bought egg.



For Pollan, another joy of Joel's food is that it reminds him of one of the essential pleasures of eating: dining in company. This is as much an ancient evolutionary urge as anything else, since humans are the only species to transform eating into a ritualized social occasion.



CHAPTER 15: THE FORAGER

1. *Serious Play.* Pollan decides to make one last meal: a meal entirely made up of ingredients he has hunted, gathered, and prepared himself. For Pollan, such a meal seems nearly impossible. He's never hunted in his life, and his attempts at foraging have raised fears of poisonous mushrooms and berries. Furthermore, hunting and gathering is hardly a sustainable model of feeding ourselves now, when there aren't enough wild fruits and animals to go around, and fishing remains the last economically important hunter-gatherer food chain (and even that is increasingly turning to an "aquaculture" industrial model).

The chief value of hunting and gathering at this point, Pollan argues, is "didactic"—which is to say, it can teach us something. He hopes that undertaking this project will help him understand more about how humans fit into the food chain. It will also help him take more "direct, conscious responsibility" for the killing of the animals he eats. In this way, he can "recover the fundamental biological realities" of how we eat that are currently obscured by the industrial food chain.

2. *My Forager Virgil.* Pollan knows that, given his ignorance about foraging practices, he will need help—a guide that he calls his "forager Virgil" (in reference to the classical Roman author who guides Dante through hell in the [Inferno](#)). Luckily, Pollan meets Angelo Garro, an Italian immigrant with a passion for producing his own food. When Pollan hears Garro speaking on the radio about seasonal food in Sicily and his "passion for foraging," he gets in touch and asks Garro if he can join his next foraging expedition.

3. *Hunter Ed.* As Pollan prepares to get his hunter's license, he begins seeing nature in a new way. When he takes a walk near his home in Berkeley, for instance, he starts searching for potentially edible plants. One day he thinks he's found a chanterelle, a mushroom described in his field guides. When he gets home, however, he has doubts about whether he really should sauté and eat a possibly poisonous plant. In the end, he throws it out. This, Pollan writes, is a prime example of the omnivore's dilemma.

Pollan admits that his foraged meal is the least compromising of all the food chains he has followed throughout this project. In most of the developed world, hunting and gathering has long since become economically and physically impractical. Pollan is thus deliberately choosing a food chain that makes no compromises at all with the demands of modern life.



Pollan finds the idea of a foraged meal appealing because he will, for once, be able to see all the connections in the food chain and trace every ingredient to its origins. He has been disturbed by the obfuscations of most industrial food chains, and he hopes that this experience will allow him to think more critically and rigorously about where his food comes from.



Paradoxically, although hunting and gathering is the oldest way humans have fed themselves, modern humans don't know anything about it. The fact that Pollan needs a guide to help him learn how to acquire his own food in the wild demonstrates the extent of the contemporary gap between the spheres of nature and human agriculture.



Pollan tries to use human-produced field guides to identify the possibly poisonous mushroom he finds in the wild. His attempt to use the accumulated wisdom of other people to avoid ingesting a harmful food is one strategy humans have developed for coping with the natural evolutionary problem of the omnivore's dilemma.



CHAPTER 16: THE OMNIVORE'S DILEMMA

1. *Good to Eat, Good to Think.* Pollan notes that, for a human, being an omnivore is both a blessing and a curse. People can eat many things in nature, but “when it comes to figuring out which of those things are safe to eat,” humans are pretty much on their own. This problem—the omnivore’s dilemma—was first diagnosed by Paul Rozin in his study of the eating habits of rats. Like humans, omnivorous rats have to balance the potential risks of food that could hurt or kill them with their desire to try new things.

According to Pollan, humans are also making this calculation every time they decide between, say, boxes in the cereal aisle, or between organic and conventional strawberries. The omnivore’s dilemma explains the psychological as well as physiological dimensions of eating. As the philosopher Claude Levi-Strauss put it, humans want food that is “not only good to eat, but also good to think”—which is to say, they need to justify eating their food in intellectual terms as well as simply eating it.

2. *Homo Omnivorous.* Pollan notes that, for humans, variety in what we eat is a “biological necessity.” Human bodies have evolved specifically to be able to consume and digest the nutrients found in *both* plants and animals. There is a tradeoff between “big brains” and “big guts”—animals like koalas have sophisticated digestive systems that can extract all the nutrients they need from a single plant, but consequently, their brains are small, and they’re particularly vulnerable to drought and diseases that compromise their food sources. Humans, on the other hand, have sophisticated brain circuitry to allow for a varied diet, and can live almost anywhere on earth.

Humans use several tools in order to make choices about food selection. The first is sense of taste, which predisposes us to desire sweet foods (a valuable source of carbohydrates) and dislike bitter foods (protecting us from defensive toxins found in plants). Another is disgust, which prevents humans from ingesting hazardous bits of animal matter like feces and rotting flesh. But bitterness and disgust aren’t always effective, since some of the bitterest plants, for instance, contain useful medicines. In these cases, humans overcome their innate aversion with their powers of memory and recognition.

In making dietary choices, humans have to make a compromise between their desire to try new things (which is a result of their omnivorousness) and the potential risks such foods might pose to their health. Every time humans eat, they are at some level making this calculation.



The omnivore’s dilemma explains why eating is so psychologically taxing for many people. For thousands of years, humans have been contending with the evolutionary problem of too much choice in dining, which raises a host of emotional and psychological problems—social issues with a biological basis in nature.



Humans are remarkably efficient at eating a broad array of foods, since their bodies have evolved to be able to digest many food sources and transform them into energy. But consequently, their brains devote a great deal of time and energy towards making strategic decisions about what to eat—an efficient use of brainpower, but one that can make for some difficult decisions in the modern world.



The human brain has reward and pleasure centers that are connected to particular types of food, such as sweet foods. These pleasurable impulses are not accidental, since humans have in fact evolved to desire food higher in nutrients. In this sense, pleasure offers a window into the human evolutionary past and the brain’s attempt to solve the omnivore’s dilemma.



Finally, cooking allowed us to overcome plant defenses by removing toxins and making foods more digestible. Cooking vastly increased the amount of energy available to humans, which many evolutionary biologists believe accounts for the large size of the human brain. For anthropologists, cooking is an example of the “cognitive niche” humans made for themselves in the world’s ecosystem, using their big brains to overcome the evolutionary defenses of other animals and plants.

3. *The Anxiety of Eating*. Pollan asserts that being an omnivore can be a source of pleasure. For example, humans’ sophisticated sense of taste allows for very specific and idiosyncratic food preferences, a cultural phenomenon that provides “social glue” and brings communities together. At the same time, however, the abundance of food humans can eat also fosters anxiety in making dietary choices. Humans decide which foods they want to eat through an “elaborate structure” of social rituals and cultures around dining. Regional cuisines, for instance, reduce anxiety around eating by rendering food familiar to the diner and legible in a wider cultural context. Human omnivorousness is a particular cause of anxiety because there seem to be very few restrictions on what humans can eat—they might even, for example, consume other human omnivores.

4. *America’s National Eating Disorder*. Pollan thinks that part of the problem with American eating habits is that there has never been a stable national cuisine; instead, the culture is constantly reinventing new habits of eating, which makes Americans easy targets for fads and diets. Rather than eating in response to the dictates of pleasure and tradition, Americans are constantly looking for a “scientific” rationale for what they eat. They are then shocked to learn that other, more traditional food cultures in fact produce healthier people. For example, in French culture, people eat supposedly “unhealthy” foods like cheese, but eat smaller portions and share their meals communally. In this way, the French can enjoy their meals “without ruining their health.”

Americans lack a “lasting consensus about what and how and where and when to eat,” Pollan argues. The problem is exacerbated by food companies, which exploit “dietary instability” by developing processed foods designed to create new eating experiences. The result is a cultural vulnerable to constantly shifting eating patterns and nutritional fads. This instability undermines traditional social structures around eating—like group family meals, for instance. Instead of relying on culinary traditions and common sense, people turn to various and conflicting opinions from governments, doctors, and advertising campaigns to tell them what to eat.

Cooking is one example of the ways that humans intervene in natural processes—by, for example, making meat and plants more digestible. Without these interventions in the natural order of the food chain, humans would not have developed such large brains and come to dominate the planet in the way they do today.



Omnivorousness is a source of pleasure for humans because it allows for a rich and varied array of social and culinary experiences. The flip side of such pleasurable variety, however, is anxiety about what to eat. Humans create elaborate social rituals around eating because humans could potentially eat nearly anything—which is a disturbing thought, in extreme cases like cannibalism. Since there is potentially no limit to human appetites, human culture has stepped in to regulate desire for food and bring it under the control of various social taboos and rituals.



In some cultures, such as France, established culinary traditions and social rituals around food offer pleasure to the eater and provide relief from the anxiety of the omnivore’s dilemma. But in the United States, Pollan argues, there is a lack of a stable consensus around how, what, or when to eat. Human culture has in this case not fulfilled its normal role of resolving the omnivore’s dilemma; instead, it’s exacerbated the problem of too much choice.



Pollan thinks there are productive and unproductive ways of using human culture to regulate dietary choices. On the one hand, social institutions like the family meal promote stability and continuity in how people eat. On the other hand, the influence of advertising, fad diets, and public health advisories create a confusing avalanche of information that makes it much harder for people to deal with the omnivore’s dilemma.



CHAPTER 17: THE ETHICS OF EATING ANIMALS

1. *The Steakhouse Dialogues*. Pollan first reads the work of Peter Singer, the world's leading philosopher of animal rights, as he's dining at a steakhouse. He has done this deliberately in order to address the cognitive dissonance between his enjoyment of meat and the ethical problems raised by the killing of animals. At the moment, he writes, human society has "an unusual amount of cultural confusion" on the issue of whether or not it is acceptable to eat animals, with the rise of vegetarianism and animal rights groups like PETA. People now suffer from a kind of "schizophrenia" in how they think about animals, lavishing love and attention on dogs and brutalizing pigs (animals easily as intelligent as dogs) in meat factories. Pollan attributes this to people's increasing lack of contact and communication with the animals that become their food.

Peter Singer's *Animal Liberation* argues that, if "equality is a moral idea" and everyone has the right to equal treatment, regardless of intelligence or ability, it is impossible to justify the killing of animals based on the idea that they are less intelligent. Singer readily agrees that pigs are less intelligent than human children, but since humans and pigs have a common interest in avoiding pain, it is not ethical to inflict pain on animals. This is what moral philosophers call the "argument from marginal cases" (AMC). For example, there are some humans (with certain mental disabilities) whose intelligence does not rise to the level of the chimpanzee, but we still treat them with more "moral consideration" than the chimpanzee. For Singer, this is discrimination on the basis of species—a human is treated better than a chimpanzee simply because he or she is a human being.

Pollan thinks that Singer makes powerful arguments in response to possible objections to his philosophy. For example, when some argue that domesticated animals couldn't survive in the wild and have never known any other life than the factory farm, Singer retorts that defenders of slavery often made a similar point, and that "the life of freedom is preferred." Besides, even an animal who has never had the freedom to exercise and stretch their limbs will still feel a natural desire and instinct for those freedoms.

For Pollan, the question comes down to whether people owe "moral consideration" to animals that can feel pain. For him, the answer is yes—and so he finds it difficult to justify killing and eating animals. He comes to the reluctant conclusion that he has to at least try being a vegetarian, since Singer points out that meat-eaters have a strong interest in convincing themselves that eating animals is ethically justifiable.

It may be "natural" for humans to eat animals, but Pollan points out that human culture treats certain animals very differently than others. For example, cats and dogs are regarded as pets and lavished with love and attention, while pigs are brutalized in meat factories. These inconsistencies are a product of culture, not nature. For Pollan, such cultural schizophrenia is only possible in a culture in which people have less and less meaningful contact with the animals that will become their food. Most people do not regard a pig as they would a dog because they simply do not interact with pigs on a daily basis.



Singer argues that the world's species are interconnected in that they share a common interest in avoiding pain. This is not to say that all species are equal in intelligence and ability, since this is clearly not the case. A human is more intelligent than a pig, for instance. But for Singer, all species should have equal rights. Pigs do not deserve to be violently tortured and slaughtered simply because they are not human, he argues. In other words, people's current treatment of animals discriminates against all non-human species.



Singer believes animals have natural impulses that are being stifled by human intervention. Even if an animal has never known life in the wild, there are certain natural desires—like longing for the freedom to run outside, for instance—that he argues are integral to animal happiness.



Pollan is ultimately persuaded by Singer's arguments for vegetarianism because he sees the point that animals are, if not equal to humans in ability, then at least equal to humans in their moral rights. He sees Singer's point that all living things have the right to freedom from pain.



2. *The Vegetarian's Dilemma*. Pollan struggles with his new-found vegetarianism, which he feels alienates him from other people and makes it awkward when he goes to dinner parties and has to ask the host to make him a special dish. He points out that many cultural traditions and ritual meals center on meat, like the Thanksgiving turkey. He disagrees with the animal rights activists that meat-eating is a mere dietary preference; instead, there is something about meat-eating that he thinks is fundamental to human identity. Although foregoing meat might lift people out of the “brutal, amoral world” of predator and prey, he thinks it also involves a compromise and sacrifice of “our own animality.”

3. *Animal Suffering*. Pollan points out that it is “impossible to know what goes on in the mind” of a pig, cow, or ape, and thus whether an animal is able to suffer. Some philosophers have drawn a line between “pain” (which is a sensory experience) and “suffering” (which involves not only pain but also other, typically human emotions like shame, humiliation, and fear). For example, castration is painful to animals, but doesn't seem to devastate animals in the way it would a human. A steer about to be slaughtered won't dread his approaching death, as a human would.

In a CAFO, however, Pollan thinks many of these distinctions between pain and suffering turn to dust. In an egg-producing operation, for instance, American laying hens are confined in tiny cages for their entire lives, where they cannibalize their cage mates and often die from the harsh conditions. This is the result of a system that treats animals as “production machines” incapable of feeling pain, Pollan writes. In order to maximize efficiency and produce eggs that can be sold for 79 cents a dozen, factories have lost all “moral restraint” and treat animals simply as tools in their capitalist enterprise.

4. *Animal Happiness*. Although Pollan is horrified by the conditions for animals in CAFOs, he also thinks of the happiness of the animals he met at Polyface Farm. Pollan defines happiness as an animal's “opportunity to express its creaturely character”—like pigs rooting around in the dirt or chickens pecking for insects in the cowpat. Animal domestication should be a “symbiotic” relationship in which humans provide food and protection in exchange for animal products. In this sense, the “crucial moral difference” between a CAFO and a good farm is that CAFOs deprive animals of their characteristic way of life, whereas a good farm will allow animals to live in harmony with humans according to their natural impulses.

Thousands of years of human evolution have conditioned people to eat meat, Pollan points out. In this sense, vegetarianism is entirely an artificial human construct, a product of culture and human intervention rather than nature. Indeed, there is no other carnivorous animal that would purposefully forego eating other animal flesh. Paradoxically, vegetarianism and moral consideration for animals seems to require humans to suppress or forget their own animalistic nature.



Pollan questions how much humans and animals really do share the same experiences of suffering. Certainly almost all species are connected by their ability to experience pain as a sensation. But he argues that, for humans, the psychological dimension of pain transforms the experience into a mental as well as a physical state of being. In this sense, there might be limits to animals' ability to experience suffering.



Despite his skepticism on the philosophical question of animal suffering, Pollan feels that the constant drive to increase efficiency in CAFOs does indeed unequivocally lead to pain and suffering for the animals that live in those factories. Animals suffer because they are treated as if they have no capacity for suffering at all—instead, factories see them merely as machines that produce a saleable product.



It is difficult to define animal suffering, but it can also be difficult to recognize animal happiness. However, Pollan thinks that he has seen a prime example of animal happiness at Polyface Farm. A chicken raised in a CAFO will never have the chance to spread her wings, whereas at Polyface, that chicken is free to roam outside. He decides that, for animals, happiness consists of the ability to express their natural impulses without undue constraints placed on them by humans.



Animal domestication has benefited those animals, Pollan points out; chickens have thrived, but wild wolves have largely died out. Predation is the natural order of things in the wild, and perhaps domesticated animals have simply exchanged wolves for humans as their predators. Pollan suggests that animal rights activists often want to deny “nature” itself—the fact that every ecosystem contains predator and prey.

Animal rights philosophers tend to regard animals as individuals, not as a species. So although they might acknowledge that domestication has helped chickens *as a species*, they focus more on the suffering of the individual chicken. But Pollan argues that it is difficult to apply an individual rights-based idea of morality to the animal world. For example, on Santa Cruz Island, a team of habitat restorers are killing off pigs imported by ranchers in the 1980s, hoping to rebuild the local ecosystem and save an endangered fox species. The killing of the pigs has drawn protest from animal rights groups, but Pollan points out that the habitat restoration project is also a larger-scale animal rights project to save the endangered foxes.

5. The Vegan Utopia. Pollan thinks that “killing animals is probably unavoidable,” even in a vegan utopia. Field mice die in grain harvests; in order to grow more crops, animal pastures and rangeland must be destroyed. Entire regions, like New England, would be unable to feed themselves, since their local food economy relies on grazing. This, in turn, would necessitate an even greater reliance on a national industrialized food chain, which entails greater consumption of fossil fuels that undermine the health of the planet. In this sense, eating animals might paradoxically sometimes be “the most ethical thing to do” when it comes to creating a sustainable agricultural system.

Pollan has an email exchange with Singer in which he asks what Singer thinks of a good farm like Polyface, in which the animals seem to lead happy lives. Singer agrees that it is better to purchase meat from such farms, but is skeptical that they could operate on a large scale—and since ethical meat is more expensive, it is usually only accessible to the well-to-do. For Pollan, this suggests that what’s wrong with eating animals is “the practice, not the principle.” In this sense, people who eat meat should be focusing on animal “welfare,” rather than “rights.”

Pollan doesn't think it's fair to regard all animal domestication as oppression. In fact, some species have greatly benefited from human intervention. Without the protection and cultivation of humans, many species would have died out over time.



The Santa Cruz Island case suggests that there is a tension between the rights of animals as individuals and as a species. Ideally, animal rights should be a compromise between the two: the rights of animals as individuals should be balanced with the interests of the entire species. Pollan thinks that, in some cases, the animal rights activists' zeal to protect individual animals leads to a blinkered and uncompromising perspective that prevents them from seeing the larger picture.



The uncompromising view that all meat-eating is unethical also might turn out to have serious consequences for the environment. Like any other dietary choice, even veganism or vegetarianism exacts a toll on the land—sometimes even a greater one than traditional agriculture. In this sense, the decision regarding whether or not to eat animals is not just a moral calculation about the rights of animals—it is also connected to larger questions about the health of the planet.



Even Singer, who is adamantly opposed to eating animals, agrees that the animals on Polyface Farm seem to lead happy lives. In this sense, Pollan begins to feel that it might be better to focus on making animal lives happier, rather than abstaining from eating meat entirely. In other words, people should be trying to ensure that animals live happy lives and die humanely.



6. *A Clean Kill*. As Pollan flies over Kansas, where steer number 534 is being slaughtered, he wonders what sort of death this steer will experience. He relies on the account of Temple Grandin, an animal handling expert, who explains that 534 will be put on a conveyor belt and “stunned” with a machine that should kill the animal on first shot. In theory, it should all be done humanely—but some animals don’t die from the stunner (there is about a 5% error rate) and later have their throats slit. Pollan isn’t sure how he feels about this system, since the meat processing company didn’t allow him in the room. This is what is so powerful about Joel Salatin’s open-air processing system, he thinks; anyone is free to watch how their food is being slaughtered.

Pollan muses that human cultures have dealt with the ethical problems of killing animals for thousands of years. Cultural rituals like saying grace and sacrificing an animal to the gods helped people contend with their feelings of shame and guilt. The loss of these rituals in the modern age means that people find themselves “unable to look” at the slaughter rather than confronting it head-on. Pollan thinks that the antidote to this willful blindness is more transparency. He thinks that a truly ethical meat-processing industry would wall their slaughterhouses with glass, giving people the “right to look.” Such scrutiny would shine a light on brutal practices and allow people to eat animals consciously and deliberately, with the respect they deserve.

CHAPTER 18: HUNTING: THE MEAT

1. *A Walk in the Woods*. When Pollan goes hunting, he feels an intense sensitivity to his environment as he looks for the signs of pigs that Angelo told him about. He notices that, in approaching his dinner, the predator becomes just as alert as the prey, just as in tune with his animal instincts. Angelo explains that there are two ways of thinking about the landscape: the hunter’s mental map of where he or she has found food before, and the pig’s map of the best places to eat and sleep. The hunter’s aim is to find an overlap between those maps, so that the encounter can take place. Pollan admits that he enjoyed shooting a pig more than he ever thought he would. He had always looked with contempt on the “hunter porn” of writers who indulged in the “macho conceit” of the solitary male hunter, but there was an element of enjoyment in hunting that surprised him.

Pollan wants to believe that the slaughterhouse operation where steer number 534 will die is run on ethical principles. However, he admits that it is impossible to prove this for sure, because the meat industry is notoriously secretive and un-transparent to the public. By contrast, Joel’s farm offers a model of a slaughterhouse that is entirely open about its methods. It does not obscure the connections between meat and the animal that died to produce that meat; instead, the death of that animal is as scrupulously handled as its life.



Pollan marvels at just how far human culture has come from the original practices of hunting and gathering. Instead of established cultural rituals around the deliberate and conscious killing of animals, people today eat meat mindlessly, without thinking about the origins of their food at all. He thinks that the answer is not to stop eating meat, but to eat meat more consciously and conscientiously, acknowledging people’s gratitude to the animal that has sacrificed to make a meal.



Pollan had been skeptical of people who praise the pleasures of hunting, but he admits that something about the experience tapped into his primitive instincts. For him, the pleasures of hunting were linked to the way it put him in touch with the prehistoric past—by sharpening his mental instincts and physical senses, which became more attuned to the world around him. In this sense, he feels more attuned to the skills that were so important to his hunter-gatherer ancestors but have been somewhat neglected in the modern world.



2. *A Cannabinoid Moment.* Pollan decides to hunt a wild boar, ostensibly because these pigs are regarded as pests that disrupt the local ecosystem—so he felt that there was an environmental benefit to hunting them. But he also admits that he enjoys pork and wanted to try the taste of wild prosciutto. Angelo says that he also hunts for the pleasure of eating, never hunting more than can feed him and his friends. On the day of the hunt, Pollan is nervous, since his experiences on the rifle shooting range had been less than successful. Angelo finds a spot near a tree and instructs Pollan to wait.

As he waits for a pig to approach, Pollan finds himself in a state of heightened awareness of his surroundings. His lack of consciousness of the passage of time reminds him of the experience of smoking marijuana, and he notes that cannabinoids (the compounds active in both marijuana) are also present in the human brain in moments of intense concentration like hunting. He suggests that his “cannabinoid moment” while hunting is an example of an evolutionary adaptation designed to help hunters lose awareness of their bodies and focus on the task at hand.

3. *Ready. Or Not.* Pollan, Angelo, and their hunting partners sit down for a delicious lunch. Pollan gets relaxed and slightly drunk, and consequently, when a group of pigs appears, he hasn't loaded his weapon. Another hunter takes the shot and brings down the pig, but Angelo is disappointed that Pollan had not been prepared. Pollan wonders whether his failure to load the bullet signifies some reluctance on his part to shoot the animal. He accepts meat as a gift from another hunter, but feels slightly degraded by not having shot a pig of his own. He also feels that he has not taken full responsibility for the killing of his dinner, as he had hoped he would, so he asks Angelo for another chance.

4. *My Pig.* On his second outing with Angelo, Pollan manages to shoot a pig. In the moment before he shoots the pig, he feels an intense sense of focus and awareness of his surroundings. Angelo congratulates him on his shot and the meal it will make, but what Pollan sees isn't meat—instead, he sees a “dead wild animal.” At the same time, however, he feels happiness and elation at his accomplishment. The expected feelings of remorse and guilt do not appear; instead, he simply feels pleased with himself.

Pollan claims that there is an environmental benefit to hunting pigs, but once again he admits that he is in fact motivated by more primal impulses—he enjoys the taste of the meat. Similarly, Angelo's hunting practices are driven by the pleasure of eating rather than need (since, after all, today very few people need to hunt and gather in order to survive).



Pollan finds himself more and more persuaded by the idea that hunting brings people back to something fundamental about their cognitive wiring. The experience of hunting puts him back in touch with the prehistoric past, stimulating the brain in ways that show the extent to which humans have evolved for precisely the task of hunting and gathering their food in the wild.



Pollan's reluctance to accept the gift of a pig he hasn't slaughtered himself suggests that the essence of his project is to take personal, direct responsibility for the killing of an animal. He had hoped that hunting would put him back in touch with the natural connection between predator and prey that has been so thoroughly obscured by the industrial food system. This is why it is so important to him that he be the one to slaughter the pig personally.



Pollan is at first surprised by his own lack of guilt and shame at killing the pig. Instead, his feelings of elation and happiness suggest that there might be something fundamentally natural and prehistoric about the urge to hunt meat. Pollan feels more in touch with his hunter-gatherer instincts that modern human society has repressed (or channeled into different kinds of violence).



5. *Making Meat*. When it comes to actually dressing the animal, Pollan's sense of elation fades. He writes that what hunters call dressing is actually an "undressing" of the animal that requires skinning the corpse and taking out the dead pig's organs. Pollan is disgusted by the stench, and is incredulous that Angelo can still be talking about the food they will make: pate, prosciutto, salami. Far from thinking about food, Pollan feels that he might vomit. He wonders why he feels so disgusted by the pig's blood and guts. He remembers Paul Rozin's theory that disgust is one of the ways humans navigate the omnivore's dilemma: people feel disgust at animal matter like feces, vomit, and decaying flesh, which can indeed be harmful to humans. In this sense, disgust is an evolutionary advantage. But Rozin also argues that people feel disgust at animal matter because it reminds them of their "own animal nature"—their vulnerability to similar physical suffering and, ultimately, death.

In light of this bloody and sickening experience, Pollan ponders how he could have felt so happy and triumphant when he shot the pig. The pleasure that hunters feel in killing looks reprehensible in retrospect, and now he feels ashamed. But he also feels that the moral ambivalence of hunting—the way it makes him feel both pleasure and guilt—is more honest than the "mechanical killing" practiced "without emotion" in the industrial slaughterhouse. In this sense, by killing an animal consciously and respectfully, Pollan feels more ethically responsible for his place in the world's ecosystem as a predator.

Pollan's sense of pleasure at the act of hunting and killing an animal is mixed with disgust at the actual process of turning a dead animal into food. He points out that this is a perfectly natural response conditioned by years of evolution—he feels disgusted by decaying flesh because it has not yet become food fit for human consumption. The fact that a pig can be disgusting before it is dressed and edible when it becomes prosciutto demonstrates the extent of human intervention in nature. By cooking food, people have been able to overcome their disgust at eating a dead animal and make eating meat a more pleasurable (and safe) experience.



Taking pleasure in hunting makes Pollan feel guilty, but he also ultimately feels that such pleasure is a better response than the lack of consciousness with which most people eat meat. His emotional reaction at least acknowledges the full extent of his connection with animals and the natural world, whereas slaughterhouse killing is mechanical and impersonal.



CHAPTER 19: GATHERING: THE FUNGI

Pollan reminisces about his love of gardening as a child; gardens always "astonished" him with their ability to produce food in a few short months. He notes, however, that the forager has a very different view of nature than the gardener. The gardener sees an orderly world in which nature can be made to conform to human needs. The forager, on the other hand, must contend with plants, like mushrooms, that deliberately hide from and frustrate the efforts of humans to cultivate them—they can even poison the humans who try to eat them.

1. *Five Chanterelles*. Pollan hunts for mushrooms with Angelo, who knows a good spot in the Bay Area for finding "chanterelles"—a delicacy highly valued by foraging enthusiasts. As when he hunted the boar, Pollan finds his senses heightened by the experience of searching a previously ordinary landscape for small signs of a hidden prey. Angelo teaches him to "put his eyes on," i.e. to see the world more closely and in more detail, as a forager would. After a full day, Pollan finds five large mushrooms that he tastes that night with his family.

Pollan suggests that humans have become comfortable in settings in which nature is accommodated to human preferences—like, for instance, the garden, which is a product of human cultivation. The wild mushrooms in the forest, by contrast, offer a window into a very different world of nature free from human intervention.



Pollan is only able to find the mushrooms after he quite literally adjusts how he sees the world, choosing to approach the forest floor with heightened senses of sight and smell. Such abilities are the product of thousands of years of human evolution, but people today are rarely asked to call upon or develop the skills that hunters and gatherers depended on to survive.



Pollan and his wife Judith recall a time when she found wild mushrooms in Connecticut. They were nervous about whether the mushrooms were poisonous, and so allowed a friend to taste them first—one less than ethical solution to the omnivore’s dilemma, Pollan notes wryly. In the case of the chanterelle, Pollan decides to eat the mushroom and resolve his innate fear of new foods because a trusted authority, Angelo, has assured him that these mushrooms are safe to eat.

2. *Mushrooms are Mysterious.* Pollan is intrigued to learn that scientists know so little about mushrooms and fungi in general, one of the three “kingdoms” (along with plants and animals) on earth. The mushroom is more like an animal than a plant in that it feeds on organic matter rather than photosynthesizing energy from the sun. Mushrooms often grow around trees because they break down the “blanket of organic matter” (i.e. dead leaves) left behind by plants. The association between mushrooms and decay and death may account for their somewhat off-putting reputation, along with the fact that of course many mushrooms are themselves poisonous or contain mind-altering substances. Most strangely of all, mushrooms contain vitamins but very few calories, since they don’t digest energy from the sun, and thus aren’t regarded as an important source of nutrition for humans.

3. *Working the Burn.* Pollan goes hunting for morels (another mushrooms delicacy) with Anthony Tassinello, a foraging enthusiast who is willing to share his “burn” sites. The hunting grounds are referred to in these terms because morels grow in woodland areas after forest fires, which are common in northern California. Tassinello tells Pollan to arrive at six in the morning, and they drive to Eldorado National Forest, where they meet up with Paulie Porcini, a professional mushroom hunter who uses a pseudonym. Although Pollan is struck by the area’s natural beauty, Tassinello and Porcini tell him to keep his eyes on the ground.

To find morels, Pollan relies on the “pop-out effect”—an evolutionary adaptation that allowed ancient human foragers to see what they were looking for in any given field of vision, like the layer of brown on the forest floor. As he searches for the morels, he reflects on the difference between a forest and a garden. A garden has been cultivated for human use, and the plants easily present themselves to the human gaze. In the forest, by contrast, nature is not so hospitable to humans.

Although Pollan is initially apprehensive about eating an unfamiliar food, he is reassured by Angelo’s expertise on poisonous and edible mushrooms. This is another example of the way that human culture and shared knowledge about food helps people navigate the omnivore’s dilemma.



All of Pollan’s food chains thus far have centered on protein derived from the sun—either directly photosynthesized, as in the case of plants, or consumed indirectly by animals. This is one means of efficiently transforming solar energy into protein. Mushrooms, however, are efficient in a very different way. They contain vitamins instead of calories—so while humans can derive valuable nutritional benefits from mushrooms, they don’t provide energy in precisely the same way as, say, steak or salad. Mushrooms thus represent an alternative food chain that offers different efficiencies and uses than traditional sources of protein.



Only by staring at the earth in a different way, at ground level, is Pollan able to see the easily camouflaged morels. This suggests that mushroom hunting requires quite literally seeing the world differently—looking at it through the eyes of a hunter-gatherer, like the prehistoric humans of thousands of years ago. Mushroom hunting turns back the clock on human evolution, peeling back the layers of human culture in order to return to an ancient practice.



One of Pollan’s primary complaints about the modern industrial food complex is that people have come to assume that growing food is easy, and nature should accommodate itself to human needs and preferences. The forest, by contrast, offers an entirely different space—one free from human intervention.



By the end of the day, Pollan, Tassinello, and Porcini have collected sixty pounds of mushrooms, which they will sell to local chefs and restaurants. Pollan explains that morels grow after forest fires to try to spread their organic matter above ground after the tree roots have died. Morels have an important role in regenerating the forest environment after the fire. Flies lay their larvae in the mushrooms, which are then eaten by birds, who spread the mushroom seeds across the floor, stimulating new growth.

Pollan shows that mushrooms are intimately connected to the life cycle of the forest. Although they grow in the wake of a destructive natural event—a forest fire—they also help regenerate the biodiversity of the soil. In this sense, although mushrooms are associated with death, they also produce new life.



CHAPTER 20: THE PERFECT MEAL

Pollan writes that this meal—made entirely of ingredients he had hunted and gathered himself—was “perfect” for him, even if some of the ingredients and seasonings may not have tasted quite so delicious for his guests. He laid several ground rules for himself before beginning: every ingredient must be in season, fresh, and gathered with his own hands. The meal thus felt more “real” to Pollan than anything he had ever eaten before, because he was responsible for every stage of its creation.

Pollan was so scrupulous about the “rules” of this meal—that every ingredient must be hunted and foraged—because the point of the project is to account for the origins of and connections between every ingredient. Pollan wants to take full responsibility for this meal in a way that he can’t for, say, a meal bought in a grocery store.



1. *Planning the Menu.* As he plans the meal, Pollan finds that he has to adjust some of the initial ground rules he had set for himself. He had intended to harvest his own salt from ponds near the San Francisco Bay, but the brine was so inedible that he had to use a store-bought alternative. His “freshly foraged” mushrooms were in fact dried from a previous expedition. And although he had planned to serve a starter of abalone—a large mollusk that grows underneath rocks on the Pacific coast—his expedition in the ocean in a wetsuit was physically punishing and left him with only one abalone, which he ate on his own. He also asked Angelo to bring a pate he had prepared from the liver of Pollan’s pig, violating the rule that everything had to be prepared by Pollan himself.

Pollan approached this meal with high expectations, planning to forage every ingredient—even the salt. In practice, however, he found that he had to make more than a few compromises. Some of his goals were simply unrealistic, like harvesting salt from the Pacific Ocean. At other moments, he found that he in fact needed help from friends and supporters and couldn’t prepare the meal on his own. Pollan’s compromises show that even the most authentic foraged meal must make some concessions to modern life.



As he looks at his final menu, Pollan realizes that his hunted and foraged meal comes largely from the forest—from the boar to the wild mushrooms to even the cherries he picked from local trees. Rather than consuming calories from farm animals, Pollan and his guests will be gaining nourishment from the energy captured by trees. His hunted and foraged meal “reverses the trajectory” of human eating, allowing the forest to feed him once again, as it had early humans in the prehistoric past.

Human intervention has transformed some natural ecosystems beyond recognition, as in the case of agriculture. By feeding himself and his guests entirely from the forest, Pollan calls back to a much earlier moment in human history, when humans relied on hunting and gathering for sustenance.



2. *In the Kitchen.* Pollan begins preparing his meal nearly a week in advance, since he has to gather wild yeast for his homemade sourdough bread. He also goes to visit Angelo and collect his pig, which they trim and dress for prosciutto. Angelo uses some leftover meat to make ragout pasta for their lunch. Although Pollan is initially dismayed by how quickly his pig turned to food, he feels that he has “done well by the pig” by making use of all its meat thoughtfully and feeding it to people who appreciate the food.

By the end of the week, Pollan has collected all his ingredients. He creates a punishing schedule of cooking on the day of his dinner, beginning at 8 AM. As he struggles with various kitchen disasters, he wonders why he is going to such trouble to make a single meal. Ultimately, however, he feels that this is his way of “honoring the things we’re eating” by wasting as little as possible and using as much of the pig or the mushrooms as he can. By cooking, humans transform what could be a fairly brutal and transactional act into a more elevated and “cultivated” experience. For Pollan, thoughtful cooking redeems the “karmic debt” of killing other creatures to gratify human needs.

3. *At the Table.* As his guests sit down to eat, Pollan proposes a toast to the people who helped him learn about foraging in Northern California, mentoring him, giving him advice, and taking him on their own foraging trips. He thinks of offering thanks to the pig and the mushrooms, too, but decides that the meal itself is a “wordless way of saying grace.” Although Pollan has some critiques of his own cooking, the guests enjoy the food and the stories that come with each dish.

For Pollan, this is the perfect meal. He values its “transparency,” the way that he knows the origin of every plant, animal, and fungi he serves at his dinner table. Unlike industrially-produced food, he knows the “true cost” of this meal in terms of the “sacrifice of time and energy and life it had entailed.” The perfect meal, he suggests, is one that leaves no debts to be paid—although he acknowledges that such a meal is unrealistic in everyday life. Still, he thinks that the exercise of preparing and eating such a meal should remind people of the true cost of things they take for granted.

Pollan compares this hunted and foraged meal to the McDonald’s meal he ate with his family. For him, the meals stand at two extremes—one eaten in “perfect knowledge,” and the other eaten in “perfect ignorance.” He thinks that both meals are unrealistic and not suited for everyday eating. Instead, people should strive for more conscious eating that knows “what we’re eating” and “we’re it comes from,” and which acknowledges the place of food and eating within the larger context of human engagements with the world around them.

Pollan’s ethical qualms about killing the pig are eased by the “respectful” use he makes of its body. For him, respect for an animal involves acknowledging the connections between people and the natural world. Meat does not merely come from the grocery store; it involves a real sacrifice on the part of animal.



For Pollan, cooking and dining is not only a pleasurable experience for himself and his guests—it is also an ethical necessity. Because human eating involves the sacrifice of animal life, he thinks people have a responsibility to prepare their food consciously, thoughtfully—and yes, joyfully. By taking the time to savor his food instead of eating it quickly and thoughtlessly, he shows respect for the sacrifice of the animals who die so that humans can enjoy a meal.



Pollan ultimately acknowledges the many compromises that have gone into this meal, which he could have made only with the help of friends and supporters. Compromise isn’t a matter of weakness or lack of ideological rigor; instead, he sees it as a source of strength and adaptability.



Even as he regards this as “the perfect meal,” Pollan acknowledges that it would be unrealistic to expect people to eat such a meal in their everyday life. For better or worse, human culture has moved on from hunting and gathering as a means of feeding people. His willingness to admit the ultimate elusiveness of the dream of a “perfect meal” demonstrates Pollan’s flexibility and willingness to compromise.



For Pollan, the answer to America’s “national eating disorder” is not a return to a primitive state of hunting and gathering, as appealing as such a vision might be. Instead, he calls for more conscious and self-aware eating that acknowledges the sacrifices of animals, the labor and effort that goes into preparing a meal, and the interconnectedness between humans and the natural world.





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