

## Book review

### *Vexing Nature? On the Ethical Case against Agricultural Biotechnology*

By Gary L. Comstock

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Not only does *Vexing Nature?* offer the most complete and philosophically rigorous overview of the arguments for and against agricultural biotechnology currently available, it also lays out some of the considerations underpinning Gary Comstock's views on a number of key issues in agricultural ethics, including the moral standards for evaluating animal agriculture and the case for promoting sustainable agriculture, subsistence agriculture, and the family farm. Since Comstock is without question one of the most important and influential philosophers to have thought deeply about agriculture over the last twenty years, this is an important book for anyone who is interested in the future of agriculture. (It is thus a bit disappointing that the volume has gotten such a shoddy treatment from the publisher: the index cites page references above 300 in a book that numbers only 297. None of the indexed items I consulted have accurate page references.)

*Vexing Nature?* begins with four lengthy chapters that are highly critical of agricultural biotechnology. "The Case against BGH" is a 1988 paper reprinted from *Agriculture and Human Values* and "Against Herbicide Resistance" is a 1990 paper reprinted from the *Journal of Agricultural and Environmental Ethics*. These chapters blend some of the now widely known concerns about the possible impact of these technologies with some general principles of environ-

mental ethics. The third chapter, "Against Transgenic Animals," consolidates arguments that Comstock published in several papers, and presents what I take to be his still current views on the moral standing of animals, and the implication of these views for the moral evaluation of all livestock production systems, without regard to whether the animals are transgenic or not. The fourth chapter, "Against Ag Biotech," also consolidates arguments that he was making in the early to mid 1990s. Comstock began to change his mind during this period, however, and the last two chapters are a systematic rebuttal of many of the key arguments that have been made against agricultural biotechnology, including many of the opinions voiced in the first four chapters of *Vexing Nature?* Hence, the book winds up being one of the most persuasive and thorough defenses of applying new recombinant DNA technologies to improvement of crops, foods, and animals that has ever been published, as well as one of the most unusual academic treatises you are ever likely to read.

Before undertaking a critical discussion of a few of the arguments Comstock has offered in *Vexing Nature?* I want to make it very clear that I am in substantial agreement with Comstock's conclusions on the ethical acceptability and practical utility of biotechnology. In my 1997 book *Food Biotechnology in Ethical Perspective*, I described myself as a "cautious booster" of ag biotech. A certain amount of skepticism and caution continues to be warranted but I now believe that the energy that has been and is still being poured into opposition toward biotechnology is a tragic miscalculation that has diverted our attention from the most ethically and environmentally pressing issues in agricultural policy and practice. However much the products of biotechnology have been oversold, and however badly some of the leading proponents have behaved, I believe that opposition to biotechnology has now reached a point that damages the cause of sustainable agriculture and threatens our ability to make effective critiques of mainstream technology and policy. This makes Comstock's book of great importance.

I also believe that individuals have a moral right to apply their own religious, cultural and even idiosyncratic values in making a decision as to whether they

will eat so-called “GM foods.” Such a right would be the putative basis for policies requiring the labeling of GM foods, and for European resistance to a technology that was being literally forced upon them. This is a point on which Comstock is strangely silent, and the moral standing of consumer values and preferences in a globalizing world is the most important gap in his treatment. However, Comstock is not silent on many of the key issues that arise in the agricultural ethics of biotechnology, and it is more appropriate to take up what he does say, rather than what he does not.

Let us work from back to front. Comstock’s final chapter is a point by point rebuttal of arguments that have been or might be made against agricultural biotechnology on the ground that it could be harmful to food consumers, family farmers, subsistence farmers, scientific research, or to wildlife, livestock and animals used in research. This chapter is quite up to date, including a fine discussion of such recent events as the debate over monarch butterflies and golden rice. In many of these cases, Comstock’s reply to the allegation that biotechnology risks harm is to critique the empirical premises. These critiques are of two general kinds. One focuses on the prediction of harm, either by providing reasons to doubt that alleged harms will occur (as in Comstock’s discussion of the monarchs), or by noting that there may be offsetting benefits that are of greater moral importance (as in his discussion of transgenic animals used in human medical research). The other general critique is to note that broad forces are at work in bringing about harmful events, and that biotechnology cannot plausibly be identified as the dominant or proximal cause when they occur. This second pattern of argument is applied especially convincingly in Comstock’s discussion of bovine growth hormone. He notes that the dislocation of family run dairies that he cited as a reason to oppose BGH in his 1988 article actually occurred before BGH came on the market.

The other “pro-biotech” chapter begins with a discussion of how Comstock came to change his mind, then proceeds to a refutation of 14 arguments against biotech that turn upon the claim that recombinant DNA technology is, in some sense, unnatural. Most of the fourteen refutations are succinct, but the last is an important discussion of agriculture’s place in the environment that goes on for almost twenty pages. Here, Comstock reviews a number of standard positions in environmental ethics. He argues that ecocentric positions in environmental ethics are incompatible not only with ag biotechnology, but with agriculture itself. At this point I usually say, “And so much the worse for environmental ethics,” but Comstock is more patient and gives a detailed

discussion of points on which the most plausible interpretations of noted ecocentric philosophers’ views are contradicted by current ecology. He concludes this section by showing how the ecocentrist environmental ethicist’s views are inconsistent with our considered moral intuitions (and then so much the worse for environmental ethics). I will return to Comstock’s use of intuitions later.

Comstock has changed his view most notably with respect to arguments that bear on the possibility that ag biotech will cause harm to the family farm. Since he made his reputation as the editor of a volume entitled *Is There a Moral Obligation to Save the Family Farm?* and with the concluding essay in that collection, which answered the question in the affirmative, this is an important shift. He has changed his view on two points. One is that he no longer thinks of ag biotech as the signal technology of modern agriculture. The second is that he thinks the decline of family farming worldwide is inevitable. The first point is indicated in discussions such as the one on BGH. The second point is conceded in a remarkably short passage in *Vexing Nature?* Here, he accepts the economic argument that technological changes benefit early adopters, and that late adopters are destined to suffer losses that will drive them from farming altogether. He also accepts an argument offered by Luther Tweeten demonstrating that efficiency enhancing agricultural technologies benefit the poor because a) such technologies reduce the cost of food and b) poor people spend a proportionately larger amount of their income on food. Finally, he confesses that his earlier conception of family farming was naïve, noting that his uncle’s farm is not the “Old McDonald” paradise he had once thought.

Frankly, this seems a rather weak reply to the man who once countered exactly this type of reasoning with the following words:

[O]ur imaginations are powerful things, and stories can change the world. An alternative story that was at once powerful, true and widely accepted could change our agricultural paradigm. . . . Such a story must present an attractive vision of a new agricultural paradigm consisting of diverse small farms owned and operated by well-educated families connected up by computers and satellites in an international market system. (p. 168)

Comstock has apparently abandoned a vision of agricultural ethics committed to the belief that people are living out alternatives to modern agriculture and that “Our challenge is to tell their stories, and to devise public policies to help the stories continue,” (p. 169). This is, in my view, deeply unfortunate. While I believe that it is indeed folly to think that there will

be a reversion of structural changes that took place over the 20th century, I never thought that Comstock was calling for such a reversion in the first place. Rather, I saw him doing ethics in a mode pioneered most recently by people such as Alasdair MacIntyre or Martha Nussbaum, and though it has not been my style, it is an approach I admire deeply.

In place of a philosophical approach that celebrated the power and wisdom of narrative and tradition, Comstock seems to be gravitating toward schools of thought that were very influential in a few analytic philosophy departments during the last quarter of the 20th century. This is most evident in his thinking on the moral standing of animals, and his derivation of prescriptions forbidding any form of livestock production that involves the slaughter of animals. Comstock's view on animals is, to my mind, a puzzling blend of neo-Kantian rights theory, utilitarianism, and appeals to moral intuitions. The rights theory comes up front, as Comstock refers to Tom Regan's *The Case for Animal Rights*, and takes on Regan's staunch opponent R.G. Frey. Yet Comstock doesn't really seem to hold a rights view, as he actually appropriates Regan's discussion of animal interests to assert that animal lives *have value*, as opposed to the assertion that individual animals possess an inviolable subject-of-a-life (Regan's term). Although Comstock once thought (in Chapter 3) that production of transgenic animals was wrong in all cases, he now believes that there are instances in which it is permissible to sacrifice animal lives when animals are used in the important (but inherently speculative) pursuit of medical research.

(Note to Readers: If the following paragraph on analytic philosophy makes no sense to you, count your blessings.) Drawing an analogy to the famous trolley case traditionally used to examine the putative distinction between killing and letting die, Comstock convinces himself that the use of biotechnology to produce transgenic animals has this feature: a medical researcher must choose between sacrificing the right to life of the *determinate* individuals who will be benefited by her research, and the right to life of the animals that will be sacrificed (see p. 271). It is important that these are determinate individuals in order to get the idea that there is a conflict of rights at stake off the ground. According to Comstock, a researcher who decides in favor of the animals has violated the rights of the humans. Clearly *that* won't do, hence Comstock can use some of Regan's theoretical apparatus to support the conclusion that we are morally required to do the research. But note that if Comstock's logic were correct, *anything* that the researcher does instead of doing the research violates the rights of "many determinate individuals." So if

the researcher decides on early retirement, she has, on Comstock's view, caused the avoidable death for "many determinate individuals," in a morally culpable way. Those poor souls among our readers who *do* know the trolley case will recall that walking away *does* lead to the death of determinate individuals in a manner that some philosophers, at least, believe *would* make the agent morally culpable. That is what gives the trolley case its bite. But is a medical researcher who takes early retirement, who quits research to care for her own children, or who opts instead to pursue a career in showbiz *morally culpable* for the deaths of the people whose lives might have been saved by her research? This is (at least) a counter intuitive suggestion, though one can easily imagine a researcher who continues contrary to her personal wishes out of a feeling of duty. The fact that we would regard such a person as morally heroic serves to underscore the sense in which it is implausible to think that determinate individuals could make a rights claim on the researcher. All this goes to show that the analogy to the trolley case fails. It may not be crucial to Comstock's final evaluation of research using transgenic animals, but it does render about six or eight complicated pages of *Vexing Nature?* irrelevant.

Comstock goes into the contorted reasoning discussed above because he is trying to remain true to a rights view. In fact, his conclusions are plausible because his commitment to rights views is pretty superficial. He actually seems to be more interested in the comparative value of benefits and harms, including the loss of life. (Indeed, he should not be so easily convinced by Luther Tweeten, if he actually held a rights view). This allows him to argue that the potential for saving human lives in the future outweighs the value of animal lives, while the value we humans get from raising and consuming animals for meat does not. Such reasoning is not characteristic of a true "animal rights" philosophy. It suggests instead that the term "rights" is being used to indicate a *prima facie* value assessment that might be overturned (or outweighed) by other considerations. This approach is much more characteristic of Peter Singer than of Tom Regan, yet Singer gets little discussion here. Further evidence for the superficiality of Comstock's commitment to rights is found in his refutation of Frey, which turns upon showing that autonomy is not what makes a life valuable. Rather, it is the enjoyment of high quality experiences (those that involve the satisfaction of a future-oriented interest) that makes a life valuable. The idea that lives are valuable is not typically part of the derivation of rights claims. Rights are generally established by showing that the possession of certain capacities grounds a claim upon the actions of others,

that we have duties to respect the exercise of certain capacities in others, whether they choose to exercise them or not.

Not all lives are of equal value by Comstock's quality of life standard, hence we must ask: why doesn't the quality of life I derive from eating meat trump the quality of life that a meat animal foregoes at the moment of slaughter? Comstock's answer to this is, again, more like Singer than Regan. The gustatory pleasure of eating meat is trivial, while the loss of a future life for the animal is not. As I read the argument here, we again get to an intuition. The relative value of these two outcomes is purported to be intuitively clear, and this is a point I will return to in a moment. First, we should note how Comstock draws rather unsystematically from traditions in moral theory that are generally thought of as mutually incompatible philosophical alternatives. He is a rights theorist who stresses the value of lives. He is a moral realist who talks about interest-based preferences. Frankly, I don't find this all that problematic, but that is because I think of moral language and moral concepts as arising from problematic situations that people encounter in real life. In my view, the consistency of our theoretical apparatus should be subservient to our capacity for collaborative problem solving with other people. The idea that we should adopt a consistent theory of morality and then apply it to real life decision making is a philosophical conceit promoted within the school of analytic applied ethics alluded to above. Comstock, on the other hand, would appear to have committed himself to that school, not only in the posture he takes throughout this book, but also in his approach to the Iowa State Bioethics Institutes for which he is justifiably well known. If so, this kind of inconsistency should be embarrassing. If not, it is puzzling why the elaborate theoretical apparatus is introduced in the first place.

I would have fewer complaints with analytic applied ethics if it were clear that rigor and theoretical power were truly being substituted for gut feelings and the implicit commitments we make in using ordinary language, but most of this work begins and ends in appeal to intuitions that are often rather unintuitive, rendering all that effort pretty questionable. Too often these intuitions depend on living the rarified, isolated, and monkish kind of life that is typical of academic philosophers. This is evident, I think, in the way that Comstock sets up the problem of animal ethics from the standpoint of someone deciding whether or not to become a vegetarian. Oh, I can admit that any pleasure I derive from eating meat is pretty trivial, but I do not think that the people who produce, transport, slaughter, and butcher animals are doing so for trivial reasons. In

fact, their lives depend upon it. And while it is true that if none of us ate meat these people would have to find some other livelihood, I find it vulgar, insensitive, and false to suggest that they have dedicated themselves to providing me with trivial sensory pleasures.

Part of the reason Comstock's way of setting up the problem has become so popular is that the question of whether or not to be a vegetarian resonates with the average college undergraduate who has never had to make any hard decisions about how to earn a living. From there, philosophy teachers can tease their students into the philosophy of Mill and Kant, and the pedagogical benefits of the approach make it seem ethically justified. I am a contrarian, I guess, in thinking that a more responsible approach in ethics is to begin by trying to understand the perspective of people in very different walks of life. I believe that we must involve these people in the philosophical diagnosis of why a situation is problematic. If we set up an analysis of the problem in which they cannot see themselves or imagine themselves having a voice, our analysis is wrong. My intuitions tell me that the men and women who find themselves employed in ranching, meatpacking, and other aspects of the livestock industry face much more uncertainty and peril to their livelihood than I do. They work at jobs that are descended from practices of animal husbandry that were effective (and morally acceptable) survival and reproduction strategies for human and animal alike. What is morally unacceptable about that industry today has to do with the way that technology and profit seeking have conspired to create circumstances that are intolerable to the humans and animals who are involved in it. Ironically, one of the greatest barriers to reform in the livestock industry is the perception held by many producers that those who call for reform are dedicated to ending their way of life altogether.

Comstock and I have some disagreements on animal ethics that we will undoubtedly be hashing out over the coming years. I have certainly not offered an adequate refutation of his views in this review. When someone looks at a plate of ribs and asks, "Am I morally permitted to partake?" there are any number of personal experiences, moral ruminations, and articles of faith that one may legitimately apply. I would argue strongly for each individual's right to follow their own lights in making that choice. The bullies and rubes in ag science departments who mock vegetarianism need to show some respect for those who select the vegetarian option, as Comstock himself needs to show a bit more respect for those who choose "no-biotech." But I think that the perspective of the disarticulated food consumer who knows nothing about where food

comes from in either a biological or historical sense should not come to be equated with “the moral point of view.” Here agricultural ethics conceived as a scholarly activity grounded as much in history and narrative as in analytic meta-theory could prove a useful antidote. While *Vexing Nature?* is a vital and important document in the philosophy of agriculture, here is my hope that Comstock has not quit the terrain of history and literature forever.

*Editor's note*

Kluwer Academic Publishers have now issued a corrected version of the index to *Vexing Nature?* Kluwer are sending a copy of the new index with each purchase of the book, and they will send one to anyone who purchased a copy before the new index was available.

