Rediscovering Agriculture: The Future of Farming

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I grew up on a small dairy farm in southwest Missouri. My brother still lives on that farm and was still milking less than 50 cows until he retired about three years ago. When I left the farm for college in the late 1950s, American agriculture was still dominated by small family farms, like ours, that produced primarily for local and regional markets. Commercial fertilizers and pesticides, developed from World War II technologies, were just coming on the scene. Factories that had produced tanks for the war were retooled to produce farm tractors. Fossil energy was abundant and cheap; a “dollar's-worth” of gasoline meant “five-gallons.” However, farming was about to be transformed from a way of life into a bottom-line, industrial economic enterprise.

Many people relate industrialization to the migration of people from farms and rural communities to manufacturing jobs in urban areas. However, the shift to manufacturing and urbanization are only symptoms of the industrial model or paradigm of specialization, standardization or simplification, and consolidation of control. Specialization increases efficiency through division of labor. Standardization is necessary to facilitate coordination and routinization of specialized production processes. Standardization and routinization simplify production and management processes, which allow consolidation of control into large-scale, corporately-controlled business enterprises. This is the industrial process by which “economies of scale” have been achieved in both manufacturing and in agriculture.

By the time I graduated from college in 1961 the industrialization of American agriculture was well under way. By then, I had been thoroughly indoctrinated into this “modern” industrial paradigm of agriculture and was committed to helping create a better agriculture for the American people as well as for myself. I took a job with Wilson & Co. Inc., the fourth largest meat packer in the U.S. at the time. After three years, however, I had become disenchanted with the corporate world. So, I decided to return to graduate school at the University of Missouri, a Land Grant University. The historic mission of Land Grant Universities, as well as for all government programs for agriculture, had been to provide food security for the nation by keeping enough family farmers on the land who were committed to taking care of the land to ensure that Americans would always be well fed, in times of both war and peace.

By the mid-1960s, however, the public mandate for American agriculture had changed. We were no longer committed to saving family farms. Instead, we would make agriculture more efficient, by any means necessary, to help make food cheaper for consumers. Cheaper food would make it possible for all Americans to afford enough safe and wholesome food to meet their needs for healthy, active lives. The goal was to achieve national food security through the marketplace, and agricultural industrialization seemed the most efficient means of achieving that worthy goal. When I left graduate school with a Ph.D. in Agricultural Economics in 1970, I was committed to doing my part to make agriculture more efficient.

During the first half of my 30-year academic career, I was a pretty traditional, free-market, free-trade economist. I had been taught that a successful farm had to be managed as any other bottom-line business, if it was going to survive. I told family farmers that their farms and
families had to be treated as distinct and separate entities. Farming could no longer be viewed as a way of life; the only economically sustainable farms would be those that became agribusinesses. Quality of life was something farmers bought with farm profits, and what they bought was a personal matter that had no place in my vision of the economics of farming. I was doing what I had been taught and thought was good for farmers as well as for society.

During the farm financial crisis of the 1980s, I was forced to rethink what I had been taught and I had been teaching about the economics of agriculture. The so-called “modern” farmers had borrowed heavily at record high interest rates to expand their operations during the export driven economic boom years of the 1970s. When the global economy fell into economic recession during the 1980s, export markets collapsed, commodity prices fell, and many of these farmers were caught with large debts at high interest rates they simply couldn't repay. Stories of farm bankruptcies and foreclosures sprinkled the national network news programs. Occasional suicides by bankrupt farmers captured both local and national headlines. It wasn't just poorly managed farms that were failing. Farming for the bottom line, for economic efficiency, had led to widespread financial and personal failure for good farmers.

We were witnessing the process by which the industrialization of agriculture inevitably forces farm families off the land. As farms become larger to achieve economies of scale, farms inevitably become fewer in number, meaning some must fail in order for others to succeed. I soon began to realize the financial failure of family farms was not only destroying farm families, it was also destroying the economic viability of many rural communities. It takes people to support communities, not just production. It takes people to shop on Main Street, serve on volunteer fire departments, sit in church pews, keep local schools open, and keep a doctor in town. As I dug deeper into the causes of the farm financial crisis I also became aware of the negative environmental and ecological consequences of industrial agriculture. Farming fencerow-to-fencerow with chemical-intensive, industrial farming methods resulted in soil erosion, water pollution, and pesticide poisoning of people and wildlife. Eventually, I was forced to conclude that this way of farming wasn't good for farmers, wasn't good for rural communities, wasn't good for society, and wasn't good for the future of humanity. There had to be a better way to farm and a better way for me to make a living.

First, I had to confront the economic realities of modern agriculture. In so-called market economies, food systems historically have been coordinated by competitive markets. Changes in consumers’ needs, preferences, and incomes were reflected in changing retail prices. When consumers demanded more of something prices would be raised to ration available supplies. Higher retail prices would provide profit incentives for retailers, who then provide profit incentives to processors, who then provide profit incentives for producers to supply more of the higher priced product in response to the stronger consumer demand. Thus, the food system was coordinated vertically, from consumers to farmers, through *vertical competition*. Competition among enterprises within the food sectors of farming, processing, distribution, and retailing limited the potential for profits. If such markets were “purely competitive,” any excess profits would be passed on to the consumer in the form of larger quantities, lower prices, or higher quality products. There were just enough profits in the food system to allow farmers and others to stay in business and keep producing, processing, and distributing food. The benefits of economic efficiency accrue to people as consumers, not as producers.
That said, the reality of today's food systems is very different from the competitive model of free-market economies. In today's economic reality, large-scale corporate food processors, distributors, and retailers dominate their respective sectors of the food marketing system. Only the farming sector retains any element of true economic competition, and even farm-level markets are rapidly disappearing. Today, large corporate processors or retailers, depending on the particular food sector, dominate the entire vertical food supply chain, from retailing to agricultural production. These dominant corporations are in a position to retain all excess profits for their stockholders, limiting consumers' food choices to those things they find most profitable and leaving farmers with even less than they would have under vertical competition. The historic economic power of food consumers has been shifted to corporate stockholders.

Furthermore, the last vestiges of vertical competition are rapidly giving way to vertical integration. With vertical integration, the large corporate food retailers or processors not only dominate markets, they essentially take control of the other levels in the vertical food supply chain, from agricultural production through retailing. They may do so through outright ownership, formal contractual arrangements, strategic alliances, or through sheer market power, as in the case of Walmart in the U.S. In such cases, the corporations that control the vertical food supply chains have the power to extract all of the excess profits, making a mockery of consumer sovereignty and leaving others in food supply chains with barely enough profits to survive. Under such conditions, farmers are forced to adopt industrial practices that deplete the productivity of the soil, pollute the air and water, and force their neighbors out of farming so they can gain access to more land and capital. Such systems simply are not sustainable ecologically, socially, or economically.

All of the problems I saw in American agriculture back in the 1980s were symptoms the widespread failure of governments to constrain or limit market economies. Market competition puts relentless pressure on producers to reduce their costs of production in order to increase economic efficiency. Participants in the food supply chain, including farmers, have found the industrial strategies of specialization, standardization, and consolidation to be effective means of reducing costs and increasing efficiency. However, the corporate model of organization allowed food processing, distribution, and retailing firms to amass huge sums of capital, to drive out competitors, and to expand far faster than the expansion in farm size. The corporations that expanded most quickly and successfully were able to gain control first of their particular market sectors, and for the most successful, control of entire vertical supply chains, including farming.

Large-scale confinement animal feeding operations, or CAFOs, are the epitome of corporate control of agriculture. Under comprehensive contractual arrangements, the corporate integrator or contractor makes all of major management decisions. Producers are left as little more than serfs on their own land, with the responsibility of disposing of dead animals and manure. These so-called CAFOs pollute their rural neighbors' air and water with noxious odors and hazardous biological wastes. They subject their workers to dangerous and degrading working conditions for near-poverty wages. They destroy the social fabric of rural communities. They violate every social and ethical principles of responsible farming. In the process, the corporate consolidation and control of agriculture is destroying the natural and human resources that must sustain the long run productivity of agriculture and the future of humanity.
All economic value comes from either nature or society. There is no place else to get anything of use to people and thus anything of economic value to people. A sustainable food system must meet the needs of the present without diminishing opportunities for the future. However, the economy provides no incentives to invest in maintaining the fertility of the land or the productivity of people, unless something of greater economic value is expected in returns. There is no economic incentive to invest in anything for the sole benefit of a community, society, or for the future of humanity. Most humans don't make purely economic decisions. The publicly owned, for-profit corporation is not a human. It has no human capacity for social or ethical responsibility. As a result, agribusiness corporations are putting farmers under relentless economic pressures to exploit their land, their workers, and their neighbors simply to survive economically. Such a food system is not sustainable.

It's critical for farmers to understand that economic relationships are fundamentally different from social or ethical relationships because economic value is fundamentally different from social or ethical value. Economic value is individualistic, instrumental, and impersonal. Economic value accrues to individuals, not to a community or society as a whole. An economy is simply a collection of individual enterprises. Economic value is instrumental in that economic decisions are always predicated on the expectation of receiving something of greater economic value in return. An economic transaction is a means to an end, not an end in itself. Economic value is impersonal in that economic value is determined by trade or exchange among different individuals. The specific individual or person involved in the transaction just doesn't matter.

Social value is also instrumental, in that something of value is always expected from a purely personal relationship. Unlike with economic transactions, the expectation often is not precise with respect to what is expected or when something is expected in return. But, if we want to have a friend we must willing to be a friend. Social value is different from economic value in that social value is clearly personal. The value of a social relationship is clearly dependent on the specific individuals involved in the relationship. Spouses are not interchangeable and neither are true friends. Purely social relationships produce nothing of economic value because they cannot be exchanged among different people. Unlike economic relationships, once social relationships end, there is nothing left that can be sold or traded to anyone else – only the personal memories.

Social relationships are individual, in that social values accrue to individuals rather than communities or societies. However, social values naturally evolve into cultural or ethical values, which recognize and respect the common or shared values within families, communities, and societies as wholes, as something more than collections of individuals. At reciprocal expectations become less personal and less precisely defined, social concerns become associated with communities, societies, or nations rather than specific individuals. Eventually, the recognition of value and respect spreads to those of other nations and to humanity as a whole, including those of future generations. This is the process by which social values evolve into ethical values.

Ethical values are different from economic and social values in that they are neither instrumental nor personal. The person who does things for purely ethical reasons has no expectation of receiving anything in return, at least not in his or her lifetime. They do it simply because they believe it is the right and good thing to do. Ethical values are clearly impersonal.
What is right for one person is right for another; what is wrong for one is wrong for all. Sustainability is ultimately an ethical issue. The only rational reason for doing something for an unknown someone of some future generation is because it has ethical value; because it is the right thing to do. The act of true stewardship is its own reward.

Certainly, there may be economic value associated with relationships that have social and ethical dimensions. It's easier and more economically efficient to do business with people we know and trust. Also, many people would rather do deal with someone who has a reputation for ethical business practices. However, relationships that are purely economic have no personal or ethical value and relationships that are purely social or ethical have no economic value.

So what does this have to do with rediscovering agriculture or the future of farming? The only sustainable and profitable alternative to both vertical integration and vertical competition is “vertical cooperation.” Cooperative relationships are neither competitive nor exploitative, they are mutually beneficial. Within a vertically cooperative food chain, economic benefits will be shared fairly and equitably among consumers, retailers, processors, farmers, and anyone else involved in the collaboration. The vertical system will be coordinated through cooperation rather than competition or integration. The participants together will decide what to produce, where and when it will be available, how it will be produced and processed, and who will produce and process it. They also will agree on a pricing arrangement to ensure that consumers get the products they need and want and a price they are willing and able to pay. Everyone in the vertically cooperative system will get an economic return adequate to reward them for their contribution to the process, without exploiting the natural and human resources that must sustain long run economic viability. Fair levels of profits will be sustainable for all participants. Food systems that lack these essential characteristics will not be sustainable in the future.

The legal organizational structure of vertical cooperation doesn't matter. The organization can be a cooperative, a collaborative, or an alliance, as long as individuals at all levels are willing to cooperate rather than compete or submit to corporate control. Such organizations cannot be sustained by economic interests because economic value is instrumental and impersonal. There will always be an economic incentive to extract and exploit in order to achieve greater economic efficiency. Vertical cooperation can be sustained only by shared social and ethical values. I have often advised farmers to either form cooperatives with like-minded friends or to make friends of like-minded people with whom they choose to form cooperatives.

These basic concepts and principles of vertical cooperation underlie the organic, biodynamic, holistic, ecological, and other sustainability-driven agricultural movements. I am not aware of any current vertically cooperative arrangement that meets all of the necessary conditions for sustainability, although I personally know of several organizations in the U.S that possess many of these attributes and are moving in this direction. The Food Commons project in California provides the best conceptual blueprint I am aware of for forming and sustaining a vertical cooperative organization. The differences between vertical cooperation and either vertical integration or vertical competition are clearly reflected in their guiding principles. Their core principles include: fairness, sustainability, decentralization, transparency, stewardship, accountability, subsidiarity, reciprocity, and ethics, as well as essential economic principles.
The organic, biodynamic, ecological, and sustainable food system of the future clearly will need to be “scaled up” from current levels, if they are to replace the industrial food system. However, if they are to be scaled-up without losing social and ecological integrity, they must span the entire vertical food chain, from farmers to consumers – from dirt to the dinner plate. If the cooperative value chain intersects with the industrial supply chain at any level, it will become a part of a vertical integrated or vertical competitive system in which large corporate entities have the economic or political power to extract the profits from the entire system. The sustainability of profits for farmers in vertically cooperative value chains depends on maintaining the social and ethical integrity of relationships among those at all levels in the food value chain, from producer to consumer. Relations based solely on economics are inherently and inevitably unsustainable. While such relationships are easier to form and maintain in local and regional food systems, vertical cooperation can span national and even global markets as well. The key to success is to form and maintain a meaningful sense of personal connectedness among people with shared ethical values. With modern communication and information systems, such relationships are not limited to local, regional, or even national markets.

To many farmers, relationships based on social and ethical values may sound idealistic or naïve. Many farmers pride themselves in their independence. However, farmers need only return to the historic purpose of farming to find the social and ethical values necessary to build a sustainable economic future. Historically, the word \textit{farm} comes from Middle English word, \textit{ferme} (“variously meaning: tenant, rent, revenue, stewardship, meal, feast”), from Old English \textit{feorm}, \textit{farm} (“meaning provision, food, supplies, possessions, rent, feast”), from Proto-Germanic \textit{firimō, firχumō} (“means of living, subsistence”), and from Proto-Indo-European \textit{perk"u-} (“life, strength, force”).

Certainly, economic concepts such as “rent, revenue, tenant, and means of living” have been historical aspects of farming. But, farming also has meant the provision of physical and mental sustenance for society, including “provision, grocer, subsistence, life, benefit, spirit, and feast.” Equally important, farming has always included a moral or ethical commitment to long run food security or permanence: “stewardship, strength, firm, solid, security, and sustain.” \textit{Real} farming has never been just another business. Farming in the future must continue to be a social, ethical, and economic way of life. Maintaining the productivity of the land, not just for profits but for the benefit of others, including those of future generation, has always been and will always be the right and good thing to do. This is both the past and future culture of agriculture.

How does this square with economic reality? Let me close with a few quotes from arguably the most widely respected economist of the 20\textsuperscript{th} century, John Maynard Keynes. Back in the 1920s, Keynes wrote, “the economic problem may be solved, or at least within sight of solution, within a hundred years. This means that the economic problem is not… the permanent problem of the human race.” Man's permanent problem will be “how to use his freedom from pressing economic cares… to live wisely and agreeably and well.” As it turned out, Keynes was right. The “economic problem” has already been solved for the vast majority of Americans as well as
those in the rest of the so-called *developed* world. In fact, most Americans probably had as much material wealth as we actually needed to be happy as far back as the 1950s. A 2004 review of more than 150 scholarly studies indicate that as national economies grow, beyond some very modest level of material well-being, around $10,000 to $15,000 per capita – there is little if any correlation between wealth and the overall happiness of people in a nation.\(^4\) A 2003 British cabinet office report confirmed that “Despite huge increases in affluence compared with 1950, people throughout the developed world reported no greater feelings of happiness.”\(^5\)

The research is simply confirming our common sense. Once our basic material needs are met – food, clothing, shelter, health care, – we know that the quality of our life depends far more on the quality of our relationships – friends, family, community, society – than on quantity of income or wealth. Our happiness also depends on our having a sense of purpose and meaning in life. Without purpose and meaning, there is no sense of rightness or goodness in what we do. Once our basic economic needs are met, the pursuit of happiness is about developing the social and spiritual dimensions of life, rather than striving for more income or wealth. Thankfully for the vast majority of Americans and Australians, our economic problem has been solved.

However, Keynes also wrote, “There is no country and no people, I think, who can look forward to the age of leisure and abundance without dread. For we have been trained too long to strive and not enjoy... It will be those people, who can keep alive, and cultivate into fuller perfection, the art of life itself, and do not sell themselves for the means of life, who will be able to enjoy the abundance when it comes.” I believe there is a bright future in farming. However, I tell young people they shouldn't even think about farming as their potential occupation unless they are convinced that farming is their basic mission or purpose in life. There are far easier ways to make money than farming. The challenge of the future, not just for farmers but for society in general, is not to continue selling ourselves for the means of life or to exhaust ourselves in the pursuit of profits. The future of farming belongs to those who willing to rethink and to rediscover the culture of agriculture. A sustainable farm is a great place to cultivate the art of life itself, to learn to live wisely, agreeably, and well.

End notes:

1 The Food Commons: Imagine, Design, and Build
<http://www.thefoodcommons.org/index.html>


5 Oliver James, “Children before cash; better childcare will do more for our wellbeing than greater affluence,” *The Guardian*, May 17, 2003.