

Vegetarianism

1. Animal Cruelty

Industrial farming is abusive to animals.

Pigs. In America, nine out of ten of pregnant sows live in “gestation crates.” These pens are so small that the pigs can hardly move. When the sows are first crated, they flail around, as if they’re trying to escape from the crate. But soon they give up. The pigs often show signs of depression: they engage in meaningless, repetitive behavior, like chewing the air or biting the bars of the stall. The animals live in these conditions for four months. Gestation crates will be phased out in Europe by the end of 2012, but they will still be used in America.¹

In nature, pigs nurse their young for about thirteen weeks. But in industrial farms, piglets are taken from their mothers after a couple of weeks. Because the piglets are weaned prematurely, they have a strong desire to suck and chew. But the farmers don’t want them sucking and chewing on other pigs’ tails. So the farmers routinely snip off (or “dock”) the tails of *all* their pigs. They do this with a pair of pliers and no anesthetic. However, the whole tail is not removed; a tender stump remains. The point is to render the area sensitive, so the pigs being chewed on will fight back.²

Over 113 million pigs are slaughtered each year in America.³ Typically, these pigs are castrated, their needle teeth are clipped, and one of their ears is notched for identification — all without pain relief.⁴ In nature, pigs spend up to three quarters of their waking hours foraging and exploring their environment.⁵ But in the factory farms, “tens of thousands of hogs spend their entire lives ignorant of earth or straw or sunshine, crowded together beneath a metal roof standing on metal slats suspended over a septic tank.”⁶ Bored, and in constant pain, the pigs must perpetually inhale the fumes of their own waste.

Pigs in the industrial farming system suffer the effects of overcrowding. In 2000, the U.S. Department of Agriculture compared hog farms containing over 10,000 pigs (which is the norm) with farms containing under 2,000 pigs. The larger farms had three times as much mycoplasma pneumonia, six times as much swine influenza, and twenty-nine times as much flu of another strain.⁷ Some of the pigs die prematurely. Others get sick and are euthanized however the farmer

sees fit. “The survivors live just long enough to stumble over the finish line — and onto our dinner plates.”⁸

This is how sausage is made.

Cows. Over 33 million cows are slaughtered each year in America.⁹ These animals are also routinely mutilated without pain relief. American cows are hot-iron branded and castrated¹⁰; their tails are docked¹¹; they are dehorned through sensitive tissue¹²; and their ears are cut for identification.¹³ The weaning process is traumatic for them, as it is for pigs. A calf would normally suckle from its mother for six months,¹⁴ but in factory farms, mother and child are separated almost immediately. Cows separated from their calves will mope and bellow for days.¹⁵ And then, if the calf is male, it might be put into the veal industry, with all its horrors.¹⁶

Cattle feedlots are like pre-modern cities, Michael Pollan writes, “teeming and filthy and stinking, with open sewers, unpaved roads, and choking air rendered visible by dust.”¹⁷ Ellen Ruppel Shell likens the feedlot to “a filth-choked slum.”¹⁸ Feedlot cattle often stand ankle-deep in their own waste¹⁹ and are exposed to the extremes in weather without shade or shelter.²⁰ One study found that cattle lacking shade were four times more aggressive toward other cows than cattle in shade.²¹ This is how feedlot cows live, 24/7.

Poor sanitation and stress make the cows ill. Also, they’re fed grain, which they didn’t evolve to eat.²² Feedlot cows often get acidosis (kind of like heartburn) which can lead to diarrhea, ulcers, bloat, rumenitis, liver disease, and a weakening of the immune system that can lead to pneumonia, coccidiosis, enterotoxemia, and feedlot polio.²³ About one sixth of dairy cows have mastitis, a painful udder infection. Mastitis is exacerbated by bovine somatotrophin injections, which are banned in Europe but are routine in the U.S.²⁴ Between 15% and 30% of feedlot cows develop abscessed livers. In some pens, it’s as high as 70%.²⁵

Sometimes the cows die prematurely. A woman who runs a “dead-stock removal” company in Nebraska said that her company had hauled off 1,250 dead cattle during a recent heat wave and couldn’t handle all the calls it got.²⁶ Cows normally live about twenty years, but the typical dairy cow is considered “spent” around age four.²⁷ Before dying, the cow’s ride to the slaughterhouse may be long, cramped, and stressful. There are, in practice, no legal limits on how long calves can be trucked without food, water or rest.²⁸

Chickens. Chickens in the egg industry are also mutilated: parts of their beaks are severed without pain relief.²⁹ A chicken's beak is rich in nerve endings, so the debeaking causes it severe pain. Why does the farmer do this? Because chickens cannot form a pecking order in the cramped conditions of the industrial chicken house. Thus, bigger chickens may peck smaller ones to death, and the prematurely killed chickens can't be sold on the market. So, the farmer debeaks every bird. One type of cruelty justifies another.

American farmers raise nearly nine billion chickens each year.³⁰ Almost all of the chickens sold in supermarkets—"broilers"—are raised in windowless sheds, each housing 30,000+ birds.³¹ In these sheds, the chickens cannot move around without pushing through other birds. Nor can they stretch their wings or get away from more dominant birds.³² Also, the sheds stink of ammonia.³³ "High ammonia levels give the birds chronic respiratory disease, sores on their feet and hocks, and breast blisters. It makes their eyes water, and when it is really bad, many birds go blind."³⁴ The chickens are bred for unnaturally fast growth, and so they cannot stand for long periods. Some cannot stand at all. Consequently, the chickens spend a lot of time sitting on the excrement-filled litter. One study found that 26% of broilers have chronic pain from bone disease.³⁵ Broilers live for six or seven weeks.³⁶

The egg-laying hens have it even worse. The farmers underfeed the hens because they don't want them to grow rapidly—they want them to lay eggs for as long as possible. On some days, the hens get no food at all.³⁷ Each hen gets less living space than a single sheet of typing paper.³⁸ The hen "spends her brief span of days piled together with a half-dozen other hens in a wire cage ... Every natural instinct of this hen is thwarted, leading to a range of behavioral 'vices' that can include cannibalizing her cage mates and rubbing her breast against the wire mesh until it is completely bald and bleeding."³⁹ Ten percent or so of the birds simply die under these conditions.⁴⁰ Laying hens would normally live for more than five years, but in factory farms they're killed after thirteen months.⁴¹

Temple Grandin, who designs humane slaughterhouses, was horrified to discover that male chicks—which aren't used for food, since they don't grow fast enough—are sometimes thrown in dumpsters.⁴² "Spent" hens might also be tossed in dumpsters, or buried alive, or thrust squirming into wood chippers.⁴³ When the broilers are being rounded up for slaughter, one reporter writes, the catchers "grab birds by their legs, thrusting them like sacks of laundry into the cages, sometimes applying a shove."⁴⁴ And then later, dangling from one leg, "the frightened

birds flap and writhe and often suffer dislocated and broken hips, broken wings, and internal bleeding.”⁴⁵ Even after all that, the stunning system of electrified bath water sometimes fails to knock the birds out. Peter Singer and Jim Mason estimate that around three million chickens per year are still conscious as they’re dropped into tanks of scalding water.⁴⁶

Turkeys. Turkeys are treated like broiler chickens.⁴⁷

Seafood. Every year, human beings eat about 100 million tons of seafood. Americans alone eat around 17 *billion* marine creatures.⁴⁸ Some of these creatures are caught in the ocean and killed. Others are raised in fish farms, which are landlocked ponds or cages in the sea. Today around one-third of the world’s seafood comes from fish farming.⁴⁹

Fish farms are floating factory farms. Like factory farms, they’re extremely crowded. For example, 50,000 salmon may be confined in one cage at a density equivalent to putting each 30-inch fish in a bathtub of water.⁵⁰ Or consider shrimp, America’s favorite seafood since 2001.⁵¹ While traditional shrimp farms yielded less than 450 pounds per acre, the newer, more efficient farms yield as much as 89,000 pounds per acre.⁵²

For salmon, the overcrowding leads to stress, sea lice infestations, abrasions, and a high death rate.⁵³ It also leads to abnormal behavior. Like the tigers that pace around tiny zoo cages, salmon swim in circles around their sea cages. Also, salmon are starved for seven to ten days before slaughter.⁵⁴ Shrimp ponds, meanwhile, are “dangerously overcrowded and indifferently managed, plagued by overfeeding, plankton blooms, and inadequate water circulation.”⁵⁵ Farmed shrimp are highly susceptible to infection, despite being given antibiotics.⁵⁶ Some of these fish die. The fish that survive are killed inhumanely: often, they are simply allowed to suffocate in the air—a process that can take up to fifteen minutes.⁵⁷

Wild-caught fish live better lives. In practice, however, you can’t selectively buy wild-caught fish, because the sellers rarely know what they’re selling. Anyway, wild-caught fish are killed inhumanely, and this provides a strong reason not to eat them. Singer and Mason write:

Each year, hundreds of millions of fish are hooked on longlines—as much as 75 miles of line ... Once hooked, swordfish and yellowfin tuna weighing hundreds of pounds will struggle for hours trying in vain to escape. Then they are hauled in, and as they come up to the boat,

fishers sink pickaxes into their sides to pull them aboard. They are clubbed to death or have their gills cut and bleed to death.⁵⁸

Gill nets are also cruel. Left drifting in the sea, these nets trap the fish. Some fish struggle violently and bleed to death; others remain trapped, perhaps for days, until the boat returns. In bottom trawling, which is environmentally destructive,⁵⁹ a net is dragged along the ocean floor, and caught fish may be dragged along for hours. When the nets are hauled up, fish that live in deep waters “may die from decompression, their swimbladders ruptured, their stomachs forced out of their mouths, and their eyes bulging from their sockets. The remainder will suffocate in the air.”⁶⁰ Some of these fish may be cut up on factory ships while still alive.

Singer and Mason make a strong case that fish feel pain.⁶¹ Immobile bivalves like oysters, clams, mussels and scallops, however, almost certainly don't feel pain.⁶² It is less clear whether crustaceans, such as shrimp, crabs and lobsters, feel pain, although a recent article in *Animal Behaviour* argues that crabs do.⁶³ If these invertebrates *can* feel pain, they must feel a lot of it. We rip the legs off crabs, pile them in buckets for long periods of time, and boil them alive.

That's enough unpleasant detail. I won't describe how calves, geese, and ducks are abused in the production of veal, foie gras, and duck's liver. To focus on those examples would keep the topic at too safe a distance from us, since few of us eat veal, foie gras, or duck's liver. It would also distract from the larger picture. Industrial farming has not “merely” been cruel to hundreds of thousands of ducks, geese and veal calves; it has caused massive pain to *tens of billions* of pigs, cows, chickens, turkeys, shrimp, tuna, and so on.

I will, however, discuss one more type of cruelty, which is not so well known.

Random acts of cruelty are common on industrial farms. Here are some examples.

In 2003, a man who spent years working in an Arkansas slaughterhouse described workers “pulling chickens apart, stomping on them, beating them, running over them on purpose with a fork-lift truck, and even blowing them up with dry ice ‘bombs.’”⁶⁴

In 2004, a video shot by an undercover investigator in West Virginia showed workers slamming live chickens into walls, jumping up and down on them and drop-kicking them like footballs. The investigator saw “‘hundreds’ of acts of cruelty, including workers tearing beaks

off, ripping a bird's head off to write graffiti in blood, spitting tobacco juice into birds' mouths, plucking feathers to 'make it snow,' suffocating a chicken by tying a latex glove over its head, and squeezing birds like water balloons to spread feces over other birds." In one video clip, "workers made a game of throwing chickens against a wall; 114 were thrown in seven minutes. A supervisor walking past the pile of birds on the floor said, 'Hold your fire,' and, once out of the way, told the crew to 'carry on.'"⁶⁵

In 2008, undercover investigators worked for over three months at an Iowa hog farm. They documented workers beating pigs with metal rods and jabbing clothespins into their eyes. As a result, three men got suspended sentences and were ordered to pay small fines. A man who beat a pig on the back at least ten times with a metal gate rod was fined \$625—the maximum allowed under the law.⁶⁶

In 2008, People for the Ethical Treatment of Animals (PETA) secured the conviction of a farm worker in West Virginia who shoved feed down a turkey's throat and maliciously broke another turkey's neck. This man was given a one-year prison sentence, which is the biggest penalty ever given to a farm worker for animal abuse.⁶⁷ PETA's investigator also saw workers shoving excrement into turkeys' mouths, holding turkeys' heads underwater, slamming turkeys' heads against metal scaffolding, and hitting turkeys on the head with pliers and a can of spray paint.⁶⁸

These instances of cruelty are "random" in the sense that the industrial farming system does not intend for them to happen, and any particular act of cruelty cannot be predicted. However, it is predictable that such cruelties will happen under the current system. The examples are not isolated; they arise from the working conditions. Slaughterhouses and factory farms are filthy, smelly, and disgusting. The work is dull, and the pay is terrible. The hours on the job must pass very slowly for the workers. In such circumstances, human beings will do what they can to relieve boredom. And these particular workers are desensitized to animal suffering because the system they work under treats animals like merchandise or chattel. Thus, random acts of cruelty occur often.

Things are getting worse. There is hope: thanks to writers like Jonathan Safran Foer, Laurie Garrett, Jeffrey Masson, Michael Pollan, Eric Schlosser, and Peter Singer, more and more educated people are learning about industrial farming. In the last ten years, the pace of animal

welfare reforms has picked up, even if it's still slow. And according to a 2006 poll, 75% of the public would like to see government mandates for basic animal welfare measures.⁶⁹ The public may someday turn against the meat industry, just as it once turned against the cigarette industry.

However, the sheer sum of suffering is increasing. In 2000, global meat production was 229 million tons. By 2050, it will be around 465 million tons, according to the United Nations.⁷⁰ Meat consumption will rise as world population rises and as places like India and China become wealthier. Not only will the U.S. export more meat, but American companies will open more plants overseas, and businesses new to the industry will copy the American model of production.

Industrial farming is so obviously cruel that industry officials rarely defend it in any detail. Sometimes they issue blanket denials (“our methods are humane”), but usually they say nothing at all. They just want the news stories to die and the checks to keep rolling in.⁷¹ How you view industrial farming is probably how you would have viewed slavery, had you been a white Southern American before the Civil War. Industrial farming, like antebellum slavery, is manifestly immoral, but it's the status quo: it benefits the wealthy, it's entrenched in our economic system, and most people on the street support it. A key question, therefore, is this: do you think for yourself on moral matters, or do you reflexively defend what's normal?

Most of the cruelty in the system occurs in factory farms. Factory farms are not slaughterhouses. Factory farms are where the animals live; slaughterhouses are where they go to die. “Factory farm” is actually a misnomer; a factory farm is not a farm. It's a building, not a plot of land. In industry parlance, factory farms are called “CAFOs” or “Concentrated Animal Feeding Operations.” Joel Salatin, an old-fashioned farmer in Virginia, has a different name for them: “industrial fecal factory concentration camp farms.”⁷²

2. The Argument for Compassionate Eating

We can formulate various arguments against industrial farming. Here is one, which I'll call *The Argument for Compassionate Eating*, or ACE:⁷³

- P1. It is wrong to cause suffering unless there is a good reason to do so.
- P2. Industrial farming causes billions of animals to suffer without good reason.

C1. Therefore, industrial farming is wrong.

C2. Therefore, you shouldn't buy factory-farmed meat.

This is not an argument for vegetarianism; to say you shouldn't buy factory-farmed meat is not to say you shouldn't buy any meat. You might buy humanely raised meat or hunted meat. Moreover, the argument is cast in terms of buying, not eating. Perhaps you shouldn't support the meat industry by buying its products, but if someone else is about to throw food away, you might as well eat it.

As a matter of terminology, a *vegetarian* doesn't eat any meat or seafood; an *ovo-lacto vegetarian* is a vegetarian who eats eggs and dairy; a *pescetarian* eats seafood but no other kind of meat; a *locavore* eats only locally produced food, which might include meat; and a *vegan* consumes no animal products at all. ACE argues for being a "conscientious omnivore," to use Singer and Mason's phrase.⁷⁴ Its mantra is: boycott cruelty.

Unfortunately, cruel companies dominate the market, so ACE has taxing implications: you may eat almost no meat, dairy or seafood sold in restaurants and grocery stores. Don't be fooled by the labels: "humanely raised," "animal care certified," "free range," "cage free," "free running," "naturally raised," "all natural," "natural," "farm fresh," and "wild" are all irrelevant to animal welfare.⁷⁵ They are legally told lies. Nor does "organic" mean much to the animals.⁷⁶ In the 1990s, "Big Organic" out-lobbied the animal welfarists, and so the big companies determined what the "organic" label means in America.⁷⁷ Food labeled "organic" is better for the environment and better for human health,⁷⁸ and it probably tastes better,⁷⁹ but that's all.

How might ACE be criticized? The first premise—it is wrong to cause suffering unless there is a good reason to do so—is very modest. *Suffering*, by its nature, is awful, and so one needs an excellent reason to cause it. Occasionally, one will have such a reason. Surgery may cause a human being severe post-operative pain, but the surgeon may be right to operate if that's the only way to save the patient.

And what if the sufferer is not a human, but an animal? This doesn't matter. The underlying principle is that *suffering is bad because of what it's like for the sufferer*. Whether the sufferer is a person or a pig or a chicken is irrelevant, just as it's irrelevant whether the sufferer is white or black or brown. The question is merely how awful the suffering is to the individual.⁸⁰

Thus, the premise simply states, “it is wrong to cause suffering unless there is a good reason to do so.”

The second premise—industrial farming causes billions of animals to suffer without good reason—is equally secure. Above, I described how billions of animals suffer in the industrial food system. What “good reason” could there be for all that pain? The pleasure we get from eating meat is not good enough, especially since we can enjoy eating other things.

Most of the objections one hears to arguments like ACE are intellectually pathetic—either they’re irrelevant or they admit of multiple, obvious refutations. Here are some typical exchanges. Objection: Wouldn’t life in the wild be worse for these creatures?⁸¹ Reply: No, it wouldn’t. Anyway, how is this relevant to the argument? Objection: Why should we treat animals any better than they treat each other?⁸² Reply: You assume that we should look to animals for moral guidance, but we shouldn’t. Anyway, we treat animals much worse than they treat each other. Objection: Animals on factory farms have never known any other life.⁸³ Reply: But they can still suffer. Similarly, it is wrong for parents to abuse their children, even if their children have never known any other life. Objection: Animals are dumb. Reply: Intelligence is irrelevant. Albert Einstein didn’t have the right to torture people with low I.Q.s. Objection: The world is full of problems, and surely solving human problems must come first.⁸⁴ Reply: A problem this big can’t wait. Anyway, industrial farming is bad for people, as I’ll explain below. Oh, and by the way, how would not eating meat prevent me from solving human problems?! Objection: We have no duties toward animals because they can’t have duties toward us.⁸⁵ Reply: Human infants and the severely disabled can’t have duties toward us, yet we shouldn’t abuse them. Nor should we abuse animals. And the reason, in each case, is the same: human infants, the severely disabled, and nonhuman animals are all capable of experiencing suffering.

Singer and Mason say that the best defense of eating meat is that, without the food industry, these animals wouldn’t exist, so at least now they have lives.⁸⁶ But this defense is as bad as the others. It would be *much* better if these animals had never existed, given how horribly they suffer. Each life in the industrial farming system has a high negative utility.

Resistance to arguments like ACE usually stems from emotion, not reason. When you describe factory farming to meat eaters, they feel attacked. Moreover, they want to justify their next hamburger. Thus they advance whatever justification comes to mind. This is human nature. I heard of one educated person who responded to an ACE-like argument by questioning whether

animals can feel pain—even though we have every behavioral, physiological, and evolutionary reason to believe that they can. This person wasn't uncompassionate; rather, his defenses were up. But, eventually, he was persuaded by the opposing argument. His name is Peter Singer.⁸⁷

The best objection to ACE is to deny the inference from C1 (“industrial farming is wrong”) to C2 (“you shouldn't buy factory-farmed meat”). This inference needs justification; we need some argument to bridge the gap between “it's wrong” and “don't support it.” One may doubt, in this case, whether any argument could succeed. After all, industrial farming is controlled by giant, multi-billion-dollar corporations that make decisions based on the bottom line, and one person's eating habits won't affect the balance sheet in any significant way. In short, the objection says, *my actions won't make a difference, so I might as well enjoy my meat and hope that someday the government will force agribusiness to change.*

This is not just a challenge to ACE. It's more general: “Why should I participate in *any* group project, when my participation is unlikely to matter but has costs for me? Why recycle? Why vote? Why write letters for Amnesty International? Why boycott products made from slave labor? Why drive a hybrid car? Even if I believe in the causes—renewing resources, electing good public officials, freeing political prisoners, combating slavery, and protecting the environment—why should I participate, when I won't affect the outcome, and I don't want to participate?” This is the best defense of laziness, apathy, and selfishness.

There are three plausible ways to try to bridge the gap.

First, you might say: “It doesn't matter whether I'll make a difference. *I shouldn't participate in a morally corrupt enterprise, regardless of the cost-benefit analysis of my participation.* If I ate meat, I'd be benefiting from the cruelty of factory farming. I'd have dirty hands. So, I shouldn't do it.” If this line of thought sounds too high-minded, consider a different example. Suppose that someone you know—a charming but sketchy character—has just mugged an old woman for \$200. Now he wants to treat you to dinner. Should you accept? Why not have a good meal before calling the cops?⁸⁸ Common sense says, “Don't do it. Don't become a part of the mugging, even after the fact.” These two examples are essentially the same. In each, you take a “principled stand”: you simply refuse to benefit from evil. To enjoy industrial meat or the spoils of a mugging would compromise your moral integrity; it would stain your soul.

As a utilitarian, I reject this way of filling in the argument. I don't believe that it's *intrinsically* good to opt out of immoral enterprises; I would assess my participation based on its

probable effects. However, I do admire the desire to disassociate one's self from evil unconditionally. People who take a principled stand against industrial farming set a good and unambiguous example to their neighbors. Also, their uncompromising attitude makes them especially unlikely to backslide.

Second, you might say, "If nobody bought factory-farmed meat, then there wouldn't be any; industrial farming wouldn't exist. Thus, the group of omnivores is responsible, both causally and morally, for the animals' suffering. Therefore, each member of the group is responsible. If I bought factory-farmed meat, I would join that group, and then I too would be responsible. So, I shouldn't buy factory-farmed meat."⁸⁹ On this view, what matters in assessing your behavior is not just the effects of your particular act, but the effects of *all* the acts of which yours is a part. Consider another example. Suppose a firing squad of twelve expert marksmen shoots and kills a person whom they know to be innocent. Each marksman can truthfully say, "I made no difference. If I hadn't fired my gun, the outcome would've been the same." But surely we can hold *somebody* responsible for the killing. We can look at the entire group and say, "If it weren't for you, that person would still be alive. You are all responsible. Therefore, each of you is responsible."

Again, I find this reasoning plausible, but I reject it. At its core, it errs by treating *group* responsibility as primary and individual responsibility as derivative. If responsibility is a basic moral notion, then it stems from the free, informed choices of individuals, not from the behavior of groups. A group does not make choices, except in the derived sense that its members makes choices. And a group is not morally responsible, except in the derived sense that its members are morally responsible. Personally, I would justify my refusal to be in the firing squad by appealing to the chance, however remote, that others in the group would miss, or would develop cold feet, or would have defective equipment, thus making me the sole cause of the innocent person's death.

I prefer a third way of bridging the gap between "it's wrong" and "you shouldn't support it." On this proposal, I shouldn't support industrial farming because my behavior *might* make a difference: the meat industry might produce less meat next year if I buy less meat this year.⁹⁰ After all, my behavior might determine whether a threshold, or tipping point, of sales is reached, thus prompting a reduction in production.

If this seems too hopeful, consider the logic of the situation. Assume that I normally eat twenty chickens per year, and let's try out different assumptions about how sensitive the meat industry is to changes in demand. Suppose, first, that they are maximally sensitive, or sensitive to differences of one: for every chicken consumed this year, there will be one additional chicken grown next year. If so, then my decision not to eat chicken is fully rational: it is guaranteed to reduce the suffering of twenty chickens at very little cost. Or rather, for economic reasons, other people might eat more chicken if I eat less,⁹¹ so let's say instead that I would reduce the suffering of ten chickens at very little cost. Next, suppose that the meat industry is sensitive only to differences of 10,000: it will increase next year's supply only when the number of chickens consumed this year reaches a multiple of 10,000. So, for example, when the millionth chicken is sold this year, this will ensure greater production next year, because 1,000,000 is a multiple of 10,000. However, the sale of additional chickens won't affect production until one million and ten thousand chickens are sold. Now the question is whether my chicken boycott will determine whether some multiple of 10,000 is reached. If so, then the odds of my boycott mattering are merely 10 in 10,000, or 1 in 1,000. However, when a multiple of 10,000 is reached, the industry will increase production by 10,000. So, I now have a 1 in 1,000 chance of eliminating the suffering of 10,000 chickens, rather than a 1 in 1 chance of eliminating the suffering of 10 chickens. Each action has the same expected utility; both are fully rational. Finally, assume that the industry is sensitive only to multiples of 100,000. Now the odds of my boycott mattering dip down to 10 in 100,000, or 1 in 10,000. However, the payoff would be a world in which 100,000 fewer chickens suffer. Again, my action would be fully rational.⁹²

This analysis is oversimplified. For example, it ignores the possible effects of government subsidies. But the basic idea is compelling: if the odds of success are high, then the payoff is high enough to justify boycotting meat; and if the odds of success are low, then the payoff is proportionally greater, and again the boycott is morally correct. Furthermore, as Alastair Norcross says, "many people who become vegetarians influence others to become vegetarian, who in turn influence others, and so on. It appears, then, that the claim of causal impotence is mere wishful thinking ..."⁹³

Therefore, ACE is sound. You shouldn't buy factory-farmed meat.

3. Industrial Farming Is Awful for People, Too

Many people won't care about ACE, because they don't care about nonhuman animals. However, industrial farming is awful for humans as well.

Infectious Disease. Factory farms breed infectious disease. They house billions of sick animals; the overcrowding ensures wide and rapid transmission; and many diseases can be passed from animals to humans.

Industrial farming is to blame for both the bird flu epidemic and the swine flu pandemic. Bird flu (H5N1) evolved for more than twelve years, mostly on poultry farms.⁹⁴ It has a 63% mortality rate in humans.⁹⁵ A United Nations task force found that one of the root causes of the bird flu epidemic was “farming methods which crowd huge numbers of animals into small spaces.”⁹⁶ In the past five years, there have been around 400 confirmed cases of bird flu.⁹⁷

The swine flu virus (H1N1), despite its name, actually combines genetic material from pigs, birds, and humans. Six of the eight viral gene segments in H1N1 arose from flu strains that have been circulating since 1998. Some scientists believe that parts of the virus can be traced back to an Indiana pig farm in 1987.⁹⁸ In 2005, a worker at a Wisconsin hog farm contracted an early version of H1N1, evidently from the pigs.⁹⁹ According to Dr. Michael Greger of the Humane Society of the United States, “Factory farming and long-distance live animal transport apparently led to the emergence of the ancestors of the current swine flu threat.”¹⁰⁰

Swine flu was first diagnosed in humans in the spring of 2009. Its first-known victim was a boy in Mexico who lived near an American-owned hog farm.¹⁰¹ In the U.S., the virus killed around 10,000 people in its first seven months and caused about 213,000 hospitalizations.¹⁰² Laurie Garrett, the Pulitzer-Prize-winning author of *The Coming Plague*, herself got the swine flu, and she wrote: “This bug is, in virology parlance, a ‘mild flu,’ but only somebody who hasn't been laid low by H1N1 would consider days of semi-delirium, muscle aches, fatigue, nausea, and stomach twisting to be ‘mild.’”¹⁰³ Garrett's description is a sober reminder that not all victims are dead.

In 2003, the American Public Health Association called for a moratorium on factory farming,¹⁰⁴ and in 2005 the United Nations urged that “Governments, local authorities and international agencies need to take a greatly increased role in combating the role of factory-farming” because factory farms provide “ideal conditions for the [influenza] virus to spread and

mutate into a more dangerous form.”¹⁰⁵ These admonitions were ignored. In late 2009, the incidence of flu was higher than at any time since the 1918 Spanish flu epidemic.¹⁰⁶

Industrial farming also promotes *drug-resistant* disease due to its massive use of antibiotics. Doctors know to prescribe antibiotics sparingly, even to sick patients, but on factory farms, antibiotics are put preemptively in the feed. A study in the *New England Journal of Medicine* showed an eightfold increase in antimicrobial resistance from 1992 to 1997, linked to the use of antibiotics in farmed chickens.¹⁰⁷ In the U.S., about three million pounds of antibiotics are given to humans each year, but animals receive many times that amount.¹⁰⁸

Escherichia coli (*E. coli*), which comes mostly from animal manure, is especially worrying.¹⁰⁹ One doctor said, “I’ve had women tell me that *E. coli* is more painful than childbirth.”¹¹⁰ *E. coli* infections cause about 73,000 illnesses in the U.S. each year, leading to over 2,000 hospitalizations and 60 deaths.¹¹¹ The number of beef recalls due to *E. coli* is increasing: from 2004-2006, there were twenty recalls; from 2007-2009, there were at least fifty-two.¹¹²

In one *E. coli* outbreak, in which 940 people got sick, a children’s dance instructor named Stephanie Smith got ill from a grilled hamburger she bought at Sam’s Club. Her diarrhea turned bloody, seizures knocked her unconscious, and doctors put her into a medical coma for nine weeks. Now she’s paralyzed from the waist down. An investigation revealed that Cargill, which supplied the meat, had violated its own safety procedures for controlling *E. coli*. Moreover, Cargill’s own inspectors had lodged complaints about unsanitary conditions at the plant in the weeks before the outbreak. Michael Moss, an investigative reporter for *The New York Times*, found that “Many big slaughterhouses will sell only to grinders who agree not to test their shipments for *E. coli* Slaughterhouses fear that one grinder’s discovery of *E. coli* will set off a recall of ingredients they sold to others.” Hamburgers are more dangerous to eat than they might be, because “a single portion of hamburger meat is often an amalgam of various grades of meat from different parts of cows and even from different slaughterhouses.” Moss concludes, reasonably enough, that “eating ground beef is still a gamble.”¹¹³

When a lot is at stake, it is rational to worry about small chances. Industrial farming might one day cause a pandemic that kills hundreds of millions of people and leads to a massive destabilization of political systems and economics structures. What are the chances that this will happen? It is hard to say, but the risk is too high.

Pollution. Industrial farms do not form closed ecological loops, like traditional farms do.¹¹⁴ Instead, they massively pollute the land, air, and sea. For example, nitrogen and pesticides run off the cornfields that supply the farmers with animal feed¹¹⁵; shrimp farming has ruined more than half a million acres of land, which now lie abandoned¹¹⁶; tractors, trucks and combines spew out exhaust fumes; and wastewater pumped from fish ponds pollutes canals, rivers, and streams with pesticides, antibiotics, and disinfectants.¹¹⁷

Most of the pollution, however, comes from sewage. In America, chickens, turkeys and cows produce over three times more total waste than people,¹¹⁸ and an adult pig produces about four times as much feces as a human.¹¹⁹ Just two feedlots outside of Greeley, Colorado, produce more excrement than the cities of Atlanta, Boston, Denver, and St. Louis combined.¹²⁰ Although human sewage is elaborately treated, animal sewage is not.¹²¹ And the farmers don't know where to put it.

Manure is wet and costly to transport, so it is often sprayed on nearby fields, where it contaminates the air, water, and land.¹²² It stinks, it kills fish and amphibians, and it generates acid rain and sewage runoff. Sometimes the manure is pumped into lagoons. This can lead to heavy metals leaking into the soil, and those metals might eventually wind up in our crops.¹²³ Moreover, the lagoons can suffer catastrophic breaches—as when, in 1995, a breach in North Carolina released twenty-five million gallons of untreated hog waste into the New River.¹²⁴ In 2002, 71% of Nebraska's rivers and streams were too polluted for recreation, aquatic life, agriculture, and drinking.¹²⁵ The problem, of course, is not limited to Nebraska. According to the Environmental Protection Agency, 35,000 miles of American waterways have been contaminated by animal waste.¹²⁶ Worldwide, over a million people get their drinking water from groundwater that is moderately or severely contaminated with pollutants that come mostly from fertilizers and the application of animal waste.¹²⁷

The air pollution from industrial farms contributes heavily to climate change. When people think of global warming, they think of SUVs, but the livestock sector emits more greenhouse gases than the entire transportation sector, mostly due to methane and nitrous oxide emanating from manure. Meat production thus contributes more to global warming than cars, trucks, buses, SUVs, trains, planes, and ships combined.¹²⁸ And as Singer and Mason say, more global warming “will mean more erratic rainfall patterns, with some arid regions turning into

deserts; more forest fires; hurricanes hitting cities that at present are too far from the equator to be affected by them; tropical diseases spreading beyond their present zones; the extinction of species unable to adapt to warmer temperatures; retreating glaciers and melting polar ice caps; and rising sea levels inundating coastal areas.”¹²⁹ The typical American diet generates the equivalent of nearly 1.5 tons more carbon dioxide per person per year than a vegan diet with the same number of calories.¹³⁰

Overconsuming Resources. Industrial farming overconsumes a number of scarce resources. First, it overconsumes fossil fuels.¹³¹ When we eat animals that grazed on pasture, we harvest the free energy of the sun. By contrast, intensively raised animals are fed mostly corn, which requires chemical fertilizers made from oil.¹³² Cattle are especially energy intensive. A typical steer consumes the equivalent of about thirty-five gallons of oil over its lifetime.¹³³ In general, it takes three units of fossil fuel energy to make one unit of food energy in American agriculture. However, it takes *thirty-five* units of fossil fuel energy to get one unit of food energy out of feedlot cattle.¹³⁴ Fossil fuels are also used to transport food long distances. One-fifth of America’s petroleum consumption goes to producing and transporting food, much of it meat.¹³⁵

All this energy is used to shed even more energy: we lose calories by feeding the animals grain and then eating the animals, rather than eating the grain directly. For example, we could get ten times as many calories by eating corn directly than by feeding corn to a steer or chicken and then eating it.¹³⁶ Industrial farming thus overconsumes *food*.

Fishing also overconsumes marine life. First, we overfish. Large-fleet fishing began in the 1950s and has depleted stocks in every ocean.¹³⁷ Second, about 25% of caught fish are “bycatch.” This means that the fisherman doesn’t want them. It also means that, each year, *billions* of fish are killed and not eaten—around twenty-seven million tons of sea creatures.¹³⁸

Because we have overfished the oceans, we now get an increasing amount of our seafood from fish farms. These farms also overconsume resources. Shrimp, for example, is unsustainably produced.¹³⁹ When we intensively farm fish, we feed fish to the fish, and we lose calories in the process. For example, it takes three pounds of wild fish to produce one pound of salmon.¹⁴⁰

Industrial farming overconsumes water, at a time when water shortages are becoming critical worldwide. Industrial farming depletes rivers as well as aquifers: many American rivers are doing badly because so much of their water has been diverted for irrigation.¹⁴¹ The thirstiest

meat is beef. To produce one pound of beef, American farmers use around 1,584 gallons of water—which is actually *less* than the worldwide average for cattle raising.¹⁴² Producing a pound of hamburger takes twelve times as much water as producing a pound of bread, 64 times as much water as producing a pound of potatoes, and 86 times as much water as producing a pound of tomatoes.¹⁴³

Finally, industrial farming overconsumes land: it fells trees and destroys natural grasslands. Forests are razed all over the world in order to grow food to feed factory-farmed animals.¹⁴⁴ Forest destruction reduces biodiversity, contributes to global warming, and harms the animals that live there. Rainforest destruction is especially bad. The Amazon rainforest, say Singer and Mason, “is still being cleared at an annual rate of 25,000 square kilometers, or 6 million acres, to graze cattle and grow soybeans to feed to animals.”¹⁴⁵ In 2004, the clear-cutting of coastal forests for shrimp production in Asia had especially horrible consequences: it contributed significantly to the tsunami that pummeled eleven nations with twenty-foot waves, killing tens of thousands of people in a matter of hours.¹⁴⁶

Harming the Powerless. Industrial farms significantly harm three groups of people who lack the resources to fight back: people who live near the plants, plant workers, and small farmers.

Local residents must cope with the stench. The odors that emanate from industrial farms are incredible. According to Pollan, feedlots create a stink you can smell for more than a mile.¹⁴⁷ Consider some testimonials. A Nebraska resident who lives near a pig farm says that she’s sometimes woken up at night by the odor, which burns her eyes and makes her feel sick. Another Nebraskan said that the stench nauseates her, gives her seven-year-old son diarrhea, and gives her tremendous headaches.¹⁴⁸ Residents in Kentucky complained of “hundreds of thousands of flies and mice” near factory farms. They also complained of gagging, coughing, stomach cramps, diarrhea, nausea, persistent mouth sores, and intestinal parasites.¹⁴⁹ Epidemiological studies suggest that the rancid fumes give local residents asthma as well as neurological maladies such as depression.¹⁵⁰

No fetid, wafting stink would be tolerated in Beverly Hills. But industrial farms occupy rural America, where the residents lack both financial and political power. According to the Pew Commission’s report, when industrial farms replace small, locally owned farms, residents can expect “lower family income, higher poverty rates, lower retail sales, reduced housing quality,

and persistent low wages for farm workers.”¹⁵¹ As mentioned above, over a million people worldwide drink from polluted wells. The Pew report describes how industrial farms damage social capital in rural communities, where “social capital” refers to “mutual trust, reciprocity, and shared norms and identity.”¹⁵² Industrial farming, in short, destroys rural communities.

If the stench emanating from industrial farms is incredible, imagine what it’s like inside the buildings themselves. Jim Mason said that he and his photographer “spent whole days inside egg and hog factories, and afterward the smell would linger for days—even after scrubbing ourselves and our gear.”¹⁵³ As part of his research, Mason got a job squeezing semen out of turkeys and “breaking” the females in order to artificially inseminate them. He describes the breaking as follows: “For ten hours we grabbed and wrestled birds, jerking them upside down, facing their pushed-open assholes, dodging their spurting shit, while breathing air filled with dust and feathers stirred up by panicked birds. Through all that, we received a torrent of verbal abuse from the foreman and others on the crew.” Mason was required to “break” one bird every twelve seconds. It was, he said, “the hardest, fastest, dirtiest, most disgusting, worst-paid work [he] had ever done.”¹⁵⁴ The Pew Commission’s report documents some of the health hazards of industrial farm work: chronic respiratory irritation, bronchitis, nonallergic asthma, increased airway sensitivity, organic dust toxic syndrome (which is nasty), and exposure to harmful gases including hydrogen sulfide, which sometimes kills workers.¹⁵⁵ Small wonder that random acts of cruelty are common in industrial farming.¹⁵⁶

American companies actively recruit undocumented workers. Sometimes they even bus the workers in from Mexico. Undocumented workers make “good employees”: they work for little pay, they don’t become whistle-blowers, and they don’t organize unions. Sometimes the police conduct raids and deport a few of the workers, but the bosses who recruit them never get in trouble.¹⁵⁷ Perhaps this typifies industrial labor relations. On shrimp farms in Thailand—where much of our shrimp comes from—migrant workers from Burma, Cambodia, and Vietnam suffer the abuses of unpaid overtime, child labor, and sexual assault.¹⁵⁸

Small farmers have also been crushed by the weight of corporate interests. Since the early 1970s, farm income in America has steadily declined along with the price of corn.¹⁵⁹ Most small farms have shut down. But these farms haven’t been outcompeted honestly; rather, the big farms have prevailed by externalizing their costs and benefiting from government subsidies.¹⁶⁰

Some small farmers have chosen to work for the big companies as “growers,” which is the industry’s name for factory farm operators. The growers usually regret it. They are, as one put it, “serfs at the mercy of the companies that make a fortune on their backs.”¹⁶¹ The grower has no power in the system. Typically, he signs a contract with a big company that guarantees him a certain amount of income for a certain amount of product. But to run his business, he has to purchase expensive equipment and go into debt. Once he has debt to pay, he must do whatever his bosses say. The grower makes little money, and he owns neither his animals nor the crops that feed them.¹⁶² Worst of all, he cannot look for better bosses the next time around, because “there is often an unwritten rule that one company will not pick up a grower who has worked for another company. So if a grower does not like the contract that Tyson offers, there is nowhere else to go.”¹⁶³

Industrial farming in America also harms farmers abroad. America is the world’s largest exporter of food,¹⁶⁴ and U.S. government subsidies have put many foreign farmers out of business by keeping American prices artificially low.¹⁶⁵ In the documentary *Food, Inc.*, Michael Pollan says that one and a half million Mexican farmers were put out of business by NAFTA. Some of those farmers were among those bussed in from Mexico to work illegally in American farms.¹⁶⁶

Health. Our love of meat is bad for our long-term health; it partly explains why we get the “Western diseases” or “diseases of affluence”: heart disease, obesity, diabetes, and cancer.¹⁶⁷ A 2009 study in the *British Journal of Cancer* finds that vegetarians are 12% less likely than omnivores to develop cancer.¹⁶⁸ A study by the National Institutes of Health, which followed over half a million Americans for more than a decade, found that people who eat the most red meat and processed meat were likely to die sooner, especially from heart disease and cancer, as compared to those who ate much less red and processed meat. The study’s findings suggest that, over the course of a decade, the deaths of one million men and maybe half a million women could be prevented by eating less red meat and processed meat.¹⁶⁹

According to the American Dietetic Association, “appropriately planned vegetarian diets, including total vegetarian or vegan diets, are healthful, nutritionally adequate, and may provide health benefits in the prevention and treatment of certain diseases. Well-planned vegetarian diets are appropriate for individuals during all stages of the life cycle, including pregnancy, lactation,

infancy, childhood, and adolescence, and for athletes. ... The results of an evidence-based review showed that a vegetarian diet is associated with a lower risk of death from ischemic heart disease. Vegetarians also appear to have lower low-density lipoprotein cholesterol levels, lower blood pressure, and lower rates of hypertension and type 2 diabetes than nonvegetarians. Furthermore, vegetarians tend to have a lower body mass index and lower overall cancer rates.”¹⁷⁰

Those are the facts, taken from the best scientific sources. Claims like, “Milk helps prevent osteoporosis” and “Vegetarians have trouble getting enough iron and protein” are false urban legends, often promoted by the meat industry.¹⁷¹

Industrial Meat Really Isn't Cheap. If you get bird flu, swine flu, or *E. coli*, the meat industry should pay your medical bills. If you die, the meat industry should compensate your family. The government shouldn't pay billions of dollars to stockpile vaccines for diseases that evolved in factory farms; the meat industry should do that. Nor should taxpayers foot the bill for crop subsidies. Nor should farmers be allowed to pollute the land, air and sea without paying for the environmental clean-up and health costs. If the food industry did all this—in other words, if it paid its own bills—then industrial meat would be expensive, not cheap.

Sometimes people say things like, “Industrial farming, whatever its drawbacks, at least succeeds in producing cheap meat. And we need cheap meat in order to feed all the hungry people in the world.” This is wrong for three independent reasons: (i) Industrial meat isn't actually cheap; it appears cheap only because its real cost isn't reflected in its price. (ii) The poorest people in the world don't eat factory-farmed meat—it is too expensive for them, even at artificially low prices. (iii) Industrial farming wastes calories. It's cheaper and more efficient to feed the world grain than to feed the world animals that eat grain.

4. The Right-to-Life Argument

In the popular mind, the main moral argument for vegetarianism concerns killing, not suffering. Sometimes animal welfare groups have promoted this misperception—for example, when PETA ran a newspaper ad that called Ronald McDonald “America's #1 Serial Killer” and

showed the clown gleefully wielding a bloody knife, about to kill a chicken.¹⁷² Rhetoric aside, the argument about killing might go like this:

P1. Many nonhuman creatures—such as pigs, chickens and tuna—have a right to life.

C1. So, it is wrong to kill these creatures in order to eat them.

C2. So, we should be vegetarians.

Some people will respond: “Even if animals have a right to life, these animals *wouldn't exist* without our farming practices. Therefore, we may kill them.” This is fallacious. If an individual has a right to life, then killing her is wrong even if we are responsible for her existence. Human parents, for example, may not kill their grown children simply because they're responsible for their existence. After all, grown children have a right to life.

The crucial claim is premise one. *Do* many nonhumans have a right to life? Common sense offers no clear answer; people are ambivalent about killing animals. Many people will say something like this: Is it okay to kill a rat in your house? Sure. Is it okay to kill your pet? No way. Is it okay to kill animals on farms? I guess so, but I wouldn't want to do it myself. (I mean, we've got to eat, right?) Is it okay to hunt deer? Well, that seems kind of mean, but I guess there are a lot of hunters out there.

Here are some facts that might be used to argue that farm animals *do* have a right to life: they have experiences; they have desires; they have cognitive abilities; they can live in social networks; and they can have lives worth living. And here are some facts that might be used to draw the opposite conclusion: animals are dumb; animals don't possess the desire to live, because they have no concept of life and death; animals have short life spans; and animals can enjoy only lower, baser pleasures. No Mozart.

The issue of killing animals is like the abortion issue: it is immensely difficult because it is so hard to say what characteristics confer a right to life on an individual. Pope John Paul II was sure that abortion is wrong, but for those not so sure, he offered this argument: Abortion *might* be murder; so, we shouldn't perform abortions.¹⁷³ This argument will have force so long as the *other* arguments about abortion are considered inconclusive. A similar argument exists for vegetarianism:

P1. Killing animals *might* be murder.

C1. So, killing animals to obtain food is wrong.

C2. So, we should be vegetarians.

Call this, “the Argument from Caution.” It is broader than the Argument for Compassionate Eating. To play it safe, we shouldn’t hunt, nor should we buy meat that was humanely raised and slaughtered.

The Argument from Caution won’t persuade many people, because most people think they *know* whether animals have a right to life. I envy their certainty. The Argument from Caution, I think, is excellent, even if it changes few minds.

5. Why Does This Happen?

It’s hard to believe that all this is true. How could something so bad be the status quo in a free, democratic society? How could it be the status quo in *our* society? Why do we tolerate it? Why do we support it?

Let’s consider, first, how the food system developed. The basic crop is corn. When the Green Revolution began around 1940, farmers could harvest only seventy or eighty bushels of corn per acre. But yields grew, and during the Nixon administration, “the government began supporting corn at the expense of farmers.”¹⁷⁴ Subsidies pushed down prices, and as farmers made less money, they were encouraged to grow more and more of the crop. By 1980, yields were up to 200 bushels per acre.¹⁷⁵ Every American president since Nixon has been in bed with the food industry; the food industry has, in effect, directed American agricultural policy. Today, growing corn is the most efficient way to produce food calories,¹⁷⁶ and American cornfields occupy an area twice the size of New York State.¹⁷⁷

The scientists and engineers who improved corn yields must’ve thought they were saving the world; they must’ve thought they were taking a giant stride towards eliminating human hunger. Instead, their work helped to replace traditional farming with industrial farming. Cows and chickens could now be fed more cheaply with corn than with grass.¹⁷⁸ So, the pastures were turned into cornfields, and the animals were brought inside. Throughout this process, the driving

force in agribusiness was profit; the driving force in Washington was re-election.¹⁷⁹ Both animal interests and long-term human interests were ignored.

It is easy to see how corporate greed and political self-interest can fuel an evil enterprise. But the blame extends far beyond a few dozen individuals. Industrial farming would never have prevailed without massive government subsidies, and the general public is responsible for the governments it elects and re-elects. We're also responsible for not improving our system of government. In America, money dominates politics. Under a better system, politicians could not be bought so easily.

And, of course, most people eat meat. Why haven't more people become vegetarians? Peter Singer has been giving arguments like ACE since 1973.¹⁸⁰ Why haven't Singer and his followers spurred a moral revolution? There are several reasons for this, none of which make human beings sound virtuous.

The main reason is selfishness. People enjoy eating meat. Also, they like the convenience of having meat as an option. So, people eat meat, even if they suspect they shouldn't.

A second reason is ignorance. Many people know nothing about industrial farming, so they eat meat. Some of that ignorance, however, is willful: people don't know because they don't want to know. If you try to tell people about contemporary farming, they will communicate through words or body language that they want you to stop. Selfishness lies behind some ignorance.

Ignorance also plays a subtler role. In general, many people have no idea what to make of unorthodox moral ideas. They don't know what questions to pose; they don't know what objections to offer; they may even have a hard time processing the idea that other people could believe such a thing. What will such people think when someone comes along and makes a bunch of disturbing claims about the meat industry? They might think, "The world is full of crackpots. Here's one of them." Or they might tell themselves: "That sounded convincing. But I'll bet someone on the other side could've sounded just as convincing, making the opposite claims."

Third, the animals we abuse can't help us see the error of our ways. Unlike human slaves, animals don't even have the potential to fight back. They can't hire lawyers; they can't write blogs; they can't organize protest rallies; and they will never engage in civil disobedience.

Fourth, when you urge people not to eat meat, you are, in effect, criticizing them for something they do every day. In *How to Win Friends & Influence People*, Dale Carnegie's first principle of handling people is "Don't criticize, condemn or complain." Carnegie writes, "Criticism is futile because it puts a person on the defensive and usually makes him strive to justify himself. Criticism is dangerous, because it wounds a person's precious pride, hurts his sense of importance, and arouses resentment."¹⁸¹ Carnegie's observations are astute. I would add that some people get defensive about eating meat because they feel guilty.

A fifth reason is the desire to conform. Many people bristle at the idea of giving up meat because it would make them seem different from their neighbors—and not just different, but weird, in a controversial-and-moralistic kind of way. Vegetarianism isn't cool. Americans may pride themselves on individualism, but conformity is the stronger motivator in society. Where I grew up, there was an area of town where "non-conformists" hung out: young people who "dressed different" and "looked different." A friend of mine, surveying the scene, described it aptly: "Let's all be different together." Even non-conformists want to fit in.

A recent study illustrates the idea that conformity matters more to people than morality. Robert Cialdini wanted to know which signs posted in hotel rooms would succeed in persuading guests to reuse towels. The traditional sign says, "Do it for the environment." But a sign which said that most guests had reused their towels was 18% more effective. And a sign which said that most guests *staying in this room* had reused their towels was 33% more effective.¹⁸² "If all your friends are eating meat," said James Rachels, "you are unlikely to be moved by a mere argument."¹⁸³

Finally, many people lack empathy for farm animals. Somehow the pain that farm animals experience doesn't seem real to them. Partly, this is because the animals are out of sight: Just as we don't properly empathize with starving people we don't see, we don't properly empathize with abused animals we don't see. But also, suffering animals might not *look* like they're suffering, at least to people unfamiliar with the type of animal in question. A photograph or video taken inside a chicken house will show the overcrowding, but it might not convey the suffering. Chickens don't cry out or writhe in pain the way that humans do. And most of us cannot discern anything from a chicken's facial expression or posture.

Some people, however, lack empathy for animals simply because *they're just animals*. Perhaps the operative psychological principle is this: the less you seem like me, the less I care

about you. Human beings are especially indifferent to the suffering of fish. Singer and Mason pose an excellent question:

how could people who would be horrified at the idea of slowly suffocating a dog enjoy spending a Sunday afternoon sitting on a riverbank dangling a barbed hook into the water, hoping that a fish will bite and get the barb caught in its mouth—whereupon they will haul the fish out of the water, remove the hook, and allow it to flap around in a box beside them, slowly suffocating to death?

Their answer seems plausible: “Is it because the fish is cold and slimy rather than warm and furry? Or that it cannot bark or scream?”¹⁸⁴ Human beings are land creatures. Thus, we care especially little about sea creatures, who are unlike us in so many ways.

6. Industrial Farming and the Holocaust

When people learn about the abuse of animals in industrial farming, they often think, “that’s awful.” However, they might have the same reaction to countless other things, such as a child getting cancer, or a hurricane destroying a neighborhood, or a person committing suicide. Factory farming is much worse than those things.

When people in our culture think of a moral horror, they think of the Holocaust—the campaign of genocide in which Hitler and his Nazi thugs starved, beat, and ultimately murdered 5.7 million Jews.¹⁸⁵ They do not think of industrial farming. But which has caused more suffering: the Holocaust or industrial farming? In asking this question, I use the word “suffering” in its proper sense: suffering is *extreme* pain, or agony. To compare industrial farming to the Holocaust, let’s consider the number of victims involved in each.

Today around ten billion animals per year are killed in American slaughterhouses,¹⁸⁶ and the vast majority of these animals suffered greatly. Let’s assume, very conservatively, that during the last twenty years, around five billion animals per year have suffered in American factory farms, which amounts to 100 billion suffering animals. And let’s assume that the Holocaust caused suffering to 20 million human beings. This means that, *for every single human being who suffered in the Holocaust, five thousand animals have suffered in American factory farms during*

the last twenty years. And really, this calculation greatly underestimates the ratio. It ignores all the intensively farmed fish; it ignores all the animals that suffered in factory farms but died before slaughter; it ignores all the farm animals that suffered more than twenty years ago; and it ignores all the human victims of industrial farming. Pain calculations are hard to make, but a five-thousand-to-one ratio (or greater) makes this judgment easy: industrial farming has caused *much* more suffering than the Holocaust.

Many people hope that animal pain isn't really so bad. Michael Pollan, for example, thinks that human pain might differ from animal pain "by an order of magnitude." Citing Daniel Dennett, he suggests that we distinguish

pain, which a great many animals obviously experience, and suffering, which depends on a degree of self-consciousness only a handful of animals appear to command. Suffering in this view is not just lots of pain but pain amplified by distinctly human emotions such as regret, self-pity, shame, humiliation, and dread.¹⁸⁷

According to this argument, animals don't really suffer, because their pain isn't amplified by such emotions as regret, self-pity, shame, humiliation, and dread.

This argument, however, is unsound. Imagine that a human being has twisted her ankle and is now on the ground, writhing in agony. She's trapped in a world of pain, waiting for it to end. But she doesn't blame herself for the pain, nor does she fear for her future. Her pain is *not* "amplified by distinctly human emotions such as regret, self-pity, shame, humiliation, and dread." Her pain just hurts like hell. This example proves that pain can be very, very bad even if it's not "amplified by distinctly human emotions." If castrating a pig without anesthesia causes the pig *that* type of pain, then that's enough for my arguments.

That takes care of the substantive issue; the remaining question is whether intense pain deserve the name *suffering*, if it hasn't been amplified by distinctly human emotions. Consider the woman who has twisted her ankle and is racked by pain. Does she suffer? She is certainly in a horrible state, and anyone who could end her pain has a strong moral reason to do so. Given those facts, I would say that she suffers. If someone else wants to use the word 'suffering' differently, so be it. Instead of asking whether industrial farming has caused more suffering than the Holocaust, I can ask whether industrial farming has caused more agony, or more intense pain,

than the Holocaust. And the answer would be the same: industrial farming has caused (at least) five thousand times more agony, or intense pain, than the Holocaust.

But suppose I'm wrong. Suppose that, for whatever reason, human pain is ten times worse than animal pain. On that assumption, factory farming over the last twenty years has still caused pain morally equivalent to five hundred Holocausts. Or suppose there's only a 10% chance that the arguments in this paper are correct. On that assumption, factory farming, again, has had the expected utility of five hundred Holocausts. And if there's only a 10% chance that animal pain is 10% as bad as human pain, then factory farming has had the expected utility of fifty Holocausts (or really more, since I'm ignoring a lot of the suffering caused by industrial farming). The philosophical arguments for vegetarianism are easy. The difficult thing is getting people to stop eating meat.¹⁸⁸

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Selected Bibliography

Articles and Books

—Mylan Engel, Jr., "The Immorality of Eating Animals," in *The Moral Life: An Introductory Reader in Ethics and Literature*, ed. Louis Pojman (New York: Oxford University Press, 2000), pp. 856-890.

—Jonathan Safran Foer, *Eating Animals* (U.S.A.: Little, Brown and Company, 2009)

—Jeffrey Moussaieff Masson, *The Face on Your Plate: The Truth About Food* (New York: W. W. Norton & Company, 2009)

—Alastair Norcross, "Torturing Puppies and Eating Meat: It's All in Good Taste," the *Southwest Philosophy Review*, vol. 20, no. 1 (January 2004), pp. 117-123, reprinted in James Rachels and Stuart Rachels, eds., *The Right Thing to Do*, fifth edition (New York: McGraw-Hill Publishers, 2010), pp. 130-137

- “Putting Meat on the Table: Industrial Farm Animal Production in America,” A Report of the Pew Commission on Industrial Farm Animal Production (2008)
- Michael Pollan, *In Defense of Food* (New York: Penguin Books, 2008)
- Michael Pollan, *The Omnivore’s Dilemma: A Natural History of Four Meals* (U.S.A.: Penguin Books, 2006)
- James Rachels, *Created from Animals: The Moral Implications of Darwinism* (Oxford University Press, 1990)
- Eric Schlosser, *Fast Food Nation: The Dark Side of the All-American Meal* (U.S.A.: Houghton Mifflin Company, 2001)
- Ellen Ruppel Shell, *Cheap: The High Cost of Discount Culture* (New York: The Penguin Press, 2009)
- Peter Singer, *Animal Liberation* (New York: HarperCollins Publishers, 2002; first edition published in 1975)
- Peter Singer and Jim Mason, *The Ethics of What We Eat: Why Our Food Choices Matter* (Rodale: U.S.A., 2006)
- The United Nations Food and Agriculture Organization, “Livestock’s Long Shadow: Environmental Issues and Options” (2006)

Websites and Documentaries

Food, Inc. (2008) A documentary directed by Robert Kenner

Death on a Factory Farm (2009) An HBO documentary directed by Tom Simon and Sarah Teale

<http://www.hfa.org/about/index.html> The website of the Humane Farming Association

<http://www.humanesociety.org/> The website of the Humane Society of the United States

<http://www.peta.org/> The website of People for the Ethical Treatment of Animals

<http://www.ucsusa.org/> The website of the Union of Concerned Scientists

¹ The information in this paragraph comes from Peter Singer and Jim Mason, *The Ethics of What We Eat: Why Our Food Choices Matter* (Rodale: U.S.A., 2006), pp. 46-47. Some states have banned gestation crates.

² The information in this paragraph comes from Michael Pollan, *The Omnivore's Dilemma: A Natural History of Four Meals* (U.S.A.: Penguin Books, 2006), p. 218.

³ According to the U.S. Department of Agriculture, 113.73 million pigs were slaughtered from November 2008 to October 2009. See

<http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1096> (total figure reached by summing the figures for each individual month).

⁴ Singer and Mason, p. 50.

⁵ Singer and Mason, p. 46.

⁶ Pollan, *Omnivore*, p. 218.

⁷ Ellen Ruppel Shell, *Cheap: The High Cost of Discount Culture* (New York: The Penguin Press, 2009), pp. 178-179.

⁸ Shell, p. 179.

⁹ According to the U.S. Department of Agriculture, 33.17 million pigs were slaughtered from November 2008 to October 2009. See

<http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1096> (total figure reached by summing the figures for each individual month).

¹⁰ Pollan, *Omnivore*, p. 69, in reference to steer 534; Singer and Mason, p. 273.

¹¹ David DeGrazia, "Moral Vegetarianism from a Very Broad Basis," *Journal of Moral Philosophy* 6 (2009), pp. 143-165 (see p. 152).

¹² DeGrazia, p. 160; Singer and Mason, p. 273.

¹³ DeGrazia, p. 160.

¹⁴ Singer and Mason, p. 57.

¹⁵ Pollan, *Omnivore*, p. 73; Singer and Mason, pp. 57-58.

¹⁶ Singer and Mason, p. 273.

¹⁷ Pollan, *Omnivore*, p. 72. For a similar account, see Singer and Mason, p. 63.

¹⁸ Shell, p. 178.

¹⁹ Pollan, *Omnivore*, p. 317.

²⁰ Singer and Mason, p. 273.

²¹ Singer and Mason, p. 63.

²² Pollan, *Omnivore*, p. 77.

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- ²³ Pollan, *Omnivore*, p. 78.
- ²⁴ Singer and Mason, p. 57.
- ²⁵ Pollan, *Omnivore*, p. 78.
- ²⁶ Chris Clayton, "More than 1250 Nebraska Cattle Died in Heat Wave," *Omaha World-Herald*, July 27, 2005.
- ²⁷ DeGrazia, p. 152.
- ²⁸ Singer and Mason, p. 273. The U.S. Department of Agriculture agreed to regulate trucking transport in 2006, but as of December 2009, they hadn't yet done so.
- ²⁹ Singer and Mason, p. 37; Pollan, *Omnivore*, p. 318.
- ³⁰ Singer and Mason, p. 24.
- ³¹ Singer and Mason, p. 23.
- ³² Singer and Mason, p. 23.
- ³³ Pollan, *Omnivore*, p. 171.
- ³⁴ Singer and Mason, p. 24. They cite six sources (see p. 304, footnote 13).
- ³⁵ Singer and Mason, p. 24.
- ³⁶ Six weeks: Singer and Mason, p. 25; seven weeks: Pollan, *Omnivore*, p. 172.
- ³⁷ Singer and Mason, p. 25.
- ³⁸ Singer and Mason, p. 37.
- ³⁹ Pollan, *Omnivore*, p. 317.
- ⁴⁰ Pollan, *Omnivore*, p. 318.
- ⁴¹ Singer and Mason, p. 107.
- ⁴² Singer and Mason, p. 40.
- ⁴³ Singer and Mason, p. 106.
- ⁴⁴ Peter S. Goodman, "Eating Chicken Dust," *The Washington Post*, November 28, 1999. The routine rough handling of animals can also be viewed in the documentaries *Our Daily Bread* (2005), *Food, Inc.* (2008), and *Death on a Factory Farm* (2009).
- ⁴⁵ Singer and Mason, p. 25.
- ⁴⁶ Singer and Mason, p. 26.
- ⁴⁷ Singer and Mason, p. 28.

⁴⁸ Singer and Mason, p. 112, using data from fishinghurts.com/fishing101.asp. Singer and Mason arrived at the 17 billion estimate by dividing the total weight of seafood consumed by an estimated average weight per creature.

⁴⁹ Singer and Mason, p. 122.

⁵⁰ Singer and Mason, p. 122.

⁵¹ Shell, p. 173. Shrimp are America's favorite as measured by weight.

⁵² Shell, p. 175.

⁵³ Singer and Mason, p. 129.

⁵⁴ Singer and Mason, p. 129.

⁵⁵ Shell, p. 175.

⁵⁶ Shell, p. 176.

⁵⁷ Singer and Mason, p. 129.

⁵⁸ Singer and Mason, p. 129, p. 132.

⁵⁹ Singer and Mason, pp. 126-127.

⁶⁰ Singer and Mason, p. 132.

⁶¹ Singer and Mason, p. 131.

⁶² Singer and Mason, p. 133, p. 276.

⁶³ Robert W. Elwood and Mirjam Appel, "Pain experience in hermit crabs?" *Animal Behaviour*, volume 77, issue 5, May 2009, pp. 1243-1246.

⁶⁴ Singer and Mason, p. 27.

⁶⁵ Donald G. McNeil Jr., "KFC Supplier Accused of Animal Cruelty," *The New York Times*, July 20, 2004.

⁶⁶ The information in this paragraph comes from a PETA newsletter dated August 24, 2009, and signed by Ingrid E. Newkirk.

⁶⁷ The information up to this point in this paragraph comes from the August 24, 2009 PETA newsletter.

⁶⁸ "Farmhands Convicted in PETA Sting," *PETA's Animal Times* (Summer, 2009), pp. 20-21. See the HBO documentary, *Death on a Factory Farm*, for gratuitous abuse at a hog farm in Ohio.

⁶⁹ The poll is cited in "Putting Meat on the Table: Industrial Farm Animal Production in

America,” A Report of the Pew Commission on Industrial Farm Animal Production (2008), p. 31. According to the report, the poll was conducted by Oklahoma State University and the American Farm Bureau Federation. However, the link they give to the poll is now defunct. The Executive Director of the Pew Commission told me through his assistant that the poll was conducted in 2006.

⁷⁰ The United Nations Food and Agriculture Organization, “Livestock’s Long Shadow: Environmental Issues and Options” (2006), p. xx, at <http://www.fao.org/docrep/010/a0701e/a0701e00.HTM>.

⁷¹ On the meat industry’s tendency to clam up, see, for example, Singer and Mason, p. 10, Michael Moss, “E. Coli Path Shows Flaws in Beef Inspection,” *The New York Times*, October 4, 2009, and *Food, Inc.*

⁷² Pollan, *Omnivore*, p. 241.

⁷³ James Rachels gives essentially the same argument as ACE in both “The Moral Argument for Vegetarianism,” reprinted and revised in James Rachels, *Can Ethics Provide Answers?* (Lanham, MD: Rowman & Littlefield Publishers, 1997), pp. 99-107, and “The Basic Argument for Vegetarianism,” reprinted in James Rachels, *The Legacy of Socrates: Essays in Moral Philosophy*, edited by Stuart Rachels (New York: Columbia University Press, 2007), pp. 3-14.

⁷⁴ Singer and Mason, p. 91.

⁷⁵ Singer and Mason, chs. 3 and 8; Jonathan Safran Foer, “Against Meat: The Fruits of Family Trees,” *The New York Times*, October 7, 2009. See http://www.humanesociety.org/issues/confinement_farm/facts/guide_egg_labels.html for the Humane Society of United States’ “brief guide to labels and animals welfare.”

⁷⁶ Pollan, *Omnivore*, pp. 140 and p. 172; Singer and Mason, ch. 8.

⁷⁷ Pollan, *Omnivore*, pp. 155-157.

⁷⁸ Singer and Mason, pp. 276-277; Pollan, *Omnivore*, pp. 162, 179, 182.

⁷⁹ Pollan, *Omnivore*, p. 176

⁸⁰ I learned this from Peter Singer, “All Animals Are Equal,” ch. 1, *Animal Liberation* (New York: HarperCollins Publishers, 2002; first published in 1975). Or perhaps I learned it from James Rachels, who learned it from Peter Singer.

⁸¹ Pollan, *Omnivore*, p. 310.

⁸² Pollan, *Omnivore*, pp. 309-310. Compare “the Benjamin Franklin defense,” Singer and Mason, pp. 243-244.

⁸³ Pollan, *Omnivore*, p. 310.

⁸⁴ Pollan, *Omnivore*, p. 310.

⁸⁵ Singer and Mason, p. 243.

⁸⁶ Singer and Mason, pp. 248-253.

⁸⁷ Stanley Godlovitch helped persuade Peter Singer to become a vegetarian in Oxford in the early 1970s. Godlovitch told me about Singer’s initial reaction to the argument when Godlovitch and I were both at the University of Colorado at Boulder, during the 1998-1999 academic year.

⁸⁸ Michael Huemer suggested this example to me several years ago.

⁸⁹ Derek Parfit discusses this kind of reasoning in *Reasons and Persons* (Oxford University Press, 1984), p. 70, and in “Comments,” *Ethics*, volume 96, no. 4 (July 1986), pp. 832-872.

⁹⁰ Thus, I disagree with James Rachels, who laments, “It is discouraging to realize that no animals will actually be helped simply by one person ceasing to eat meat. One consumer’s behavior, by itself, cannot have a noticeable impact on an industry as vast as the meat business.” (“The Moral Argument for Vegetarianism,” p. 106)

⁹¹ If one group of consumers exits the market, prices will drop, and then the remaining consumers will buy more.

⁹² I thank Michael Huemer for helping me think through this paragraph.

Both Alastair Norcross and David DeGrazia discuss the expected utility of becoming a vegetarian in terms of how many total new vegetarians, including oneself, there are likely to be. This frames the argument too narrowly. Even if I am sure to be the only vegetarian in the world, my vegetarianism would still be correct because it might result in sales being below a certain threshold. See Norcross, “Torturing Puppies and Eating Meat: It’s All in Good Taste,” the *Southwest Philosophy Review*, vol. 20, no. 1 (January 2004), pp. 117-123, reprinted in James Rachels and Stuart Rachels, eds., *The Right Thing to Do*, fifth edition (New York: McGraw-Hill Publishers, 2010), pp. 130-137 (see pp. 135-136), and DeGrazia, p. 158.

⁹³ Norcross, “Torturing Puppies,” p. 136.

⁹⁴ Laurie Garrett, “The Path of a Pandemic,” *Newsweek*, May 11/May 18, 2009, pp. 22-28 (see p. 26).

⁹⁵ Garrett, "The Path of a Pandemic," p. 26.

⁹⁶ UN News Centre, "UN task forces battle misconceptions of avian flu, mount Indonesian campaign," October 24, 2005, at www.un.org/apps/news/story.asp?NewsID=16342&Cr=bird&Cr1=flu.

⁹⁷ The Centers for Disease Control and Prevention, <http://www.cdc.gov/flu/avian/gen-info/qa.htm> (accessed December 14, 2009).

⁹⁸ Garrett, "The Path of a Pandemic," p. 26.

⁹⁹ Garrett, "The Path of a Pandemic," p. 22.

¹⁰⁰ Michael Greger, M.D., "CDC Confirms Ties to Virus First Discovered in U.S. Pig Factories," August 26, 2009, The Humane Society of the United States website, http://www.hsus.org/farm/news/ournews/swine_flu_virus_origin_1998_042909.html.

¹⁰¹ Garrett, "The Path of a Pandemic," p. 26.

¹⁰² Donald G. McNeil Jr., "Swine Flu Death Toll at 10,000 Since April," *The New York Times*, December 10, 2009.

¹⁰³ Laurie Garrett, "Surviving Swine Flu," *Newsweek*, September 28, 2009.

¹⁰⁴ American Public Health Association, "Precautionary Moratorium on New Concentrated Animal Feed Operations," Policy Number 20037, 11/18/2003, <http://www.apha.org/advocacy/policy/policysearch/default.htm?id=1243>.

¹⁰⁵ UN News Centre, "UN task forces battle misconceptions."

¹⁰⁶ This is according to the director of the National Center for Immunization and Respiratory Disease. See "H1N1 death toll estimated at 3,900 in U.S.," CNN.com, November 12, 2009.

¹⁰⁷ Jonathan Safran Foer, "Eating animals is making us sick," October 28, 2009, in the Opinion section of cnn.com.

¹⁰⁸ Foer, "Eating animals is making us sick."

¹⁰⁹ Though perhaps MRSA is even more worrying. See p. 21 of the Pew Commission report.

¹¹⁰ Moss, "E. Coli Path."

¹¹¹ Mead P.S., Slutsker L., Dietz V., McCaig L.F., Bresee J.S., Shapiro C., Griffin P.M., Tauxe R.V., "Food-related illness and death in the United States," *Emerging Infectious Diseases* 5 (1999), pp. 607-625.

¹¹² William Neuman, “After Delays, Vaccine Is Tested in Battle Against Tainted Beef,” *The New York Times*, December 4, 2009.

¹¹³ The information in this paragraph comes from Moss, “E. Coli Path.” An animal vaccine for *E. coli* is now being tested. (Neuman, “After Delays”)

¹¹⁴ Pollan *Omnivore*, pp. 67-68.

¹¹⁵ Pollan, *Omnivore*, p. 130.

¹¹⁶ Shell, p. 176.

¹¹⁷ Shell, p. 176.

¹¹⁸ Pew Commission report, p. 3, based on figures from the USDA and the EPA.

¹¹⁹ Singer and Mason, p. 43.

¹²⁰ Shell, p. 179.

¹²¹ Singer and Mason, p. 43; Pew Commission report, p. 12.

¹²² Pew Commission report, p. 12.

¹²³ Shell, p. 179.

¹²⁴ *Oceanview Farms v. United States*, 213 F. 3d 632 (2000).

¹²⁵ The Nebraska Department of Environmental Quality, Water Quality Division, 2002 Nebraska Water Quality Report, Lincoln, 2002.

¹²⁶ Elizabeth Kolbert, “Flesh of Your Flesh: Should you eat meat?” *The New Yorker*, November 9, 2009, pp. 74-78 (see p. 76).

¹²⁷ B. T. Nolan and K. J. Hitt, “Vulnerability of shallow groundwater and drinking-water wells to nitrate in the United States,” *Environmental Science & Technology*, 40: 7834-40 (2006), cited on p. 29 of the Pew Commission report.

¹²⁸ “Livestock’s Long Shadow,” p. xxi.

¹²⁹ Singer and Mason, p. 144

¹³⁰ “It’s better to green your diet than your car,” *New Scientist*, Number 17, Issue 2530, December 17, 2005, p. 19, at www.newscientist.com/channel/earth/mg18825304.800.

¹³¹ Pollan, *Omnivore*, p. 7; Singer and Mason, p. 63.

¹³² Singer and Mason, p. 63.

¹³³ This assumes that the cow eats twenty-five pounds of corn per day and weighs 1,200 pounds at slaughter. (Pollan, *Omnivore*, pp. 83-84)

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- ¹³⁴ Pew Commission report, p. 29.
- ¹³⁵ Pollan, *Omnivore*, p. 83 and p. 183.
- ¹³⁶ Pollan, *Omnivore*, p. 118. See Singer and Mason, p. 232, for more information.
- ¹³⁷ Mark Bittman, "Loving Fish, This Time With the Fish in Mind," *The New York Times*, June 10, 2009.
- ¹³⁸ Singer and Mason, p. 112.
- ¹³⁹ Singer and Mason, p. 276.
- ¹⁴⁰ Bittman, "Loving Fish."
- ¹⁴¹ Singer and Mason, p. 234.
- ¹⁴² A. K. Chapagain and A. Y. Hoekstra, *Water Footprints of Nations: Volume 1: Main Report*, Unesco-IHE Institute of Water Education, Delft, November 2004, Table 4.1, p. 41.
- ¹⁴³ Chapagain, *Water Footprints of Nations*, Table 4.2, p. 42. See Singer and Mason, p. 236.
- ¹⁴⁴ Singer and Mason, p. 233.
- ¹⁴⁵ Singer and Mason, p. 233.
- ¹⁴⁶ Shell, p. 176, citing "In the front line: shoreline protection and other ecosystem services from mangroves and choral reefs," *United Nations Environment Programme World Conservation Monitoring Centre*, Cambridge, England, 2006.
- ¹⁴⁷ Pollan, *Omnivore*, pp. 65-66.
- ¹⁴⁸ Singer and Mason, p. 44.
- ¹⁴⁹ Singer and Mason, p. 30.
- ¹⁵⁰ Pew Commission report, p. 17. Also see Shell, p. 179.
- ¹⁵¹ Pew Commission report, p. 49.
- ¹⁵² Pew Commission report, pp. 43-45.
- ¹⁵³ Singer and Mason, p. viii.
- ¹⁵⁴ Singer and Mason, p. 29.
- ¹⁵⁵ Pew Commission report, p. 16.
- ¹⁵⁶ For more on the mistreatment of workers, see Eric Schlosser, *Fast Food Nation: The Dark Side of the All-American Meal* (U.S.A.: Houghton Mifflin Company, 2001), chs. 7 and especially 8.
- ¹⁵⁷ *Food, Inc.*, 51-55 minutes into the movie.

¹⁵⁸ Shell, p. 177.

¹⁵⁹ Pollan, *Omnivore*, p. 53.

¹⁶⁰ American agricultural subsidies benefit big farms, not small farms: Pew Commission report, p. 47.

¹⁶¹ Singer and Mason, p. 33.

¹⁶² Pew Commission report, p. 5.

¹⁶³ Singer and Mason, p. 33. Also see *Food, Inc.*, around the 16 minute mark, and p. 49 of the Pew Commission report.

¹⁶⁴ Shell, p. 171.

¹⁶⁵ Shell, pp. 166-167.

¹⁶⁶ *Food, Inc.*, 51-55 minutes into the movie.

¹⁶⁷ Singer and Mason, p. 245.

¹⁶⁸ T. J. Key, P. N. Appleby, E. A. Spencer, R. C. Travis, N. E. Allen, M. Thorogood and J. I. Mann, "Cancer incidence in British vegetarians," *British Journal of Cancer*, volume 101, issue 1 (2009), pp. 192-197.

¹⁶⁹ The study was directed by Rashmi Sinha and reported in the March 23, 2009 issue of *The Archives of Internal Medicine*. My information comes from Jane E. Brody, "Paying a Price for Loving Red Meat," *The New York Times*, April 28, 2009.

¹⁷⁰ This is from the abstract of "Position of the American Dietetic Association: Vegetarian Diets," *Journal of the American Dietetic Association*, volume 109, issue 7 (July 2009), pp. 1266-1282, http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/advocacy_933_ENU_HTML.htm.

¹⁷¹ Jonathan Safran Foer, "Food industry dictates nutrition policy," October 30, 2009, in the Opinion section of cnn.com, pp. 1-2. On related matters, see Michael Pollan, *In Defense of Food* (New York: Penguin Books, 2008).

¹⁷² This was a full-page ad in "The Reader," a weekly newspaper serving Omaha, Lincoln and Council Bluffs, October 21-27, 1999.

¹⁷³ *Evangelium Vitae*, encyclical letter of John Paul II, March 25, 1995, reprinted in David DeGrazia and Thomas A. Mappes, eds., *Biomedical Ethics*, 6th edition (New York: McGraw-Hill Publishers, 2006) as "The Unspeakable Crime of Abortion," pp. 457-459 (see p. 459).

¹⁷⁴ Pollan, *Omnivore*, p. 48.

¹⁷⁵ Pew Commission report, p. 3.

¹⁷⁶ Pollan, *Omnivore*, p. 54.

¹⁷⁷ Pollan, *Omnivore*, p. 65. Our food system is ecologically precarious because it relies on just a handful of crops. (Pollan, *Omnivore*, p. 47 and elsewhere.)

¹⁷⁸ Pollan, *Omnivore*, p. 39.

¹⁷⁹ Pollan tells of how George McGovern lost his senate seat in a tussle with the food industry. McGovern's story provided a cautionary tale to other politicians: don't mess with agribusiness. (*In Defense of Food*, pp. 22-25)

¹⁸⁰ Peter Singer, "Animal Liberation," *New York Review of Books*, April 5, 1973.

¹⁸¹ Dale Carnegie, *How to Win Friends & Influence People* (New York: Simon & Schuster, Inc., 1981) (originally 1936), p. 5.

¹⁸² I learned about this study from Bonnie Tsui, "Greening With Envy: How Knowing Your Neighbor's Electric Bill Can Help You to Cut Yours," *The Atlantic*, July/August 2009, pp. 24, 26.

¹⁸³ Rachels, "The Basic Argument," p. 7.

¹⁸⁴ Singer and Mason, p. 130.

¹⁸⁵ See the conclusion of Timothy Snyder, *Bloodlands: Europe Between Hitler and Stalin* (New York: Basic, 2010).

¹⁸⁶ Singer and Mason, p. v.

¹⁸⁷ Pollan, *Omnivore*, p. 316.

¹⁸⁸ I thank Michael Huemer for helping me with this paragraphs.