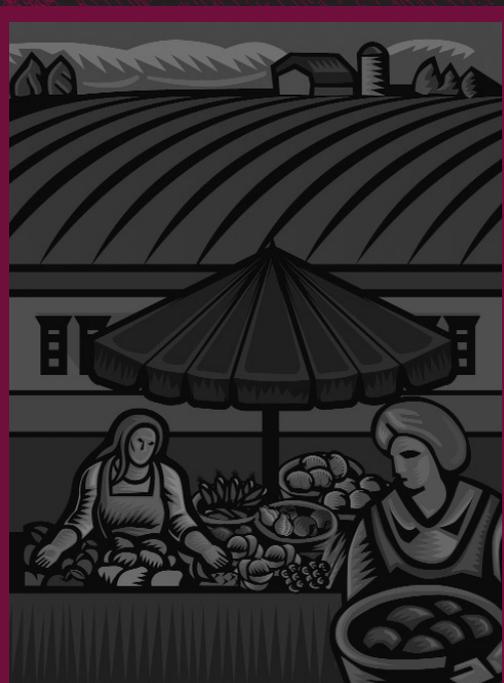


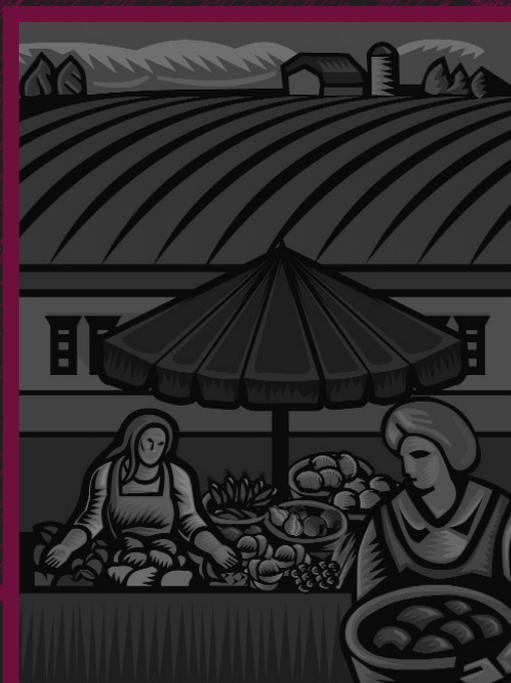
Food, Farming, Fear – The Power of
Ideas to Create the World We Want

Frances Moore Lappé

MARCH 5-6, 2003



SPONSORED BY:
HENRY A. WALLACE
ENDOWED CHAIR
FOR SUSTAINABLE
AGRICULTURE



THE JOHN PESEK COLLOQUIUM
ON SUSTAINABLE AGRICULTURE

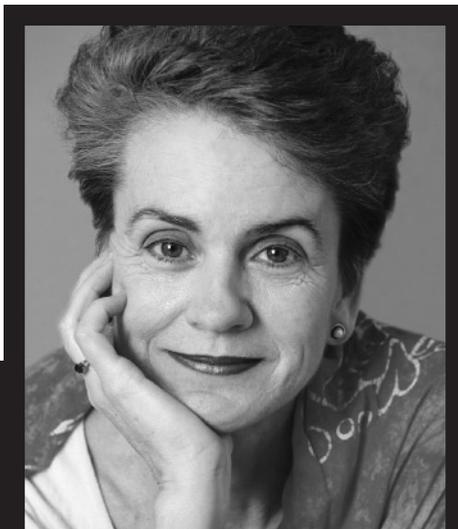
THE SPEAKER

FRANCES MOORE LAPPÉ



Frances Moore Lappé, author of thirteen books, has spent over three decades studying, writing and speaking about some of the most critical questions of our time. Her writing on healthy, sustainable alternatives to world hunger and to corporate globalization and the degradation of food has fostered world-wide debate. She has received 16 honorary doctorates and, in 1987, became the fourth American to receive the coveted Right Livelihood Award.

Her first book, *Diet for a Small Planet*, was released in 1971 and was instrumental in helping a generation rethink issues on food and hunger. The dominant paradigm at the time was predicting world famine based on population growth, and Lappé challenged this view saying that there was more than enough food to feed the world's population but that issues about the way the food was used and distributed were at the base of the problem. She also argued that high input, large-scale, technology dependent agriculture would not be sustainable over the long run—and that a plant-centered, whole foods diet would not only feed more people, but would solve many environmental and human health problems.



Some of Lappé's other books include *Mozambique and Tanzania: Asking the Big Questions* (1979), *Aid as Obstacle: 20 Questions About Our Foreign Aid and the Hungry* (1980), *World Hunger: Twelve Myths* (1986), *Rediscovering America's Values* (1989), and *The Quickening of America: Rebuilding Our Nation* (1994). Her most recent work, *Hope's Edge: The Next Diet for a Small Planet* (2002) is a narrative of small-scale democratic movements worldwide where people are working to solve problems of hunger and lack of economic opportunity. Jane Goodall has said of *Hope's Edge*, "Absolutely one of the most important books as we move into the 21st century."

Lappé is the co-founder of two national organizations focused on food and the roots of democracy. In 1975, she founded the California-based Institute for Food and Development Policy (now known more commonly as Food First). This action-based non-profit organization organizes and puts forth information on the causes of—and solutions for—world hunger. In 1990, Lappé co-founded the Center for Living Democracy, a ten-year initiative that inspires and prepares people to make democracy a rewarding, practical, everyday approach to solving society's problems. Lappé has served as founding editor of the Center's American News Service that has placed solutions-oriented news stories in more than 300 newspapers, including almost half of the nation's top 100 newspapers by circulation.

While writing *Hope's Edge*, Lappé was a visiting scholar at the Massachusetts Institute of Technology. Currently, she is a Senior Fellow with Second Nature and resides in Boston.

LECTURE

Food, Farming, Fear – The Power of Ideas to Create the World We Want

5 MARCH 2003
FRANCES MOORE LAPPÉ

A dream?

I find myself in a huge amphitheater packed with tens of thousands, perhaps 70,000 people, young and old. I hear a blend of tongues excitedly talking all around me, and then a robust, bearded man begins to speak. He is the brand new president of this country, I am told. He declares that his first goal as president is to end hunger. “I will have fulfilled my life’s mission,” he says, “if at the end of my term, everybody in my country eats three meals a day.” He closes by saying, “I may make mistakes,” and then promises, “but I’ll never forsake my principles.” The cheering, the tears, the singing that greet his pledge are almost deafening. I feel my body swaying with those around me as I sense a collective surge of hope.

*“I want you to
try to see the world
in a different way
than it is viewed by
most of us here in the
United States.”*

Is this a dream? A president winning an overwhelming electoral victory because he puts the needs of the poor first? A president who makes of one his first acts the canceling of an order for 12 fighter jets so that he can re-direct over \$600 million to fighting hunger?

Could this actually happen?

Yes. The scene I just described is not a dream. It was my experience in January in Porto Alegre, Brazil, where I attended the third World Social Forum, a gathering of 70,000 to 100,000 people from all over the world, addressing challenges ranging from hunger to the environment to violence. All came to proclaim that “another world is possible”—the Forum’s slogan appearing on billboards along the highway and banners hanging everywhere at the conference.

I begin my remarks here today with this scene from the World Social Forum for one reason. I want to ask you to come with me on a mental journey. I want you to try to see the world in a different way than it is viewed by most of us here in the United States. I want you to step with me outside our guarded borders to see the deepening global crises, as well as the possibilities for our planet—from the point of view of those living without our material wealth, those who see their horizons blocked by our government and multinational corporations grounded in our economy.

Despite the diversity of the participants at the World Social Forum—from poor Bolivian peasants fighting the takeover of their land by mining companies to the editor of *France’s Le Monde Diplomatique* decrying corporate dominance of the media—there was, amazingly, a shared diagnosis.

During the last twenty years what I call “primitive marketism” has undermined the power of elected governments to solve problems by doing away with limits on corporate concentration and reducing more and more of life’s essentials into commodities for sale, from farmers’ seeds to drinking water. This doctrine, spread globally

through conditions placed on countries that seek help from the World Bank and the International Monetary Fund, now touches every corner of the planet.

After World War II, the market had been tamed somewhat by social movements protecting workers' rights and creating social safety nets. Corporate monopoly was checked by anti-trust enforcement and corporate behavior was shaped by social mores including at least minimal loyalty to employees and communities. All this ended with the Reagan era. Moreover, primitive marketism—driven solely by the logic of highest return to existing wealth—has arisen at the same time the U. S. government has declared itself the world's sole superpower. This status will be maintained, according to the recent Bush doctrine, by foregoing strategies of containment and declaring the U.S. intention of maintaining its superiority, if it alone deems necessary, by first-strike military intervention. The result of such beliefs is a growing inequality and misery within and among countries, an increasing diversion of funds from social to military spending, and a world that feels more gripped by fear than perhaps even during the Cold War.

Now, you may wonder, what does this have to do with the Pesek Colloquium on Sustainable Agriculture—with concerns for healthy food, water, farmland and thriving rural communities?

Everything.

Let me organize our thought experiment around key ideas—ideas we inhale like an invisible ether—that allow us day in and day out to justify, condone, and live with what violates our innate sense of justice as well as our common sense.

*"In actuality,
however, it is this
set of assumptions, this
"map" that is propelling us
to create the very
scarcity we so fear."*

The scarcity scare...

It is the spring of 1975. I am sitting in a rural conference center in Iowa surrounded by earnest Lutherans concerned about "world hunger." The last event of the evening is a film about the famine killing tens of thousands of Ethiopians. I see images of skeletal women holding babies trying in vain to suck milk from their mothers' shriveled breasts. The explanation for this calamity is drought. My hosts at this church gathering, like most U.S. religious activists at the time, were calling for more American food aid to Africa. The tragedy they saw was scarcity brought about by natural disaster, so our duty was to ship our abundance abroad. Even by then however, I had learned that there is nothing natural about famine in today's world—that "underdeveloped" is not an adjective but a verb, as Walter Rodney explained in his 1974 book, *How Europe Underdeveloped Africa*.

Fast forward to 2003. A buried *New York Times* story announces 38 million people at risk of starvation in Africa. The U.N. World Food Program reports that demand for its aid is unprecedented. To blame are problems of government corruption and AIDS, but, mainly, drought. Over almost three decades, the message is eerily familiar. Scarcity is the culprit, caused by nature's vagaries and specific human frailties. On the surface, nothing appears to have changed. But appearances deceive. Much is changing. Though the inertia of the old mental map still has us in its grip, a new map is bursting through in surprising places with remarkable rapidity.

Scarcity-making...

The dominant mental map tells us that we are in a perpetual battle to overcome scarcity; without capitalism's relentless drive, we would probably all be going hungry by now. In actuality, however, it is this set of assumptions, this "map" that is propelling us to create the very scarcity we so fear. I wrote *Diet for a Small Planet* 32 years ago precisely to ring this alarm—to tell the world that humans were creating scarcity in so many different ways, including turning livestock, animals whose genius is manufacturing protein,

into massive protein disposals. For eons ruminants like cattle had served humans by converting grass and other non-edibles into high-grade protein. Then, we discovered the idea of concentrated grain feeding in industrial-style feedlots that, in the U.S., transforms 16 pounds of grain into one pound of beef on our plates. Today, while hunger stunts the lives of hundreds of millions who are too poor to make a “market demand” for the food they need, from one-third to nearly one-half of all the world’s grain goes to livestock. In the last three decades meat consumption even in low-income countries has doubled. In China or Thailand, for example, the better-off are creating such demand that, while almost no grain went to livestock in these countries thirty years ago, now more than one-quarter goes to produce meat.¹

With feedlot-fed cattle, we have invented an efficient system for squandering water as well. To produce just one steer, U.S.-style, we use enough water to float a destroyer. This waste is happening in a world where millions go without clean water and groundwater tables are sinking on every continent.

In many ways, the race for the creation of scarcity has sped up. During World War II U.S. government posters advised: “Eat fish, they feed themselves.” Now, four pounds of what are deemed ‘junk’ fish like sardines—long a staple food of the poor—are turned into feed to produce just one pound of salmon, which is then priced out of the reach of the poor.²

Modern fishing practices themselves create scarcity: In shrimp harvesting using bottom-scraping drag nets, ten pounds of sea life are captured (and mostly destroyed) for every one pound going to nourish humans. Typically, worldwide, nearly one-quarter of the

total marine harvest is thrown back, dead or dying. Over-fishing has led to declining catches of virtually every type of commercially sold fish.³

Right alongside hunger and under-nutrition, a global epidemic of obesity and overweight—afflicting as many people as go hungry—is sweeping the planet. Food corporations, the world’s biggest advertisers, have discovered the highest profits are in marketing “food products” stripped of nutrients but laden with fat and sugar. So it is now food—too little food, food with too few nutrients, or too much food—that has become the culprit in more than half of all disease-related lost years of healthy life on our planet.⁴

How can it be that we have created a food system that actually reduces nature’s abundance—a system, furthermore, that takes perfectly nutritious food and transforms it into a health hazard? How could this happen when every other species has figured out how to feed itself and its offspring? What’s up with *homo sapiens sapiens*?

“It is man’s humanity that makes him so inhumane,” writes Erich Fromm in *The Anatomy of Human Destructiveness*. By this ironic assertion he means something very simple: Human beings are the only species that become enamored with their own ideas, who get stuck in a certain way of seeing the world and would rather die than change. It is our mental maps, what Fromm calls “frames of orientation,” that literally determine what we can see and what we cannot see. And today we’re really stuck.

“Solving by dissection”...

One key thought trap of the dominant mental map that creates scarcity from plenty and starvation amidst abundance, is the notion that the only way to solve problems is to divide reality into graspable pieces and then tackle those pieces one by one. In relation to food, our single-minded focus on production flows from the scarcity premise—and it is only one piece of a very large puzzle. From that perspective, we fix our gaze on how to produce *more*, never stopping to widen our lens to examine the full consequences of that production.

*“In relation to food,
our single-minded focus on
production flows from the
scarcity premise—and it is
only one piece of a very
large puzzle.”*

Norman Borlaug, “father of the Green Revolution,” today with great emotion and impatient dismissal of critics, claims that without the Green Revolution’s new seeds producing higher yields—when chemical fertilizers and pesticides are applied—many millions more would go hungry today. He has joined the agribusiness industry chorus now telling us that we need a second revolution, the Gene Revolution, to stay ahead of swelling populations. He and other champions of chemical agriculture, and now biotechnology, often point to India as proof. In the 1960s and 1970s India went from begging bowl to breadbasket with the introduction of Green Revolution technologies. No one argues with the dramatic increase in grain output in India, tripling yields since the 1950s, but the “solve by dissection” strategy ignores two huge questions.

First, why hasn’t this great increase in yields ended hunger in India? India is home to the world’s greatest concentration of hunger; half its children are stunted by malnutrition. Borlaug doesn’t see, because his mental map focuses on production, that one can have more food, a lot more food, and yet persistent hunger. Today India is home to one-quarter of all the hungry people in the world; yet it has 63 million tons of surplus grain. That’s enough to supply every man, woman and child on earth for one to two months.

Two years ago in New Delhi on our research trip to write *Hope’s Edge* with my daughter Anna Lappé, I met Shanta Kumar, India’s Minister of Consumer Affairs and Public Distribution. “Ours is not a problem of scarcity,” he told me. “It’s a problem of plenty.” People go hungry in India not because of lack of production. Poor people go hungry in India as well as in the United States because of a primitive market system driven by highest return to existing

wealth—an arbitrary premise that concentrates wealth and excludes millions of poor from the market altogether. Approaches to addressing hunger that depend on farmers buying commercial inputs often means they must incur debt, which can contribute to poor people losing their land and, thus, their sustenance.

This tragic consequence was brought home to me in the Indian Punjab two years ago where I met desperate farmers swamped by huge debts when destructive insects became pesticide resistant and their crops failed. Afsar Jafri, a young Indian scientist, explained to us that two years before, the bollworm and crop failures swept another state, Andhra Pradesh. “In one district pesticide use had increased 2,000 percent in the previous three years, but the crops still failed. The bollworm had become resistant. Two years ago,” he continued, “more than 300 farmers in this district committed suicide, many by drinking the very pesticides that had so indebted them.”

Second, a narrow focus on producing more—in this case with more fertilizer and pesticides and the spread of irrigation—forestalls our asking whether other paths might have had *even better* outcomes? The “solve by dissection” approach assumes that it is *either* the Green Revolution *or* starvation, *either* transgenic biotechnology *or* hunger. It blinds us from asking about paths not taken that could have connected increasing output with reducing hunger and would have avoided the rapid degradation of soil as well as nitrate contamination of water (creating, for example, a “dead zone” in the Gulf of Mexico the size of the state of Massachusetts) that have come in the Green Revolution’s wake—not to mention the risks to humans from pesticide exposure causing three million poisonings and over 200,000 deaths each year.⁵

The production fixation also diverts us from approaches that might have avoided the drastic loss of biodiversity. The Green Revolution chose to focus only on a few varieties of a tiny number of crops, ignoring or bypassing more nutritious crops such as peas, beans, lentils, and sunflower seeds, as well as crops that could have been raised profitably with low-input or locally available resources.

*“A narrow focus
on producing more...forestalls
our asking whether other
paths might have had even
better outcomes?”*

Solving for pattern...

Now, some forty years later, with a paltry trickle of resources as compared to those going toward the spread of chemical, large-scale, and bio-engineered agriculture, we can see striking progress in achieving replicable, sustainable, non- or low-chemical farming. We have a clearer sense of the “paths not taken.” These paths suggest an entirely different way of seeing: instead of a world dissected into distinct problems, the varied crises of world agriculture and hunger are understood as aspects of a single pattern, in which all facets connect. Touching one aspect ripples out to all the others. To evoke this approach in our recent book, my daughter Anna and I borrowed a useful phrase from the poet and farmer, Wendell Berry, and called this approach “solving for pattern.”

Sustainable farming—the approaches that work with nature’s genius through intercropping, “green manure” (such as clover to return nitrogen), biological pest control, composting, careful crop sequencing—is an intriguing example of “solving for pattern.” Farmers consider the complex pattern of interactions among crops, ground cover, animals, insects, and more. They utilize more knowledge but fewer purchased inputs and still maintain respectable productivity. Recent research looked at over 200 sustainable farming projects in 52 countries, covering approximately 70 million acres. This university-sponsored survey was unequivocal. Sustainable practices can “lead to substantial increases” in production. In fact, some root crop farmers realized gains as great as 150 percent using more sustainable methods.⁶



Many of the projects in this study were in the non-industrialized world where advances were measured against existing, non-chemical practices. But even within the industrial countries where farmers obtain high yields with chemicals, research shows that sustainable practices do not lower yields after the transition period. According to the U.K.-based Institute of Science in Society, replicated research at seven U.S. universities, as well as the Rodale Research Center in Pennsylvania and the Michael Fields Center in Wisconsin, document yields from organic farming that are comparable to those using chemical inputs.⁷

Sustainable practices are by their nature more useable by poor farmers with little or no cash to buy seeds, chemical inputs, nor access to irrigation. These approaches therefore stand a much better chance of improving the lives of the world’s poor, most of whom are still small farmers.

Solving for pattern has another virtue. By the very fact that it builds on local knowledge and requires learning and care on the part of the farmer—true decision-making skills—it is empowering. Farmer empowerment, the self-confidence and actual capacity to solve problems oneself, may be the one of the most important “ripples” of sustainable approaches. Dependence on commercial suppliers of inputs, sold through advertising, can be as dis-empowering as prior forms of colonialism in which decision-making was taken out of farmers’ hands. And empowerment, once unleashed, can be unstoppable.

In our research for *Hope’s Edge*, Anna and I talked with village women, members of the Green Belt Movement, a grassroots women’s organization in Kenya devoted to environmental conservation and community development, founded by Wangari Maathai.⁸ These unschooled women, we learned, are accomplishing what few would have considered possible. Confounding the skepticism of government foresters, they have created 6,000 cooperative tree nurseries throughout the country and planted 20 million trees.

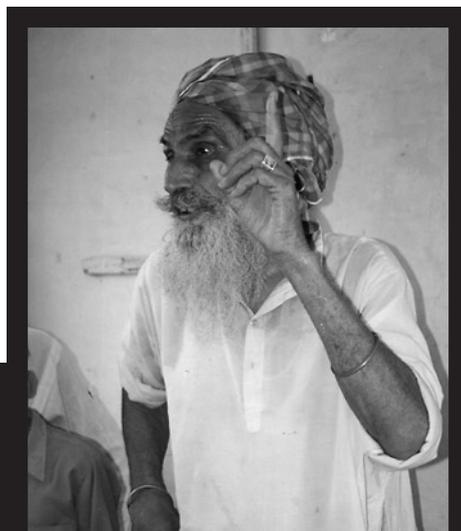
Emboldened with new confidence, Green Belters then began to question the impoverishing dependence on single exports like

coffee, where producer prices have now hit an historic low. They began relearning the best of traditional farming practices and reclaiming lost crops. As I was leaving a village involved in the Green Belt Movement, Lea Kisomo, a Green Belt elder, grabbed my arm. “Tell your people that we Kamba people had lost our culture, especially our food security,” she told me, “but now we are going to regain it. What we’ve lost, we’re getting back.” The results are stronger community bonds, enhanced food security, the fostering of new skills and the development of problem-solving groups.

Not surprisingly, this new consciousness was threatening to the government of strongman Daniel arap Moi. In fact, under his reign, Maathai had been jailed and beaten more than once for her pro-democracy, pro-environment activities. So, if Anna and I had predicted two years ago that Maathai could break through the deadlock of old ways of thinking and gain a powerful voice within the Kenyan government, we would have been dismissed as utterly naïve. Yet in recent parliamentary elections, she outpolled her closest opponent 50 to one and was appointed deputy minister for the environment and natural resources. Celebrating women danced in the streets of Nairobi!

Navdanya...

In India as well, we met those waking up to the dangers of the “solve by dissection” approach. One farmer network, instigated by the New Delhi-based Research Foundation on Science, Technology, and Ecology is called *Navdanya*, meaning nine seeds. The movement was founded to help preserve India’s agricultural diversity and promote food security. On Navdanya’s demonstration farm, farmers



learn how to save indigenous seeds and grow food organically and are encouraged to share knowledge and seeds. Navdanya is creating a national network of community seed banks and helping villages re-establish traditional practices in what are called “Zones for Freedom”—areas made up of villages that pledge to reject chemical fertilizers and pesticides, genetically modified (more accurately termed transgenic) seeds, and patents on life forms.

Visiting villages in the foothills of the Himalaya that are part of the Navdanya network, we saw painted marks on many white-washed stone walls identifying seed savers and sharers who receive seeds from Navdanya each season. In return for taking shared seed, the farmers promise to give back as much as two times the amount they received, or to share their seeds with at least two other farmers, and inform Navdanya.

Leaving one tiny village, Pullinda, for the next village, a hut caught my daughter’s eye. How could it not? Big Hindi letters covered virtually its entire side. “What does that say?” she asked our translator. “We reject Monsanto and gene patenting. We reject terminator technology,” was his answer. Hearing this, we chuckled with surprise at this unexpected sign of the penetration of western agribusiness, and the resistance to it by farmers who are finding a better path for their communities.

After we returned to the U.S., we heard from Jafri, the Navdanya scientist. He told us that, in the area of the Punjabi village we visited where farmers’ crops failed due to pesticide resistance, 128 farmers are now using Navdanya’s traditional wheat varieties instead of the commercial varieties. In this case, early in the transition, yields per acre are only 50 to 75 percent of what they had produced with Green Revolution varieties, but the farmers are still coming out way ahead. Without chemicals, their costs—which had before buried them in debt—are only one quarter of what they were.⁹

That sustainable agriculture (including, but not limited to, approaches such as organic agriculture, agroecology, permaculture, and bio-intensive farming) still has a ring of impracticality about it for many people is testament to the power of advertising and

the ownership of major media by corporations dependent on selling commodities. Sustainable approaches are based primarily on learning to work with nature, not on buying products to overwhelm nature. In the calculus of the existing corporations, sustainable approaches don't offer big markets.

At the very moment I was writing the last paragraph, I received a call from a *New York Times* correspondent who focuses on agriculture. "I think the sustainable stuff is great and bio-tech has a lot of potential downsides," he said, "but with the world's population still growing, I don't think sustainable farming can feed us all." This dismissal of sustainable approaches also continues, I believe, because the real costs of the dominant approach (from pesticide poisoning to the loss of seed varieties) are not paid by the those who profit by it, and those costs continue to remain invisible to the broad public—even as we pay for everything from higher disease rates to unemployment benefits for displaced farmers. As author John Robbins has written about the illusion of cheap food, "The cost of cheap is very, very high."¹⁰ We each have a role to play in making the real price visible.

Beyond primitive marketism...

In Karl Polanyi's 1944 classic, *The Great Transformation*, we learn how suddenly, in a blink of historic time, economic life was ripped out of its rich community context; how market exchange, over thousands of years embedded in family, culture and nature, came to be seen as a distinct realm over and above all others. But even the insightful Polanyi probably couldn't have foreseen the degree to which market fundamentalism would triumph by the

*"We don't stop
to think that there
may be many ways to
build market economies,
not just one."*

21st century. What Ronald Reagan called the "magic of the market" has become the world's dominant religion. Now that primitive marketism has seized our common consciousness it is hard to take a fresh look—to see that we've actually accepted the illogical notion that a system of production and exchange built on the single principle of highest return to existing wealth will produce benign outcomes and food systems healthy for the earth and our bodies.

Pulling away another layer of the dominant map, we can see what lies beneath the specious premise that return to existing wealth should tower above all other considerations: above community well-being, above clean water and healthy soil, above life itself. We must dig down to our very assumptions about what it means to be human. Today in much of the industrialized world the view—now taking hold around the globe—is that Thomas Hobbes was right in concluding, *Homo homini lupus*, we are to each other as wolves. Since Hobbes knew nothing of the social nature of wolves, he was really stating that our nature is to be at each other's throats. His 17th century insights matched perfectly with the mechanistic worldview then emerging, one in which human beings were nothing but "social atoms," each pursuing our own inertial trajectories, all in splendid isolation of one another.

Within this view of ourselves, it makes perfect sense that we have sought overarching, impersonal laws to mediate human affairs. And "the market" looked like a good one. After all, we self-seeking social atoms would inevitably muck up any attempt to come together to deliberate over common ends. So it is best to turn over our fate to the market and slap any human hand that wants to tamper with it. Isn't this the melody of today's Neo-Liberals? With this skewed view of ourselves, it's understandable that we don't stop to examine the nature of this market, our salvation. We don't stop to think that there may be *many* ways to build market economies, not just one. Nowhere is it pre-ordained that a market economy can only work when premised on highest return to existing wealth.¹¹

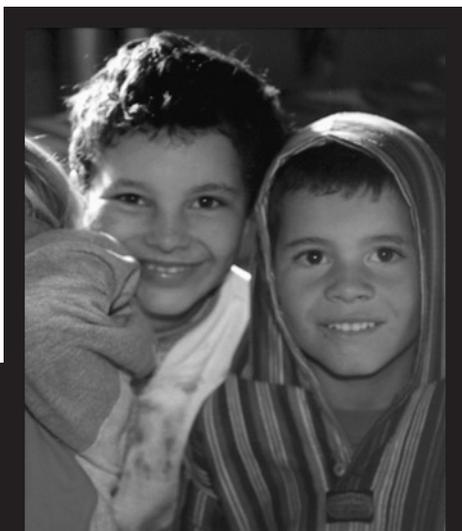
In some ways, the grip of primitive marketism—and the dominant mental map, more generally—seems never to have been tighter. It appears everything is being turned into property, from drinking

water to human genes, and we are told that deliberative devices for sharing the commons for common benefit have all flopped. At the very same time, unseen by most of us a new mental map is emerging. It is cracking through the thought traps that have put our species on a death march and illuminating new pathways toward solutions. If you look, you can see them. But you have to really look.

Re-embedding the market in community...

Before we set out on our journey to write our book, Anna and I packed in quite a bit of background reading, including Thomas Friedman's 1999 *The Lexus and the Olive Tree*. Here, this four-time Pulitzer prize-winner argues that there is no alternative to corporate globalization: "...[T]here is no more mint chocolate chip, there is no more strawberry swirl, there is no more lemon-lime. Today there is only [free-market] vanilla and North Korea."¹² (And, of course, no one is about to choose North Korea!) Friedman uses the example of Brazil to bring his point home, describing the only opposition to the global corporate march as disorganized, frustrated losers, bereft of ideology or even a manifesto.

Arriving in Brazil ourselves, we were astonished to see what Friedman's mental map had blinded him to—the largest social movement in the Hemisphere, and one that embodies not only a sophisticated critique of globalizing corporatism but an alternative coming to life in thousands of communities across Brazil. That blind spot of Friedman's is the Landless Workers' Movement, called by its Portuguese acronym MST, a roughly 20-year old undertaking that has settled a quarter of a million families on



15 million acres of land throughout almost every state of Brazil. Taking advantage of a constitutional provision mandating the government to redistribute unused land, the MST has used civil disobedience to press its case.

As we talked with newly settled MST families, they told us that they had discovered acquiring land is only the beginning. They have found they have to consider all aspects of community building, including the role of economic profit relative to other values. "Capitalism doesn't care about the individual," one young member told us, and we wondered at how discordant his comment would sound to an American ear.

And what they are coming up with is hardly "anti-market." Some MST farms, co-ops, and small businesses even sell internationally. But market exchange is embedded in other values, putting community well being, for example, and the health of the environment in pride of place. MST farmers told us they were rejecting chemical agriculture not only because of the hazard to their own health (many had suffered pesticide poisoning as farm workers) but out of concern that chemical residues might end up hurting the consumer. In a sense, these gutsy Brazilians may in fact be reversing Polanyi's "great transformation" as they re-embed market relations in a wider circle of values.

One hears so often, "We can't take this market-reduced-to-tool-of-community approach: It's inefficient. It's too costly." But consider this: A Brazilian research center recently totaled the cost to the government of land reform, including compensating landowners, legal expenses, and credit for the new farmers, and compared that to the price tag of the same number of people migrating into an urban shantytown, which requires government services and infrastructure. It turned out that the cost to the government of the latter (the market's solution) exceeds in just one month the cost to the government of an entire year of settling new farmers.¹³

Fair trade...

Primitive marketism tells us that prices are simply the outcome of impersonal forces automatically registering costs of production and consumer demand. The notion of what is a “fair” price, a value judgment, doesn’t enter into the equation. Thirty years ago, when I first began to try to understand the roots of hunger, it seemed that price was a significant factor. Are we really powerless, I wondered, against the impersonal forces determining price? Over the decades, the forces actually at play gradually came into focus for me. In the eighties, for example, I studied the plight of American farmers during one of the big price downturns that drove tens of thousands of farmers off the land. With only a handful of grain traders operating worldwide, I understood that farmers are “price takers,” because there are hundreds of thousands of them and only a few Cargills. What bargaining power do farmers have in the market? Essentially none. With no bargaining power, farmers are forced to increase production just to stay in business. But markets are saturated at home and prospects abroad don’t look bright when one-half the world lives on less than two dollars a day. From this perspective, it is easier to understand why real farm prices are now approximately one-third of what they were in the 1970s.¹⁴

In 1996, senior executives of Archer Daniels Midland, “supermarket to the world,” as ADM described itself, were charged with price-fixing to rig world markets, costing consumers millions in higher prices. A year before the company’s indictment, ADM’s chairman Dwayne Andreas, acknowledged, “There is not one grain of anything in the world that is sold in the free market. Not one. The only place you see a free market is in the speeches of politicians.”¹⁵

*“Basing trade on
the premise that producers
are assured a fair price has
long seemed to me an obvious
centerpiece of any strategy to end
the poverty and powerlessness
at the root of hunger.”*

Beyond monopoly power in the trading and processing industries (four companies, for example, control 80 percent of meat packing in America), prices for farm commodities reflect policies of the World Bank and International Monetary Fund, which have told poor countries that one way to earn foreign exchange to pay their crushing \$1.45 trillion debt and to “develop” is to focus on growing export-crops. Of course, with many countries growing the same commodities, markets are glutted, and prices have fallen dramatically. Today’s coffee prices are as low as they have been in 100 years.

The notion that prices reflect inexorable forces of supply and demand doesn’t hold up under even the most cursory scrutiny. So, if we admit there’s no “magic” in the market, to use Ronald Reagan’s favorite term, no one immutable way the market must act, then we have to ask, *What kind of markets do we want?* How can we make sure that prices reflect real costs, including a decent return to farmers? Basing trade on the premise that producers are assured a fair price has long seemed to me an obvious centerpiece of any strategy to end the poverty and powerlessness at the root of hunger. After all, the majority of the world’s poor are still small farmers and others living in rural areas.

Shortly after *Diet for a Small Planet* was published I decided to learn about the coffee trade. Coffee is the second most valuable commodity traded in the world. If I could understand the dynamics of how the coffee trade traps the more than 20 million small coffee farmers in 80 countries in poverty, I thought I could grasp the more general pattern at work in the harsh lives of small producers of other commodities like bananas, tea, cocoa, and spices around the world.

I soon learned that small coffee producers face two huge problems. For one, coffee prices swing wildly. So extreme are the spikes and dips on graphs of world coffee prices that they always looked to me like Pinocchio on a lie detector test. Between one year and the next during the ‘90s, there was a three-fold price fluctuation. Plus, small coffee producers receive only a tiny share, about five percent, of what consumers in the North pay for their product. Most producers work all day to earn less than \$3.00, or about

what consumers here spend on just one Grande Macchiato at Starbucks. Imagine if coffee growers were compensated like the producers of the world's first-ranked commodity traded—oil!

To begin to address the inequity of prices paid to producers of raw commodities, a fair trade movement began in Europe in the 1980s. Now it has taken hold in the United States. In the last three years demand for fair-trade coffee here has tripled to seven million pounds. In the U.S., fair trade works like this: Importers and roasters pay a fee to Transfair USA, the certifying organization of the fair trade movement, and a premium for each pound of coffee. This allows Transfair to implement a fair 'floor' under prices coffee farmers receive—no matter what the perturbation of the world market. Like certifiers in Europe, TransFair USA ensures coffee with the "Fair Trade Certified" label meets specific criteria—that, for example, the coffee is produced by democratically organized small farmers with full knowledge of market prices.

Without protection, small coffee farmers may get 25 cents for a pound of coffee that retails here for \$8 or more. The fair trade network assures a floor of \$1.26 a pound and makes sure it goes directly to farmers. The result is that annual incomes have risen from \$500 a year to around \$2,000 on average. "That still may not sound like much, but the difference in the lives of coffee growers is huge," Transfair's executive director Paul Rice told me, "In practical terms it means many farmers are able to stay on the land, keep their farm, and feed their kids."

"[A] truly sustainable agriculture will not emerge if only resource issues like soil and water quality are considered but the human and social issues of how food is produced and marketed are ignored."

Solving for pattern here at home...

In the last decade a citizens' movement has come to life in the United States as well, one weaving together the varied dimensions of healthier farming and food. The fair trade movement is only one part of it. We can all look for, ask for, and buy fair-trade certified coffee, and now, chocolate as well. We can "boycott," as Rice puts it, and choose only those goods for which we know workers are fairly paid. A useful resource for this information is the website: www.idealswork.com.

But there are many threads weaving this new pattern and you here in Iowa are in the vanguard. Your Leopold Center for Sustainable Agriculture at Iowa State University has been at the forefront since 1987, putting you well ahead of the curve. According to Neil Hamilton, Drake University professor and chair of the three-year-old Iowa Food Policy Council, five years ago the Center decided to start looking at food in Iowa systemically. "[A] truly sustainable agriculture," writes Hamilton, "will not emerge if only resource issues like soil and water quality are considered but the human and social issues of how food is produced and marketed are ignored." This shift in perception led Leopold Center researchers to look at the benefits of direct farm marketing and local food processing. It led the Center to explore the impact of food purchasing decisions by Iowa schools, state government, and businesses and recommend state policy supporting local purchases. Buying locally helps sustain local farmers, counters the growing concentration of food industry middlemen, reduces transportation energy costs, and allows consumers access to fresher food. Taking leadership in raising public awareness, the Leopold Center decided to feature Iowa raised food at its events and conferences. "The simple act of asking chefs to work with local farmers to feature Iowa food," says Hamilton, "has helped begin a sea change in appreciation for local food."¹⁶

As Hamilton notes as well, this appreciation is linked to other breakthroughs. One is the community-supported agriculture (CSA) movement in which farmers and consumers link and share

risk. Consumers buy a “share” at the beginning of the season entitling them to the fruits of the farmers’ labors. CSAs emerged in the mid-60s in Germany, Switzerland and in Japan where it is called “teikei.” Literally teikei means “partnership” but carries a meaning closer to “food with the farmer’s face on it.”¹⁷ Seventeen years ago no CSAs existed here, but since 1986 a growing movement of dedicated farmers and consumers has been working to establish CSAs across the country. Today, there are more than 3,000 serving as many more than 30,000 families.¹⁸ I was delighted to learn on a visit to England this fall that our example here has inspired a fast-growing CSA movement there, one that has won government support.

The rapid spread of farmers’ markets also reflects this growing awareness of the multiple values of linking growers and eaters directly. Between 1994 and 2002, the number of farmers’ markets grew by almost 80 percent to 3,100 nationwide. In fact, farmers’ markets are so popular that in some cities that organizers can’t find enough small farmers to supply them.

Policies encouraging local buying, farmers’ markets and CSAs all reflect a letting go of what I’ve called primitive marketism. They acknowledge the community’s need to set values and parameters within which the market works. In this way, the market returns to its function as a means to healthy communities, not an end in itself.

Food becomes a right of citizenship...

Let me take you once more beyond our borders, again to Brazil, to see the market in new light.

*“In this way,
the market returns to
its function as a means
to healthy communities,
not an end in itself.”*

On our research travel, Anna and I visited Belo Horizonte, that country’s fourth largest city. We felt we had to go there because we’d read that in 1993 its government had declared food a right of citizenship. In effect, the newly elected city administration, representing the same political party of the country’s new president, had said, “You may be too poor to buy enough healthy food, but you are still a citizen—and we are still accountable to you, even if the market is shutting you out.” This shift of mental map triggered dozens of innovations that have begun to end hunger in this city: little patches of city-owned land were made available at low rent to local organic farmers as long as they would keep produce prices within the reach of poor, inner-city dwellers; the city redirected the 13 cents provided by the federal government for each school child’s lunch and instead of buying corporate-made processed foods began buying local organic food, resulting in enhanced children’s nutritional intake. To keep the market honest, the city teamed up with university researchers who each week post the lowest prices of 45 basic food commodities at bus stops and broadcast them over radio. This way, inner city dwellers had sound information to fight against price gouging by unscrupulous grocers. Through the new lens of ‘food as a right of citizenship’, people also began to see abundance where they had never seen it before. Manioc leaves and eggshells, always tossed out as waste, were processed into a nutritious additive for bread for school children. These were only a few of the initiatives that flowered as the city reached out to form alliances with citizen, religious and labor groups. All of these efforts consume, we were told, only one percent of the municipal budget. No doubt Brazil’s new president, whose address began this talk—former union leader Luis Inazio “Lula” da Silva—will look to Belo Horizonte’s innovative government and citizens for clues as to how to implement his “zero hunger” pledge for Brazil where at least 25 million now go without.

At the end of our stay in Belo Horizonte, Anna and I sat with Adriana Aranha, whose job in city government is to coordinate all these efforts. I asked, “When you began, did you realize how much difference your efforts might make? Did you know how out of step you were with the neo-Liberal approach [the term most widely

used in South America for what I'm calling primitive marketism] that says government can do no good and the market can do no harm?"

Adriana went on and on, animated and intense, in Portuguese. And we couldn't understand a word. We sat patiently, but when I saw her eyes start to tear up, I couldn't wait any longer. So I nudged our interpreter. "Please, what is she saying?" He translated for us, "I knew we were out of step," Adriana said, "we had so much hunger in the world, but what is so upsetting, what I didn't know when I started this, is it is so easy. It is so easy to end it."

I have thought about this conversation many, many times since. How was Adriana able to look at this problem and say, "It is easy to solve"? I realize now that this kind of understanding can be reached if, and only if, we can see with new eyes, if we can free ourselves from the choking momentum of the inherited mental map. Then...it is easy, for we're suddenly able to perceive new, more life-serving forms emerging.

These breakthroughs may be hard to find not only because the prevailing media doesn't cover them but also because they do not constitute a new "ism." They don't add up to a new, packaged formula. They are, like the Navdanya network in India, the Green Belt Movement in Kenya, the triumphs of the Brazilian landless, and the community-supported agriculture movement here, about ordinary people trusting their deepest values and their common sense. In the process, they are giving birth to new mental maps where human beings are more than narrow consumers.

*"Our inner compass,
our common sense and
innate desire to sustain life,
is jarred each day by the
contrast between the world
out there and the
world inside."*

Multiplying courage...

Before closing, let me suggest a historical perspective to help us appreciate this extraordinary, unprecedented moment in which you and I happened to be alive. It is the first moment in the evolution of our species in which we humans are aware both that we, not some supernatural force, are the creators of our world and yet, at the same time, we are aware that it doesn't feel or look like our creation at all. We cannot imagine even the most callous among us getting up in the morning, and saying: "Yes, I want another child to die of hunger." Yet over 30,000 are dying daily from hunger and hunger-related disease around the world. Not one of us would arise and add to our day's checklist, "How can I contribute to global warming?" Or, "what can I do to eradicate one more species?" Or, "how can I make sure that in this new century, violence—costing over 100 million, mostly civilians' lives in the last century—continues to spread?" So, if we feel that simply living in this world takes more and more effort, there may be good reason. Our inner compass, our common sense and innate desire to sustain life, is jarred each day by the contrast between the world out there and the world inside. We know we are responsible; yet we cannot imagine our fellow humans willingly choosing this world-in-decline.

How can we understand this paradox? For decades, I have been asking myself, "What could possibly be powerful enough to create a world that none of us feels we're choosing." Over the decades, I've come to believe there is only one thing that powerful. It is the power of ideas.

Earlier you'll recall I quoted Erich Fromm who reminds us that it's our frame of orientation, what I call our "mental map," that shapes what we believe our nature to be and what, therefore, we believe is possible. This is all well and good, *if* our map is life serving. But what if it is destructive, if our map instead puts us collectively on a death march? I have come to believe, unfortunately, that many features of the dominant Western mental map formed over the last three centuries, and now spreading globally, are just that—life denying.

Within the dominant mental map, we human beings are reduced to caricatures of ourselves, nothing more than selfish little accumulators, ego-centered materialists. With that view of ourselves, it does follow logically that, of course, we can do no better than to turn over our fate to the market. We are too selfish, after all, to come together to deliberate over a desirable common future (like that quaint thing called democracy). As I have noted throughout my talk, we then abdicate citizenship in favor of market outcomes and the result is what I've called primitive marketism, where more and more of life becomes mere commodities—from health care to school lunches, from water to seeds.

And where does this shrunken view of human nature leave us? Most troubling, it leaves us denying two deep human needs—our need for effectiveness, for shaping the world beyond our own survival and our need for connection, for bonds based not merely on market exchange but on genuine caring. Signs of this denial of ourselves are found, I believe, in the existence of spreading emotional distress. Worldwide, for example, suicide—the ultimate act of despair—now exceeds homicide deaths by half. Depression, the World Health Organization tells us, has grown to be the fourth leading cause of loss of productive life.

In the dominant mental map, we are expected to cut off our fellow feeling and simply compete 'dog-eat-dog'—even though the joy of cooperating may be embedded in our very cells. Researchers at Emory University in Atlanta used magnetic image resonance scans (MRI) to detect brain responses while subjects pursued the well-known simulation game, Prisoner's Dilemma. They found, to

*"What if, in today's world,
our long-prized assurance
of protection—fear as trusted
signal of threat—may actually
be keeping us trapped in a
system that is killing us?"*

their surprise, that the "brightest signals arose in cooperative alliances and in those neighborhoods of the brain already known to respond to desserts, pictures of pretty faces, money, cocaine and any number of licit or illicit delights." These responses, said the scientists, suggest, "that we're wired to cooperate with each other."¹⁹ The scientists were surprised. But their findings don't surprise our common sense; how could we have survived as early hunter-gatherers without deeply embedded and finely honed capacities for cooperating with each other?

Having defined the problem as the dominant mental map, we now must ask the next obvious question. For, if it is true that this map denies real human needs, our needs to "effect and connect," *why do we go along?* Why do we condone—and even take daily part in—what violates our deepest sensibilities? My one word answer is 'fear'—more specifically, fear of two kinds—of the unknown and of being different.

Unconsciously, of course, we have assumed that fear is not a problem. To the contrary we have believed that it helps us; listening and responding to fear actually helps us to survive. In this inherited mindset, fear—that uncomfortable, sometimes almost unbearable, bodily feeling—is an accurate reading of real threat. Fear's message is unmistakable: something is *wrong*—so stop, fight or flee. That is the way to survive.

Or is it?

When the primary threats humans faced were lion attacks, this understanding of the role of fear in helping to guarantee our survival made a lot of sense. But what if this notion of fear is outdated? What if, in today's world, our long-prized assurance of protection—fear as trusted signal of threat—may actually be keeping us trapped in a system that is killing us? Accepting the freeze-fight-flight response to fear unreflectively may block us from seeing possibilities for acting in ways that *could* save us, both as individuals and as societies. If my premise is true, our

future may depend on whether we can learn to see fear with new eyes. Rather than a warning that something is *wrong*, fear in certain circumstances can come to mean that something is *right*. In other words, to act effectively in creating solutions to reverse our global death march will likely require that we:

- *Do something different* than we are doing today, which is just another way of saying we must walk into the unknown, and
- *Risk being different*, which by definition means that we risk separation from others.

At each of these prospects, fear has one standard response, “Oh, no.” Fear says “stop.” The unknown is dangerous and being different might result in expulsion from the tribe, which we learned generations ago meant death. So if we listen to fear’s old tune, we’re blocked from doing the very things we must in order to survive. Listening to fear, we go back to the familiar, yet it is the familiar that got us into this mess in the first place! I believe that our survival and, indeed, our personal and social happiness now depend on re-examining our ideas about and therefore our responses to fear.

What if we began to see fear linked positively, rather than negatively, to exactly what we need to survive? What if we see some types of fear as a signal that we are pushing our growth edge, taking the risks we must to be true to ourselves?

*“I believe that
our survival and, indeed,
our personal and social happiness
now depend on re-examining our
ideas about and therefore our
responses to fear.”*

How do we transform fear? We often think of fear as originating outside of us—as an external force such as terrorists’ threats or a tightening job market—but one night in Nairobi, Kenya, my assumptions about fear were changed forever. My daughter and I, along with a small group of other Americans, were spending the evening with Reverend Timothy Njoya, an ally of Wangari Maathai, the founder of the Green Belt Movement I mentioned earlier. That night I learned Reverend Njoya had done what I thought no human being could do.

He had been preaching a pro-democracy message in his country despite repeated threats from a dictatorial government. Because of his activities, he was attacked in his home by seven assailants wielding swords. A slight and gentle man, he acted out for us what happened to him that night. As we listened in horror, he described his fingers being sliced off, his belly slashed open...and he was chuckling! Even listening to his account second-hand, I found my heart beating wildly. Then he told us that as he lay on the floor, certain he was dying, he began to give his treasures away to his attackers—to one, his favorite Bible, to another, his library, and so on. I thought to myself, how could this be? How could anyone respond to such brutality with anything other than sheer terror and ‘life-preserving’ aggression? So I asked. “Dr. Njoya, isn’t fear a natural response to threat? Isn’t it instinctual? How have you mastered it?”

Sitting deep in the cushioned armchair, his face framed by a stiff white priest’s collar, Njoya paused for only a moment. Then he said, “Fear is an energy that comes from inside us, not outside. It is neutral. So we can channel it into fear or paranoia or euphoria, whatever we choose.” “Imagine a lion,” he said, arising and crouching. “When a lion sees prey, or a predator, it senses fear first. But instead of lunging blindly in defense or in attack, it recoils.” Njoya moved back, too, leaning on his left leg and crouching lower. “The lion pauses a moment, targets his energies. Then he springs.”

"We can do the same. We can harness our would-be fears, harmonize our energies and channel them into courage." His whole body, his whole life, told us this is possible. And in fact, Reverend Njoya's response—one of compassion and generosity in the face of inhumanity—so moved his assailants that it was they who rushed him to the hospital where doctors saved his life. From that night onward, I have repeatedly reminded myself that I don't have to hope that fear will go away and leave me alone, once and for all. I can instead recognize that it is not an external force but one that is within me. I can therefore harness my fear and, like the lion taking aim, choose where and what I do with it.

I have become convinced that we can learn to *expect* fear when stepping beyond our trodden paths. We can learn to accept that the unknown is frightening to most of us, while coming to understand that it is through this walk into the unknown that we gain what we really seek—not freedom from fear but joy in discovering that we have choice.

The second lesson I have learned about fear through my daughter's and my journey is this: to reverse the planetary march to disaster, our world needs for each of us to listen to our deeper selves. Yet ironically, it is precisely in connecting with our personal, unique gifts that we face the terrifying prospect of being different and excluded. What shall we do? Rather than denying our need for acceptance, we can become more conscious choosers of connection.

*"...to reverse the
planetary march to disaster,
our world needs for each
of us to listen to our
deeper selves."*

Allow me to expand on this idea for a moment. For better or worse, our wonderfully social nature—recall the brain experimenters' findings I mentioned earlier—is double edged. Our need for acceptance is so intense that we often end up going along with that which violates our own good sense just so that we can avoid expulsion from our "tribe." This is perfectly understandable, when we realize that humans evolved in social groups in which being cast out could literally bring death. No doubt that fear of exclusion still drives us today, as we relate to our peers and to the broader culture. So, perhaps a great deal of compassion for our species is in order. We evolved knowing our survival meant staying with the pack; now our planetary survival depends on breaking from the pack. This is a tall order and something very hard for human beings to do.

Acknowledging this 'need for inclusion' aspect of our social nature is a first step. However, acknowledging it should not lead us to suppressing it; that is probably not possible anyway. The wise path is to use our drive toward acceptance consciously. We can deliberately choose to bring people into our lives who will reinforce our risk-taking and approve and even celebrate the new aspects of ourselves we are bringing into being. Since we inevitably absorb qualities of the people closest to us, a powerful tool for changing ourselves is carefully to choose a "tribe" with the qualities we are building.

In a sense, this is why Anna and I wrote *Hope's Edge* in the way that we did, introducing our readers to risk-takers all over the planet who are breaking free from the dominant mental map. That's why I leavened this talk with stories of real people. I hoped that by vicariously rubbing elbows with such people, my audience would come to realize that a new tribe, or tribes, are emerging, and we can join with them, and be reinforced by them, as we ourselves are willing to risk.

Pushing the edge of hope...

Now, let me go back to Brazil, where I began this talk. The World Social Forum was about hope, about possibility. The tens of thousands of people who gathered did not see themselves as victims of forces beyond their control. One of the flyers handed out my third day there, read: "Make like Lula [the president], participate! This is a story we are creating together." Hope, I am learning, does not come from just assessing what is possible and striving for that—we could never have predicted the startling turns of the last few months both in Kenya (with Wangari Maathai's victory) and Brazil (with Lula's election) that I have shared with you. In the awareness of possibility itself—the limits of which are *always* unknowable—we are free to focus on creating the world we want. With this understanding, we realize that hope is not what we seek out in evidence; it is what we *become* in action. So as we bring hope to life and work toward building a new world of equity and abundance for all, I challenge us to learn to walk with fear, to make it our friend, and to welcome those into our lives who will celebrate our courage. This is a story we are creating together.

*"With this
understanding, we realize
that hope is not what we seek out
in evidence, it is what we
become in action."*

¹ Brian Halweil, "The United States Leads World Meat Stampede," WorldWatch Issues Paper, July 2, 1998.

² Naylor, R.L., J. Goldberg, J.H. Primavera, N. Kautsky, M.C.M. Beveridge, J. Clay, C. Folke, J. Lubchenco, H. Mooney, and M. Troell. 2000. "Effect of aquaculture on world fish supplies," Nature 405:1017-1024. See also: Pauly, D., Christensen, V., Dalsgaard, J., Froese, R. and Torres Jr., F.C. 1998a. "Fishing down marine food webs." Science 279: 860-863.

³ William Fulbright Foote, "Swimming Against the Tide of Overfishing," Los Angeles Times, December 29, 2002.

⁴ Gary Gardner and Brian Halweil, "Overfed and Underfed: the Global Epidemic of Malnutrition," WorldWatch Institute, WorldWatch Paper 150, March 2000.

⁵ David Pimentel, T. W. Culliney, and T. Bashore, "Public Health Risks Associated with Pesticides and Natural Toxins in Foods," in E. B. Radcliffe and W. D. Hutchison, editors, Radcliffe's IPM World Textbook, (St. Paul, Minnesota: University of Minnesota, last revision, September 2000). Available online at <http://ipmworld.umn.edu>. An estimated one to two million chemical preparations are on sale around the world today by the chemical industry, the world's second biggest manufacturer (after cars). Its yearly sales are \$1.6 trillion – and much this in sales of pesticides whose toxicity to humans is not known.

⁶ Jules Pretty and Rachel Hine "Reducing Food Poverty with Sustainable Agriculture," Centre for Environment and Society, University of Essex, UK, February, 2001. To view the report online: <http://www2.essex.ac.uk/ces/ResearchProgrammes/SAFEWexecsumfinalreport.htm>

⁷ Lim Li Ching, "Organic Agriculture Fights Back," Institute of Science and Society, October 2002, The Institute of Science in Society, PO Box 32097, London NW1 OXR. Website: www.i-sis.org.uk

⁸ http://www.geocities.com/gbm0001/All_Frames.html

⁹ Afsar H. Jafri, "Navdanya's Seeds of Hope Programme in Bhatinda Punjab," Research Foundation for Science, Technology, and Ecology, 2000.

¹⁰ John Robbins and Dean Ornish, The Food Revolution: How Your Diet Can Help Save Your Life and Our World, Conari Press, 2001.

¹¹ Marjorie Kelly, The Divine Right of Capital, Berrett-Koehler, 2001.

¹² Thomas L. Friedman, The Lexus and the Olive Tree (New York: Farrar, Straus, Giroux, 1999) 86.

¹³ Peter Rosset, Access to Land: Land Reform and Security of Tenure, World Food Summit/Five Years Later, Civil Society Input/Case Studies June, 2002.

¹⁴ Key Indicators of the U.S. Farm Sector, Major Crops, a 27-Year History with Inflation Adjustments, January 2002 Annual Update, by John M. Dittrich, Policy Analyst, The American Corn Growers Association, Washington, D.C. (202) 835-0330, www.acga.org

¹⁵ Quoted by Dan Carney in "Dwayne's World," Mother Jones, January 1995.

¹⁶ Neil D. Hamilton, Drake University Agricultural Law Center, "Putting a Face on Our Food: How State and Local Food Policies Can Promote the New Agriculture," 2001.

¹⁷ Elizabeth Henderson with Robyn Van En, Sharing the Harvest: A Guide to Community-Support Agriculture (Chelsea Green Publishing Company: April 2000) xvi. This book is an excellent resource for farmers interested in starting a CSA and for consumers interested in supporting one.

¹⁸ CSA estimate based on most recent figures available from U.S. Department of Agriculture Alternative Farming Systems Information Center. For more information about CSAs and to see a state-by-state listing visit www.nal.usda.gov/afsic/csa.

¹⁹ Natalie Angier, "Why We're So Nice: We're Wired to Cooperate," New York Times, 23 July 2002

THE INSPIRATION

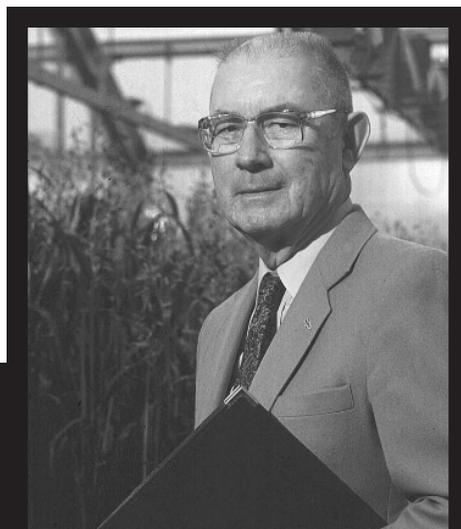
DR. JOHN PESEK, IOWA STATE UNIVERSITY EMERITUS PROFESSOR OF AGRONOMY



r. John Pesek, Iowa

State University Emeritus Professor of Agronomy, has had a long and distinguished professional career. He has made nationally recognized research contributions in agronomy in the areas of soil fertility, crop production, and the economics of soil fertilizer use. His work has led scientists to a better understanding of the effects of management practices on the environment and their combined influence on yields.

In the 1980s, Dr. Pesek chaired a National Research Council committee under the National Academy of Sciences Board of Agriculture that was directed to study alternative methods of soil management. The book resulting from their case studies, *Alternative Agriculture*, was a groundbreaking report that



documented how farming systems that used lesser amounts of pesticides, fertilizers, antibiotics, and fuel can be productive and profitable. Its publication generated worldwide attention and brought Dr. Pesek to Washington, D.C., to testify before the Joint Economic Committee of the House and Senate.

Dr. Pesek has been named a fellow of the American Society of Agronomy, the Soil Science Society of America, Crop Science Society of America, the Iowa Academy of Science, and the American Association for the Advancement of Science. He has served as president of both the American Society of Agronomy and the Soil Science Society of America and he helped establish the nation's first National Soil Tilth Center. Dr. Pesek has authored or co-authored more than 75 publications and has been active in international programs in Brazil, Mexico, Egypt, Morocco, Uruguay, Tunisia, and Russia. He was named a Charles F. Curtiss Distinguished Professor of Agriculture in 1981 and received the Agronomic Service Award in 1989.

THE CO-SPONSORS:

BLOOMING PRAIRIE WAREHOUSE

Blooming Prairie Warehouse, a division of United Natural Foods, Inc., is a wholesale distributor of organic and natural products, including packaged grocery, refrigerated, frozen and bulk foods as well as household, health and beauty and nutritional supplements. It serves retail stores, buying clubs, restaurants, and other customers throughout the upper Midwest since its inception in 1974. Blooming Prairie has locations in Iowa City, Iowa, and Mounds View, Minnesota and is a long-time supporter of organic and sustainable agriculture. <http://www.bpcop.com>

IOWA STATE UNIVERSITY EXTENSION

Extension is the educational outreach arm of Iowa State University and directly serves Iowans in all 99 counties. Extension is a partnership of local, state and federal resources and meets the daily needs of citizens in agriculture and natural resources, families, communities, youth and 4-H, and business and industry. <http://www.extension.iastate.edu>

IOWA STATE UNIVERSITY GLOBAL AGRICULTURE PROGRAMS

International Agriculture Programs (IAP) is the ISU College of Agriculture office responsible for promoting mutually beneficial global connections among students, faculty and staff. The mission of IAP is to globalize learning, discovery, and engagement to serve the people of the state of Iowa, the nation and the world. <http://www.ag.iastate.edu/global>

LEOPOLD CENTER FOR SUSTAINABLE AGRICULTURE

The Leopold Center for Sustainable Agriculture was created by the Iowa General Assembly as part of the 1987 Iowa Groundwater Protection Act. Its purpose is to identify negative impacts of agriculture, contribute to the development of profitable farming systems that conserve natural resources, and inform the public of new research findings. The Center accomplishes its mission through competitive grants, interdisciplinary research issue teams, and education programs. Results of the Center's programs are disseminated through numerous Center publications and through presentations at conferences and other training opportunities, developed in cooperation with ISU Extension and other organizations. <http://www.leopold.iastate.edu>

NEW PIONEER COOPERATIVE, IOWA CITY

New Pioneer, a democratically organized natural foods cooperative, was formed in 1971 for the purpose of making healthful food produced in an ecologically sound manner available to its members and the wider community. Over the intervening years, New Pioneer has expanded to include a hearth bakery, naturally raised meats, Fair Trade coffee, and fine wines from micro-wineries. The cooperative features local and organic foods whenever possible and it supports the work of Table to Table Food Rescue, a non-profit organization dedicated to reducing hunger by transporting usable but not salable food to the hungry. New Pioneer Cooperative serves its 13,000 members from two stores: the flagship store at Washington and Van Buren in Iowa City, Iowa; and its new facility in Coralville, Iowa. <http://www.newpi.com>

NORTH CENTRAL REGIONAL CENTER FOR RURAL DEVELOPMENT

The North Central Regional Center for Rural Development, located at Iowa State University, is one of four regional centers coordinating rural development research and education throughout the United States. The mission of the NCRCD is to initiate and facilitate rural development research and education programs to improve the social and economic well-being of rural people in the region. The NCRCD also provides leadership in rural development regionally and nationally by identifying, developing and supporting programs on the vanguard of emerging issues. <http://www.ncrcrd.iastate.edu>

WOMEN, FOOD AND AGRICULTURE NETWORK

In February of 1997, a group of women at the Practical Farmers of Iowa Women's Winter Gathering agreed to form a network to act on their long-standing concerns on to link and amplify women's voices on the issues of food systems, sustainable communities, and environmental integrity. Its goals are to: promote sustainable agricultural and community structures; insist on social and ecological justice for current and future human and non-human communities; provide opportunities for education on economics and environment that articulate a holistic view of agriculture, instill a sense of place, and draw upon useful experiences from the past; create networks that support communities of growers, consumers, workers and others who strive for sustainability, increase effective access to and use of existing resources, engage participants in experiential learning and; advocate change by exploring alternatives and challenge the globalization of economies, cultures of domination and institutionalized discrimination and the disintegration of landscapes. Though centered in Iowa, WFAN members come from over 25 states and several other countries. <http://www.wfan.org>

THE OPINIONS EXPRESSED BY THE SPEAKER
DO NOT NECESSARILY REPRESENT THE OPINIONS OR
PRACTICES OF THE CO-SPONSORS.