

Ecological Morality: A New Ethic for Agriculture

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Frederick Kirschenmann, Director, Leopold Center, Iowa State University

The astonishing thing about our deepened [scientific] understanding of reality over the last four or five decades is the degree to which it confirms and reinforces so many of the older insights of humanity. The philosophers told us we were one, part of a greater unity that transcends our local drives and needs. They told us that all living things are held together in a most intricate web of inter-dependence. . . . These were, if you like, intuitions drawn in the main from the study of human societies and behavior. What we now learn is that they are factual descriptions of the way in which our universe actually works.

--Rene Dubos and Barbara Ward

That we failed to learn from them [Native Americans] how to live in this land is a stupidity . . . they had a responsible sense of living within the creation---which is to say that they had, among much else, an ecological morality . . .

--Wendell Berry

Had they [European immigrants] been other than they were, they might have written a new mythology here. As it was they took inventory . . .

--Frederick Turner

History presents us with a curious paradox concerning ethics in agriculture. On one hand, philosophers, sages and shamans, have promoted the idea that humans are part of a web of life on which our survival absolutely depends and which we ignore at our peril. On the other hand, human actions have, more often than not, contradicted that wise advice. Certainly the “failures are more numerous than the successes, as told by the ruins and wrecks . . .” (Lowdermilk, 1953). The unraveling of that mysterious contradiction has, of course, preoccupied philosophers and theologians for millennia.

Any effort to formulate an appropriate ethic for agriculture will need to recognize the complexity of this fundamental human paradox. While this paper does not finally unveil the core mystery of the paradox, it does attempt to recognize and honor it. Any attempt to propose an ethical blueprint for agriculture that does not take into consideration this fundamental paradox will, at best, be an abstraction that will have little to contribute to the real world of farming.

It is important to acknowledge that the culture that informed our farming practices for most of agriculture’s 12,000-year history was wedded to a story of the universe that no longer holds true. For most of human civilization, nature was perceived as a given. It

was assumed that stars and trees, animals and plants, mountains and lakes, birds and worms had always been there and would always continue to be there. It was a story of stability, of permanence, of firmness—it was the story by which we lived in the world. While we now know that such a view of the world is patently false, we still farm largely in accordance with its cultural baggage. Most farmers still believe that nature is essentially permanent and stable and they even view changes in weather patterns as temporary abnormalities (Schneider, 1976).

Modern science evolved in that same context and became a second cultural force that shaped agriculture. Scientists saw nature as a collection of raw materials that were part of a mechanistic world available to be shaped into a permanent habitat suitable solely for humans. Following that line of thought, it was presumed that nature could be controlled by humans. For the Puritans, it was all part of “taming the wilderness” and building a “Kingdom of God.” For Francis Bacon, it raised the prospect of “bending nature to our will.” As science developed ever more powerful technologies, it seemed more feasible to manufacture an entire food production system completely under human control—food produced entirely by human wit.

In the latter part of the 20th century, the culture of agriculture was shaped by a third force; a money-based economy. The emergence of this exclusive money-based, laissez-faire, libertarian economic theory, and subsequent economic practices, led to a conviction in agriculture, as well as in all other human enterprises, that the market always knows best and that price alone captures appropriate value. Consequently, it led to the notion that “what is not reflected in the price system does not exist” (Kuttner, 1997). Accordingly, anything that does not capture value in the marketplace is “externalized.” On the farm that translated into a culture of agriculture that ignored soil loss, water pollution, loss of biodiversity, decaying rural communities, and anything else that didn’t directly affect the bottom line.

It is true that a long procession of philosophers, shamans and sages recognized the interdependence of all species. They urged humans to stand in humble awe of the intricate inter-relational character of all of life (in other words, to adopt an ecological morality). Yet, from the beginning, cultural forces led to very different behavior. A few cultures (mostly aboriginal) intuitively ascertained the more complex, inter-relational character of the world—a view now corroborated by evolutionary biology. But for the most part, humans acted solely to secure their own survival. Consequently, humans became a “patch disturber” species who hunted out or farmed out their neighborhoods and then moved on (Rees, 1999).

It is important to recognize here, however, that humans are not the only species to modify their environment. In an effort to secure their own survival, all organisms modify their environment, and in doing so actually *create* the environment. Were it not for organisms constructing their own environment out of the bits and pieces available to them, there would be no environment. But the way each species modifies its environment both destroys part of the environment and creates opportunities for other species in its ecological neighborhood. Each organism uses resources that are in short supply and transforms them into a form that cannot be used again by individuals of the same species, but does become a resource for other species. Each species, in other words, is destroying

part of its environment, and in the process of doing so serves up resources for other species. The majority of the waste created by one species becomes food for another—hence the cyclical, the communal, the ecological, character of the planet (Lewontin, 1998).

It is this discovery of the communal, dynamic nature of the planet that has created the need for a new agricultural ethic. In the old universe story, nature was a collection of stable objects that could be transformed into a permanent habitat for the sole benefit of humans, controlled solely by human-created technologies. This inspired an agricultural ethic that concentrated on just one imperative---to produce as much as possible, regardless of the cost (Thompson, 1995). This *productionist* ethic implies that any behavior is “good” so long as it increases productivity.

That ethic is now bankrupt. It utterly fails to develop an agriculture that does not degrade the very ecological and social communities on which agriculture depends. But so long as we are in the grip of a cultural vortex that:

- views nature as a static, mechanistic structure which can be controlled with technology,
- assumes nature is stable and therefore largely immune to harm, and
- operates by an economy that is solely price determined, we are not likely to abandon our productionist ethic.

At the same time our predominant *environmental* ethic, which seeks to “save” the environment, or to keep things as they are, or to maintain some kind of presumed “harmony” in nature, also is bankrupt. Nature, we now understand, is a complex and dynamic community that is in a constant state of change. Ninety-nine percent of all the species that ever existed on this planet are now extinct. And in the evolutionary journey ahead, many more species, very likely including our own, also will become extinct. While human activity, driven by a productionist ethic, is largely to blame for the current rate of extinctions, some would still occur even if there were no humans on the planet at all.

What we need, therefore, is neither an ethic that values production over everything else, nor an ethic that seeks to keep everything as it is. What we do need is an ethic that recognizes the need for agriculture to be conducted in a manner that makes a decent life for humans possible on this planet while, at the same time, retaining the ecological dynamics that sustain all life on the planet. And that will require, among other things, an agricultural ethic that respects the complex, dynamic, ecological interrelationships in which a farm exists. For agriculture to survive, it will need to honor the complex ecological mix in which it participates. In modifying the environment, the farmer needs to attend to the many and varied modifications simultaneously being carried out by the millions of other organisms on which the farm depends. Ideally, all the modifications will form a kind of synergy that increases the robustness of the entire ecological neighborhood. It will require, in other words, an ethic that upholds and promotes an ecological morality.

From a Productionist Ethic to Ecological Morality

Moving from one values perspective to another is never simple and there are perhaps no “strategies” that we can implement to accomplish such transformations. Still, it is worth considering at least two classical proposals.

A. The Enlightenment Approach

One approach to changing our values is sometimes referred to as the enlightenment approach favored by Thomas Jefferson. He believed that if people were free to do the right thing and had the information to do the right thing, they would do the right thing. David Orr suggests three modern strategies for using this approach to values transformation.

The first enlightenment strategy suggested by Orr would use drama to emphasize the need to change course. We can “try to capture public imagination by dramatizing aspects of our situation,” he writes. He cites an example of such high drama in the Clock of the Long Now Foundation that proposes the creation of a 10,000-year clock that would illustrate the longer sweep of time. This would make us more “amenable to precautionary steps to preserve those things essential to the long now, and less susceptible to the political, technological, and economic contagions of the moment” (Orr, 2000). Orr acknowledges that such drama runs the risk of simply becoming another theme park but still seems to think it is worth considering. An example of this strategy for transforming our agricultural values might be a dramatic “Disney World” kind of display at county fairs throughout the nation that projects the continuing:

- loss of soil due to erosion,
- loss of land to salinization and urban sprawl,
- development of dead zones,
- demise of rural communities,

with an emphasis on the impact that these ongoing realities portend for our common quality of life.

A second enlightenment strategy that Orr suggests lies in “creating more accurate and telling metaphors and theories.” An example of this strategy is the effort to include ecological capital in our economic accounting. When applying this strategy to the task of transforming agricultural values, one might target information that demonstrates how much additional money farmers have to spend in fertilizer costs for every ton of soil lost on their fields, or how much more it will cost them for farm maintenance when goods and services provided by local rural communities disappear. Again, Orr reminds us that changing minds by this method tends to be slow---mostly “funeral by funeral.”

A third enlightenment strategy consists of political change. This strategy suggests that people use the machinery of the body politic to conduct the kind of public interest research and promote the robust political ideas that would protect “earth systems.” Orr acknowledges that this strategy is particularly problematic in the current political climate, since our belief that the private sector is superior to government in almost every respect has dramatically weakened government.

But that cautionary tale serves as an example of the overall problem with the enlightenment approach. One’s current commitment to old values creates institutions and entrenched cultural mores that tend to prevent us from seeing the need to implement new

values. The enlightenment approach is, consequently, not a very promising way to bring about a real and rapid transformation of values.

B. The Incentives Approach

A second classical approach to changing human behavior is by creating incentives to change. Adam Smith, the best-known proponent of this approach, believed that even if people are free to do the right thing and have the information necessary to do the right thing, they are still unlikely to do the right thing unless there is some incentive for them to do so.

According to this approach, if we want farmers to adopt an ecological morality over a productionist ethic, we need to develop policies and markets that reward them for doing so. In the policy arena there are examples where this approach has been implemented, such as the U.S. Conservation Reserve Program (CRP). In this program farmers are paid by the government to plant highly erodible land into grass and discontinue any agricultural practices for a period of 10 or fifteen years. Ever since the program has been implemented, farmers have offered to put more land into the Reserve than could be accepted with available funds, demonstrating that the incentive works, albeit at a very high cost. It is also clear that this incentive achieved many of the environmental goals the program envisioned. The program vastly increased habitat for wildlife, dramatically reduced soil erosion, and improved water quality.

But there is little evidence that the CRP has changed the values of the farmers who signed up for the program. As CRP contracts expire, most of the land has returned to production using practices identical to the ones that were in place prior to the contract. It would appear that incentives created by public policy are effective only in changing behavior as long as the incentives are in place.

The next question is whether market-driven incentives would be any more successful in adopting an ecological morality than policy-driven initiatives. First, it is important to recognize that market-driven success mostly hinges on one's intuitive capacity to anticipate new opportunities. If incentives influence human behavior only so long as the incentives are in place, and market-driven incentives are dependent on the ability of the entrepreneur to intuitively anticipate new opportunities, then it is not a very effective way to establish a consistent ethic. (There may be potential for additional response if market-driven incentives are sustained for a number of years.)

The organic food industry, which emerged from an ecological ethic, offers a good example of what can happen. Sir Albert Howard, one of the architects of the organic movement, embodied the ethical beliefs that guided the movement. The health of the soil was Howard's guiding principle. For him, the central question was whether humans could regulate their affairs so that their "chief possession—the fertility of the soil—is preserved" (Howard, 1943). But once entrepreneurs intuitively anticipated new opportunities in the organic market, a very different kind of ethic emerged. For many in the food industry, organic has now become a "corporate adventure" that, in many respects, makes the organic industry barely distinguishable from the conventional food system (Pollan, 2001).

Yet we should not overlook the power of the market and its incentives as a tool to move us toward more ecologically sound farming practices. Currently in the food and agriculture system there are many signals indicating that the market may be ripe for some changes. These shifts could spur the development of incentives that may lead farmers to adopt more ecologically sound practices.

The current market system, for example, is not working well for farmers *or* the environment. A recent survey conducted by Paul Lasley, a rural sociologist at Iowa State University, revealed that 64 percent of Iowa farmers believed that the overall economic prospects for farmers in the state would become worse in the next five years (Lasley, 2000). At the same time the environment continues to signal that nature's sinks can no longer tolerate the wastes expelled into the environment by industrial farming practices. A recent report on nitrogen pollution indicated that if today's enterprises, including agriculture, continue to function in their current mode, the amount of nitrogen pollution going into the environment over the next 25 years will double (Horton et al., 2000). A steady stream of reports concerning the deterioration of Iowa's fresh water lakes and streams appeared in the *Des Moines Register* during the spring of 2001 and serves as a harbinger of that prediction. Sports enthusiasts, environmentalists, and tourists will almost certainly begin to bring pressure on farmers to change their farming practices to prevent further pollution (Des Moines Register, 2001).

Contemporary market analysts suggest that a growing number of food shoppers want to have a conversation about their purchases (Locke et al., 2000). This means, among other things, that consumers increasingly will want to know the full story of the food they purchase—where it came from, whether environmental stewardship was practiced in producing and processing it, and whether laborers were treated fairly. And the story had best be authentic (Schlosser, 2001).

These are all negative indicators that give intuitive signals for potential new market opportunities. If conventional agriculture is not working for farmers *either* economically *or* ecologically, then the stage is set to develop new markets for food products that are produced in a more ecologically sound manner and that can retain more value on the farm. The farmer becomes an integral part of the story surrounding food production.

But the larger problem with the incentives approach to developing an ecological morality remains. Apart from an abiding ethic that forms the context of economic activity, incentives will always shift to whatever opportunity the market finds attractive. If that happens to be damaging to local communities or local ecologies, the market doesn't care. In a libertarian market system, economics determine values, while values never seem to determine the market.

Yet the reality is never that simple. Economies always function inside a set of values. Markets always demand some regulations. Few want to let the market alone decide the level of food safety. No one wants to let the market decide whether or not recreational drugs should be sold freely in supermarkets. The real question, then, is what kind of values drive our market economies?

The answer to that question has become increasingly complex since the end of the Cold War. "Now, there are many different 'mixed economies' based on countries using their own markets, rules, laws, contracts, and so on, reflecting their own goals and values,

traditions and cultures,” according to Hazel Henderson (1997). She goes on to say that “Today, we are rediscovering that values, far from being peripheral, actually drive all economic, technological and social systems . . . Today, we must clarify the immense political, social, economic, and technological transitions we are experiencing. How do these transitions relate to new and old multicultural goals and values, to ideas of wealth and progress, satisfaction, freedom, and development, and to the deeper spiritual and religious concerns they embody?” In other words, not only are we developing a money-based global economy, we also are developing a global civic society that will be engaged in sorting out these very complex values issues. Today we can see the tension between those two forces playing out on the global stage. Certainly the global civic society will not go away. The question is, will an ecological morality be part of the new global culture that evolves out of the process?

In the end, the extent to which we move toward an ecological morality will depend on a process that cannot be reduced to either incentives or enlightenment strategies. The outcome will be determined, rather, by a complex host of actors on the global stage, and both incentives and enlightenment will likely be part of that process.

The Problem of Ethical Dissonance

This brings us back to our opening observation. We humans often act contrary to our own rational self-interest and, even more so, contrary to our own value commitments (Kirschenmann, 2000). Consequently, if we want to create an ecological morality that actually results in farming practices which respect the dynamic interrelationships of all the organisms that make up the ecologies in which we farm, then we have to come to terms with this paradox.

We are, of course, all aware of the problem of ethical dissonance. Our own communities, as well as the history of human literature, are replete with examples. But modern Western culture has tended to deal with the problem of ethical dissonance by externalizing it into a kind of morality play. Western movies, while they were seldom allegorical or given to providing explicit ethical instructions, were nevertheless morality plays of sorts. And they epitomize the way the Western world deals with ethical dissonance. Morality plays divide the world up between the virtuous and the wicked, the good guys and the bad guys, white hats and black hats. The good guys always win and the bad guys are always subdued in the end--often through force and violence.

This is a neat way of dealing with the messy complexity of ethical dissonance without having to face up to the problem. It oversimplifies the problem, externalizes it, and exempts the viewers of the drama from having to deal with the dissonance in their own experience. And, it, of course, leaves the real world problem unsolved because each party always identifies itself with the side of virtue.

Modern agricultural ethics provide the stage for a similar morality play where environmentalists and farmers are pitted against one another. Environmentalists feel that they wear the white hats while farmers wear the black hats. Farmers pollute and environmentalists are attempting to stop pollution. The farmers, in the meantime, see environmentalists as wearing the black hats in contrast with their own white headgear. Farmers are trying to feed the world, while environmentalists are preventing them from

doing so by imposing unworkable regulations, regulations that are, in their view, based largely on a total ignorance of farming systems (Kirschenmann, 1988). In the last analysis, this way of dealing with ethical dissonance leads to a kind of ethical constipation. Once we have divided the world up between good guys and bad guys no real change can take place. The good guys absolve themselves of any need for change and the bad guys are never expected to change—the only way to deal with them is to subdue them. It is an approach that generally leads to denial, self-righteousness, hypocrisy, and inertia.

In his delightful little book, *The Genesis of Ethics*, Rabbi Burton Visotzky suggests an alternative approach to moral development that potentially provides a more effective way of dealing with ethical dissonance. Visotzky reminds us that the book of Genesis in the Old Testament hardly presents itself as a moral book to the modern sensibilities. As he says, it reads more like a soap opera about a dysfunctional family than a moral text. “It is a story about rape, incest, murder, deception, brute force, sex, and blood lust. The plotlines and characterizations of Genesis are so crude as to call into serious question how this book became and remained a sacred, canonical text for two thousand years and more” (Visotzky, 1996). In other words, it is the antithesis of a morality play.

What is going on here? How can this be a book for moral development? Visotzky argues, correctly I think, that we can identify with it precisely because Genesis spares no punches in telling its story about the human family. “It is the unattractive component of Genesis that causes us to have such a strong identification with it in the first place. When we read of the dysfunctional family with strong lust and murderous intentions, we recognize that it is our family. . . .” In other words, instead of providing us with a mechanism for avoiding our own ethical dissonance, as the morality play does, the Book of Genesis invites us to own our personal ethical discord.

The point is that we cannot effectively deal with ethical dissonance until we internalize it, until we adopt it as our own condition. Only when we recognize that our own ethics are dysfunctional are we in a position to experience any kind of meaningful ethical transformation. Until we recognize that we are all part of the problem, there is little chance for a meaningful cultural transformation that will lead to actual changed behavior. Until farmers and environmentalists recognize that they are both part of the problem, they won’t be able to work together to find real solutions that both can embrace. It is unrealistic to expect that farmers, given their present circumstances, will change their farming practices from producing as much as possible regardless of the ecological or economic cost. They are caught in a food and agriculture system and public policy structure that provide them with few options to improve their economic position—and more production is presented as their primary option. If we see a contradiction in that behavior, it is no less a contradiction than the environmentalist who burns fuel to fly across the country to join a protest against farming practices that cause pollution. We are both part of the same system that leads to one degree or another of the same disparities. (This is not to deny that some behavior is more harmful to local ecologies than others.)

Our approach to ethics prevents us from seeing our own dissonance, and therefore prevents us from appreciating the contradictory situations in which we all find ourselves. None of us “walk our talk,” and it might be destructive if we did. Our collective failure to

recognize that none of us “walk our talk” causes us to marginalize everyone in whom we see ethical contradictions. When the media noted that protesters involved in the “Battle of Seattle” were wearing Nike shoes, the news people dismissed the protestors as being insincere and therefore not worthy of our attention. When we discover that an environmentalist living in the mountains owns an SUV, we don’t believe that her message can have any value worth our notice. At the same time, we ignore the contradictions in our own lives.

The Genesis story therefore has great insight to offer to our own situation. Until we recognize the foibles and foolishness in our own lives, we are not likely to participate meaningfully in the development of a new ecological morality. Unless farmers and non-farmers alike recognize their common need to re-think core values, we are not likely to see the evolution of a new ethic for agriculture that reflects our new understanding of how nature works. We need to participate fully in a robust living community in which we recognize that our participation in nature is one small part of a living web that includes millions of other organisms as our neighbors and fellow creators of the environment in which we all have a communal stake. And we need to honor the fact that our farms are part and parcel of that ecological neighborhood. From that perspective we may still have an opportunity, for a short while, to write a “new mythology here” instead of taking inventory simply to ascertain how much of nature we can use in a futile attempt to shore up an isolated habitat for humans on the planet (Pollan, 1996).

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Chapter 11 Study Questions

1. Is it reasonable to assume that we can “save the environment”? Why or why not?
2. Is technological innovation likely to solve the “environmental crisis”? Why or why not?
3. Is better education likely to solve the “environmental crisis”? Why or why not?
4. Are appropriate incentives likely to solve the “environmental crisis”? Why or why not?
5. Do you think farmers and environmentalists will ever be able to work together for a common future? How might that happen?
6. How might the sciences of ecology and evolutionary biology inform our ethical choices with respect to agriculture and the environment?