Also by Jonathan Safran Foer

Extremely Loud and Incredibly Close

Everything Is Illuminated
5.

I Am the Last Poultry Farmer

My name is Frank Reese and I'm a poultry farmer. It's what I've given my whole life to. I don't know where that comes from. I went to a little one-room country school. Mother said one of the first things I wrote was a story titled "Me and My Turkeys."

I just always loved the beauty of them, the majesty. I like how they strut. I don't know. I don't know how to explain it. I just love their feather patterns. I've always loved the personality of them. They're so curious, so playful, so friendly and full of life.

I can sit in the house at night, and I can hear them, and I can tell if they're in trouble or not. Having been around turkeys for almost sixty years, I know their vocabulary. I know the sound they make if it's just two turkeys fighting or if there's a possum in the barn. There's the sound they make when they're petrified and the sound they make when they're excited over something new. The mother turkey is amazing to listen to. She has a tremendous vocal range when she's speaking to her babies. And the little babies understand. She can tell them, "Run and jump and hide under me," or "Move from here to here." Turkeys know what's going on and can communicate it—in their world, in their language. I'm not trying to give them human characteristics, 'cause they're not humans; they're turkeys. I'm only telling you what they are.

A lot of people slow down when they pass my farm. Get a lot of schools and churches and 4-H kids. I get kids asking me how a turkey got in my trees or on my roof. I tell 'em, "He flew there!" And they don't believe me! Turkeys used to be raised out on fields like this by the millions in America. This kind of turkey is what everybody had on their farms for hundreds of years, and what everybody ate. And now mine are the only ones left, and I'm the only one doing it this way.

Not a single turkey you can buy in a supermarket could walk normally, much less jump or fly. Did you know that? They can't even have sex. Not the antibiotic-free, or organic, or free-range, or anything. They all have the same foolish genetics, and their bodies won't allow for it anymore. Every turkey sold in every store and served in every restaurant was the product of artificial insemination. If it were only for efficiency, that would be one thing, but these animals literally can't reproduce naturally. Tell me what could be sustainable about that?

These guys here, cold weather, snow, ice—doesn't hurt 'em. With the modern industrial turkey it would be a mess. They couldn't survive. My guys could maneuver through a foot of snow without any trouble. And my turkeys all have their toenails; they all have their wings and beaks—nothing's been cut off; nothing's been destroyed. We don't vaccinate, don't feed antibiotics. No need to. Our birds exercise all day. And because their genes haven't been messed with, they have naturally strong immune systems. We never lose birds. If you can find a healthier flock, anywhere in the world, you take me to it and then I'll believe you. What the industry figured out—and this was the real revolution—is that you don't need healthy animals to make a profit. Sick animals are more profitable. The animals have paid the price for our desire to have everything available at all times for very little money.

We never needed biosecurity before. Look at my farm. Anyone who wants to can visit, and I wouldn't have a second thought about taking my animals to shows and fairs. I always tell people to visit an industrial turkey farm. You may not even have to go into the building. You'll smell it before you get there. But people don't want to hear those things. They don't want to hear that these big turkey factories have incinerators to burn all the turkeys that die every day. They don't care to hear that when the industry
sends turkeys off to be processed, it knows and accepts that it’s gonna lose 10 to 15 percent of them in transport — the DOAs at the plant. You know my DOA rate this Thanksgiving? Zero. But these are just numbers, not anything anyone gets excited about. It’s all about nickels and dimes. So 15 percent of the turkeys suffocate. Throw them in the incinerator.

Why are entire flocks of industrial birds dying at once? And what about the people eating those birds? Just the other day, one of the local pediatricians was telling me he’s seeing all kinds of illnesses that he never used to see. Not only juvenile diabetes, but inflammatory and autoimmune diseases that a lot of the docs don’t even know what to call. And girls are going through puberty much earlier, and kids are allergic to just about everything, and asthma is out of control. Everyone knows it’s our food. We’re messing with the genes of these animals and then feeding them growth hormones and all kinds of drugs that we really don’t know enough about. And then we’re eating them. Kids today are the first generation to grow up on this stuff, and we’re making a science experiment out of them. Isn’t it strange how upset people get about a few dozen baseball players taking growth hormones, when we’re doing what we’re doing to our food animals and feeding them to our children?

People are so removed from food animals now. When I grew up, the animals were taken care of first. You did chores before you ate breakfast. We were told that if we didn’t take care of the animals, we weren’t going to eat. We never went on vacations. Somebody always had to be here. I remember we had day trips, but we always hated them because if we didn’t get home before dark, we knew we’d be out in the pasture trying to get the cows in, and we’d be milking cows in the dark. It had to be done no matter what. If you don’t want that responsibility, don’t become a farmer. Because that’s what it takes to do it right. And if you can’t do it right, don’t do it. It’s that simple. And I’ll tell you another thing: if consumers don’t want to pay the farmer to do it right, they shouldn’t eat meat.

People care about these things. And I don’t mean rich city people.

Most of the folks who buy my turkeys are not rich by any means; they’re struggling on fixed incomes. But they’re willing to pay more for the sake of what they believe in. They’re willing to pay the real price. And to those who say it’s just too much to pay for a turkey, I always say to them, “Don’t eat turkey.” It’s possible you can’t afford to care, but it’s certain you can’t afford not to care.

Everyone’s saying buy fresh, buy local. It’s a sham. It’s all the same kind of bird, and the suffering is in their genes. When the mass-produced turkey of today was designed, they killed thousands of turkeys in their experiments. Should it be shorter legs or shorter keel bone? Should it be like this or like this? In nature, sometimes human babies are born with deformities. But you don’t aim to reproduce that generation after generation. But that’s what they did with turkeys.

Michael Pollan wrote about Polyface Farm in The Omnivore’s Dilemma like it was something great, but that farm is horrible. It’s a joke. Joel Salatin is doing industrial birds. Call him up and ask him. So he puts them on pasture. It makes no difference. It’s like putting a broken-down Honda on the Autobahn and saying it’s a Porsche. KFC chickens are almost always killed in thirty-nine days. They’re babies. That’s how rapidly they’re grown. Salatin’s organic free-range chicken is killed in forty-two days. ‘Cause it’s still the same chicken. It can’t be allowed to live any longer because its genetics are so screwed up. Stop and think about that: a bird that you simply can’t let live out of its adolescence. So maybe he’ll just say he’s doing as much right as he can, but it’s too expensive to raise healthy birds. Well, I’m sorry if I can’t put him on the back and tell him what a good guy he is. These aren’t things, they’re animals, so we shouldn’t be talking about good enough. Either do it right or don’t do it.

I do it right from beginning to end. Most important, I use the old genetics, the birds that were raised a hundred years ago. Do they grow slower? Yes. Do I have to feed them more? Yes. But you look at them and tell me if they’re healthy.
I don’t allow baby turkeys to be shipped through the mail. Lots of people don’t care that half their turkeys are going to die under the stress of going through the mail, or that those that do live are going to be five pounds lighter in the end than those that you give food and water to immediately. But I care. All my animals get as much pasture as they want, and I never mutilate or drug them. I don’t manipulate lighting or starve them to cycle unnaturally. I don’t allow my turkeys to be moved if it’s too cold or too hot. And I have them transported in the night, so they’ll be calmer. I only allow so many turkeys on a truck, even though I could pack many, many more in. My turkeys are always carried upright, never hung by their feet, even if that means it takes much longer. At our processing plant they have to slow everything down. I pay them twice as much to do it half as fast. They have to get the turkeys off the trailers safely. No broken bones and no unnecessary stress. Everything is done by hand and carefully. It’s done right every time. The turkeys are stunned before they’re shackled. Normally they’re hung live and dragged through an electrical bath, but we don’t do that. We do one at a time. It’s a person doing it, handbeld. When they do it one by one, they do it well. My big fear is having live animals put in the boiling water. My sister worked at a large poultry plant. She needed the money. Two weeks, and that was all she could take. This was years and years ago, and she’s still talking about the horrors she saw there.

People care about animals. I believe that. They just don’t want to know or to pay. A fourth of all chickens have stress fractures. It’s wrong. They’re packed body to body, and can’t escape their waste, and never see the sun. Their nails grow around the bars of their cages. It’s wrong. They feel their slaughters. It’s wrong, and people know it’s wrong. They don’t have to be convinced. They just have to act differently. I’m not better than anyone, and I’m not trying to convince people to live by my standards of what’s right. I’m trying to convince them to live by their own.

My mother was part Indian. I still have that thing where the Indians apologize. In the fall, while other people are giving thanks, I find myself apologizing. I hate seeing them on the truck, waiting to be taken to slaughter. They’re looking back at me, saying, “Get me off of here.” Killing is... it’s very... Sometimes I justify it in my mind that I can at least make it as good as possible for the animals in my custody. It’s like... they look at me and I tell them, “Please forgive me.” I can’t help it. I personalize it. Animals are hard. Tonight I’ll go out and make everybody that jumped the fence come back in. These turkeys are used to me, they know me, and when I go out there, they’ll come running, and I’ll open the gate and they’ll come in. But at the same time, I put thousands on trucks and send them off to slaughter.

People focus on that last second of death. I want them to focus on the entire life of the animal. If I had to choose between knowing that my throat was going to be slit at the end, which might last three minutes, but I’ve had to live for six weeks in pain, I’d probably ask for that slit throat six weeks earlier. People only see the killing. They say, “What’s the big deal if the animal can’t walk or move, ‘cause it’s just gonna get killed anyway?” If it was your child, do you want your child to suffer three years, three months, three weeks, three hours, three minutes? A turkey chick isn’t a human baby, but it suffers. I’ve never met anyone in the industry—manager, vet, worker, anyone—who doubts that they feel pain. So how much suffering is acceptable? That’s what’s at the bottom of all of this, and what each person has to ask himself. How much suffering will you tolerate for your food?

My nephew and his wife had a baby, and as soon as it was born they were told it wasn’t going to survive. They’re very religious. They got to hold her for twenty minutes. For twenty minutes she was alive, and in no pain, and she was part of their life. And they said they would never have traded those twenty minutes. They just thanked the Lord and praised him that she was alive, even if it was only twenty minutes. So how you gonna approach that?
infected with two different virus types at the same time, there is a possibility of viruses trading genes. The H1N1 swine flu appears to have resulted from just this. What’s worrisome is that such gene swapping could lead to the creation of a virus that has the virulence of bird flu and the everyone-is-getting-it contagiousness of the common cold.

How did this new landscape of disease come about? To what extent is modern animal agriculture responsible? To answer these questions, we need to know where the birds we eat come from, and why their environments are perfect to make not only the birds, but us, sick.

The Life and Death of a Bird

The second farm I saw with C was set up in a series of twenty sheds, each 45 feet wide by 490 feet long, each holding in the neighborhood of 33,000 birds. I didn’t have a tape measure with me and couldn’t do anything resembling a head count. But I can assert these numbers with confidence because the dimensions are typical in the industry — though some growers are now building larger sheds: up to 60 feet by 504 feet, housing 50,000 or more birds.

It’s hard to get one’s head around the magnitude of 33,000 birds in one room. You don’t have to see it for yourself, or even do the math, to understand that things are packed pretty tight. In its Animal Welfare Guidelines, the National Chicken Council indicates an appropriate stocking density to be eight-tenths of a square foot per bird. That’s what’s considered animal welfare by a “mainstream” organization representing chicken producers, which shows you how thoroughly co-opted ideas about welfare have become — and why you can’t trust labels that come from anywhere but a reliable third-party source.
It's worth pausing on this for a moment. Although many animals live with far less, let's assume the full eight-tenths of a square foot. Try to picture it. (It's unlikely you'll ever get to see the inside of a poultry factory farm in person, but there are plenty of images on the Internet if your imagination needs help.) Find a piece of printer paper and imagine a full-grown bird shaped something like a football with legs standing on it. Imagine 33,000 of these rectangles in a grid. (Broilers are never in cages, and never on multiple levels.) Now enclose the grid with windowless walls and put a ceiling on top. Run in automated (drug-laced) feed, water, heating, and ventilation systems. This is a farm.

Now to the farming.

First, find a chicken that will grow big fast on as little feed as possible. The muscles and fat tissues of the newly engineered broiler birds grow significantly faster than their bones, leading to deformities and disease. Somewhere between 1 and 4 percent of the birds will die writhing in convulsions from sudden death syndrome, a condition virtually unknown outside of factory farms. Another factory-farm-induced condition in which excess fluids fill the body cavity, ascites, kills even more (5 percent of birds globally). Three out of four will have some degree of walking impairment, and common sense suggests they are in chronic pain. One out of four will have such significant trouble walking that there is no question they are in pain.

For your broilers, leave the lights on about twenty-four hours a day for the first week or so of the chicks' lives. This encourages them to eat more. Then turn the lights off a bit, giving them maybe four hours of darkness a day—just enough sleep for them to survive. Of course chickens will go crazy if forced to live in such grossly unnatural conditions for long—the lighting and crowding, the burdens of their grotesque bodies. At least broiler birds are typically slaughtered on the forty-second day of their lives (or increasingly the thirty-ninth), so they haven't yet established social hierarchies to fight over.

 Needless to say, jamming deformed, drugged, overstressed birds together in a filthy, waste-coated room is not very healthy. Beyond deformities, eye damage, blindness, bacterial infections of bones, slipped vertebrae, paralysis, internal bleeding, anemia, slipped tendons, twisted lower legs and necks, respiratory diseases, and weakened immune systems are frequent and long-standing problems on factory farms. Scientific studies and government records suggest that virtually all (upwards of 95 percent of) chickens become infected with E. coli (an indicator of fecal contamination) and between 39 and 75 percent of chickens in retail stores are still infected. Around 8 percent of birds become infected with salmonella (down from several years ago, when at least one in four birds was infected, which still occurs on some farms). Seventy to 90 percent are infected with another potentially deadly pathogen, campylobacter. Chlorine baths are commonly used to remove slime, odor, and bacteria.

Of course, consumers might notice that their chickens don't taste quite right—how good could a drug-stuffed, disease-ridden, shit-contaminated animal possibly taste?—but the birds will be injected (or otherwise pumped up) with "broths" and salty solutions to give them what we have come to think of as the chicken look, smell, and taste. (A recent study by Consumer Reports found that chicken and turkey products, many labeled as natural, "ballooned with 10 to 30 percent of their weight as broth, flavoring, or water.")

The farming done, it's now time for "processing."

First, you'll need to find workers to gather the birds into crates and "hold the line" that will turn the living, whole birds into plastic-wrapped parts. You will have to continuously find the workers, since annual turnover rates typically exceed 100 percent. (The interviews I did suggest turnover rates of around 150 percent.) Illegal
aliens are often preferred, but poor recent immigrants who do not speak English are also desirable employees. By the standards of the international human rights community, the typical working conditions in America’s slaughterhouses constitute human rights violations; for you, they constitute a crucial way to produce cheap meat and feed the world. Pay your workers minimum wage, or near to it, to scoop up the birds—grabbing five in each hand, upside down by the legs—and jam them into transport crates.

If your operation is running at the proper speed—105 chickens crated by a single worker in 3.5 minutes is the expected rate according to several catchers I interviewed—the birds will be handled roughly and, as I was also told, the workers will regularly feel the birds’ bones snapping in their hands. (Approximately 30 percent of all live birds arriving at the slaughterhouse have freshly broken bones as a result of their Frankenstein genetics and rough treatment.) No laws protect the birds, but of course there are laws about how you can treat the workers, and this sort of labor tends to leave people in pain for days afterward; so, again, be sure you hire those who won’t be in a position to complain—people like “Maria,” an employee of one of the largest chicken processors in California, with whom I spent an afternoon. After more than forty years of work, and five surgeries due to work-related injuries, Maria no longer has enough use of her hands to do the dishes. She is in such constant pain that she spends her evenings soaking her arms in ice water, and often can’t fall asleep without pills. She is paid eight dollars an hour, and asked that I not use her real name, for fear of retribution.

Load the crates into trucks. Ignore weather extremes and don’t feed or water the birds, even if the plant is hundreds of miles away. Upon arrival at the plant, have more workers sling the birds, to hang upside down by their ankles in metal shackles, onto a moving conveyor system. More bones will be broken. Often the screaming of the birds and the flapping of their wings will be so loud that workers won’t be able to hear the person next to them on the line. Often the birds will defecate in pain and terror.

The conveyer system drags the birds through an electrified water bath. This most likely paralyzes them but doesn’t render them insensible. Other countries, including many European countries, require (legally, at least) that chickens be rendered unconscious or killed prior to bleeding and scalding. In America, where the USDA’s interpretation of the Humane Methods of Slaughter Act exempts chicken slaughter, the voltage is kept low—about one-tenth the level necessary to render the animals unconscious. After it has traveled through the bath, a paralyzed bird’s eyes might still move. Sometimes the birds will have enough control of their bodies to slowly open their beaks, as though attempting to scream.

The next stop on the line for the immobile-but-conscious bird will be an automated throat slitter. Blood will slowly drain out of the bird, unless the relevant arteries are missed, which happens, according to another worker I spoke with, “all the time.” So you’ll need a few more workers to function as backup slaughterers—“kill men”—who will slit the throats of the birds that the machine misses. Unless they, too, miss the birds, which I was also told happens “all the time.” According to the National Chicken Council—representatives of the industry—about 180 million chickens are improperly slaughtered each year. When asked if these numbers troubled him, Richard L. Lobb, the council’s spokesman, sighed, “The process is over in a matter of minutes.”

I spoke to numerous catchers, live hangers, and kill men who described birds going alive and conscious into the scalding tank. (Government estimates obtained through the Freedom of Information Act suggest that this happens to about four million birds each year.) Since feces on skin and feathers end up in the tanks, the
birds leave filled with pathogens that they have inhaled or absorbed through their skin (the tanks’ heated water helps open the birds’ pores).

After the birds’ heads are pulled off and their feet removed, machines open them with a vertical incision and remove their guts. Contamination often occurs here, as the high-speed machines commonly rip open intestines, releasing feces into the birds’ body cavities. Once upon a time, USDA inspectors had to condemn any bird with such fecal contamination. But about thirty years ago, the poultry industry convinced the USDA to reclassify feces so that it could continue to use these automatic eviscerators. Once a dangerous contaminant, feces are now classified as a “cosmetic blemish.” As a result, inspectors condemn half the number of birds. Perhaps Lobb and the National Chicken Council would simply sigh and say, “People are done consuming the feces in a matter of minutes.”

Next the birds are inspected by a USDA official, whose ostensible function is to keep the consumer safe. The inspector has approximately two seconds to examine each bird inside and out, both the carcass and the organs, for more than a dozen different diseases and suspect abnormalities. He or she looks at about 25,000 birds a day. Journalist Scott Bronstein wrote a remarkable series for the *Atlanta Journal-Constitution* about poultry inspection, which should be required reading for anyone considering eating chicken. He conducted interviews with nearly a hundred USDA poultry inspectors from thirty-seven plants. “Every week,” he reports, “millions of chickens leaking yellow pus, stained by green feces, contaminated by harmful bacteria, or marred by lung and heart infections, cancerous tumors, or skin conditions are shipped for sale to consumers.”

Next the chickens go to a massive refrigerated tank of water, where thousands of birds are communally cooled. Tom Devine, from the Government Accountability Project, has said that the “water in these tanks has been aptly named ‘fecal soup’ for all the filth and bacteria floating around. By immersing clean, healthy birds in the same tank with dirty ones, you’re practically assuring cross-contamination.”

While a significant number of European and Canadian poultry processors employ air-chilling systems, 99 percent of US poultry producers have stayed with water-immersion systems and fought lawsuits from both consumers and the beef industry to continue the outmoded use of water-chilling. It’s not hard to figure out why. Air-chilling reduces the weight of a bird’s carcass, but water-chilling causes a dead bird to soak up water (the same water known as “fecal soup”). One study has shown that simply placing the chicken carcasses in sealed plastic bags during the chilling stage would eliminate cross-contamination. But that would also eliminate an opportunity for the industry to turn wastewater into tens of millions of dollars’ worth of additional weight in poultry products.

Not too long ago there was an 8 percent limit set by the USDA on just how much absorbed liquid one could sell consumers at chicken meat prices before the government took action. When this became public knowledge in the 1990s, there was an understandable outcry. Consumers sued over the practice, which sounded to them not only repulsive, but like adulteration. The courts threw out the 8 percent rule as “arbitrary and capricious.”

Ironically, though, the USDA’s interpretation of the court ruling allowed the chicken industry to do its own research to evaluate what percentage of chicken meat should be composed of fouled, chlorinated water. (This is an all-too-familiar outcome when challenging the agribusiness industry.) After industry consultation, the new law of the land allows slightly more than 11 percent liquid absorption (the exact percentage is indicated in small print on packaging—have a look next time). As soon as the public’s attention moved elsewhere,
the poultry industry turned regulations meant to protect consumers to its own advantage.

US poultry consumers now gift massive poultry producers millions of additional dollars every year as a result of this added liquid. The USDA knows this and defends the practice — after all, the poultry processors are, as so many factory farmers like to say, simply doing their best to “feed the world.” (Or in this case ensure its hydration.)

What I’ve described is not exceptional. It isn’t the result of masochistic workers, defective machinery, or “bad apples.” It is the rule. More than 99 percent of all chickens sold for meat in America live and die like this.

In some ways factory systems may differ considerably, for example in the percentage of birds that are accidentally scalded alive each week during processing or in the amount of fecal soup their bodies absorb. These are differences that matter. In other ways, though, chicken factory farms — well run or poorly run, “cage-free” or not — are basically the same: all birds come from similar Frankenstein-like genetic stock; all are confined; none enjoy the breeze or the warmth of sunlight; none are able to fulfill all (or usually any) of their species-specific behaviors like nesting, perching, exploring their environment, and forming stable social units; illness is always rampant; suffering is always the rule; the animals are always only a unit, a weight; death is invariably cruel. These similarities matter more than the differences.

The vastness of the poultry industry means that if there is anything wrong with the system, there is something terribly wrong in our world. Today six billion chickens are raised in roughly these conditions each year in the European Union, over nine billion in America, and more than seven billion in China. India’s billion-plus population consumes very little chicken per capita, but that still amounts to a couple billion factory-farmed birds annually, and the number of birds they raise is increasing — as in China — at aggressive, globally significant rates (often double the growth of the rapidly expanding US poultry industry). All told, there are fifty billion (and counting) factory-farmed birds worldwide. If India and China eventually start consuming poultry at the rate the United States does, it would more than double this already mind-blowing figure.

Fifty billion. Every year fifty billion birds are made to live and die like this.

It cannot be overstated how revolutionary and relatively new this reality is — the number of factory-farmed birds was zero before Celia Steele’s 1923 experiment. And we’re not just raising chickens differently; we’re eating more chickens: Americans eat 150 times as many chickens as we did only eighty years ago.

Another thing we could say about fifty billion is that it is calculated with the utmost meticulousness. The statisticians who generate the figure nine billion in the United States break it down by month, state, and the birds’ weight, and compare it — each and every month — to the death toll in the same month a year before. These numbers are studied, debated, projected, and practically revered like a cult object by the industry. They are no mere facts, but the announcement of a victory.

**Influence**

Much like the virus it names, the word influenza comes to us by way of a mutation. The word was first used in Italian and originally referred to the influence of the stars — that is, astral or occult