CHAPTER 2

From Subsistence to Production

How American Agriculture Was Made Modern

Agriculture and Rural Life

Less than one hundred years ago most rural households in the United States sustained themselves by farming. While some agricultural products were sold for money on the open market, others were produced solely for household consumption or for bartering with neighbors. All family members, including husbands, wives, and children, contributed their labor to the economic maintenance and survival of the household. While there was a well-established division of labor along gender and age lines in many farm households, there was not a well-articulated and formalized occupational structure within most rural areas. In this social and economic context, the household, the community, and the economy were tightly bound up with one another. The local economy was not something that could be isolated from society. Rather the economy was embedded in the social relations of the farm household and the rural community.

Local communities served as trade and service centers for the farming population. Rural communities also served as places that nurtured participation in civic and social affairs, and as

such they could be viewed as nodes that anchored people to place. And, as most commentators have noted, schools played a key role in solidifying and defining community boundaries.

Two early rural sociologists, John H. Kolb and Edmund de S. Brunner, describe the settlement of the Middle West and Far West this way. "Individual farms were settled by families who went out to get land and to seek their fortunes. They settled in groups on adjoining farms and were bound together by such ties as kinship, common nationality, the same education, social, or religious purposes." Within the rural communities, "Mutual aid, exchange of work, building bees, social affairs, schools and churches soon became the organized ways of these groups."[1]

In rural households, men, women, and children engaged in a wide range of productive enterprises. On the farm, they grew crops, raised animals, cleared land, built and repaired machinery, engaged in home-based manufacturing, and maintained the farmstead. A typical farm in the United States in 1870, for example, was very small by today's standards. Most farm families survived on less than seventy-five acres. Indeed, in 1870 less than one-third of the nation's farms had one hundred acres of improved cropland. The typical family farm produced a wide range of commodities, including dairy products (e.g., cheese, butter, milk), tobacco, fresh fruits, and vegetables. Gross sales, though crudely estimated in the nineteenth century, averaged about $1,200 a year.[2] Much of what was produced was not sold on the market but rather was bartered for goods and services in the local community or else used for home consumption.

Household-based productive activities in rural areas are more difficult to ascertain, since no systematic data were ever collected in this area. However, we know from historical accounts that the members of farm households produced a

broad range of goods for their own consumption including clothes, furniture, and housewares. Labor exchanges and bartering were also an embedded feature of the economic life in rural communities.

Doug Harper describes the social nature of "changing works" this way:

> The principle of changing works was that farmers informally organized themselves . . . to share labor. There were many forms of changing works in different regions of the country, depending on the duration of the work which needed to be done, the density of farms in a region, and the technology at a given stage of agricultural development. . . . In [Illinois in the 1920s] . . . farmers grew several crops, including large fields of grain. Each July a group of farmers in a neighborhood collectively rented a thresher, which they moved from one farm to another. Given the size of the grain fields in the region, it took a thresher crew up to two weeks to do the crop on a single farm. While harvesting the crop, the crew stayed on the farm. Thus, the farm women fed up to twenty people a day for ten to fourteen days in a row. . . . [3]

Some manufacturing of durable and nondurable goods in rural areas also took place outside of farm households. Many rural communities had metalworking enterprises, woodworking shops, and related activities. The Census of 1870, for instance, shows that in the three most rural northern New England states, Vermont, New Hampshire, and Maine, there were 12,162 manufacturing establishments. On average, these places employed fewer than ten workers. Sawmills, blacksmith shops, flour and gristmills, wagon-making enterprises, and leather-related industries, such as saddle/harness shops and shoe factories, predominated.

Much of this economic activity was organized around small, skilled, artisan shops. Artisan shops are places that employ a handful of workers and do not use water or steam power in the production process but rather rely on hand- or foot-powered machinery. Factories that relied on water or steam power were virtually unknown in the United States in the early 1800s and this type of economic organization did not penetrate rural areas of the country to any great extent until after the Civil War. In 1810, for example, only 2.8 percent of the American workforce could be found in such factories.[4] By 1870, however, 58 percent of the factories in northern New England were waterpowered and another 6.7 percent were powered by steam.

Nonfarm rural households shared many of the characteristics of households engaged in agricultural production. Nonfarm work roles, though a bit less embedded in household structures, were nevertheless well integrated into the local community. A set of distinct occupational titles that reflected a rigid and formalized division of labor was of little use in most rural areas. In fact, the U.S. Census acknowledged the ambiguity in attempting to classify rural nonfarm workers into existing occupational schemes in the 1870 Census.

> As communities advance in industrial character, functions become separated, and distinct occupations become recognized. . . . [However, in] many of the communities of the land it is difficult to draw distinctions much finer than those between the agricultural, the mining, the mechanical, and the commercial pursuit of professions. Indeed, even this is not practicable, since it is a matter of notoriety that . . . the occupations of carpenter and farmer, or blacksmith and farmer, or farmer and fisherman, are frequently united in one person. In large and more prosperous communities a clear separation

> between such incongruous occupations takes place; yet still, the carpenter, for instance, in nine out of ten counties in the United States, performs a half a dozen functions which, in cities, are recognized as belonging to distinct trades.[5]

The idea of "economic embeddedness" is clearly important for understanding how agriculture and food production were organized in the 1800s, and it has considerable value in helping understand the relocalization of agriculture that is taking place in America today as well. We know from a small, but growing, body of research in rural sociology and allied disciplines that there are many different ways rural people "make a living" and provide for their material needs today. Working for wages in a job and buying goods and services in the marketplace are the ways most Americans typically think about the contemporary economy. Indeed, from the perspective of neoclassical economics, the modern economy is one in which families and workers engage almost entirely in formal market transactions bereft of any social or cultural meaning. Beyond the marketplace of the economists, however, lies an economic terrain rich in substance and meaning. Households and communities provide the context in which economic transactions transpire. The "market," in neoclassical terms, is but one of many venues for "economic" activity.[6]

The Emergence of Modern Economic Forms

In the early 1800s, economy and society were woven of the same cloth in rural America. Agricultural production and manufacturing were organized along very similar social lines. This was the era of protoindustrialization and small-scale family farming. Labor in both manufacturing and agriculture

was relatively undifferentiated, and there were few specialized work roles. The broad range of labor skills held by one individual and the relative smallness of the production enterprises has been labeled "craft production" by many modern-day observers.[7]

As a system of economic production, craft-based manufacturing and agricultural enterprises produced a diverse array of goods for local markets. We would call this "customized production" today. The geographic landscape of rural America, then, consisted of identifiable conglomerations of economic activities that met local needs. Regional and national markets, such as they existed in the early part of the nineteenth century, were small relative to the aggregate demand of the local markets.

An economic revolution occurred in the mid-1800s in the United States with the advent of mass-production techniques in manufacturing. The system of craft production that had dominated the economic landscape for centuries began to give way to relatively large-scale ensembles of production activities organized in one central location. As Michael Piore and Charles Sabel note in *The Second Industrial Divide,* "The visionaries of mass production foresaw a world of ever more automated factories, run by fewer and ever less skilled workers."[8] While it has been assumed that advances in technology were the driving force behind mass production, recent historical scholarship has begun to show that at least initially the rise of the factory system was due not to superior forms of technical efficiency but rather to a capitalist philosophy of "so many hands, so much money." That is, the amount of profit was tied directly and almost exclusively to the amount of labor employed. For example, the best-known way for a bicycle manufacturer to increase his profits would be to add more bicycle makers to his factory. In strictly economic terms, early

mass production increased gross profits but did not necessarily raise the rate of profit. In a study of early factories in Indianapolis, Robert Robinson and Carl Briggs found "that firms with large numbers of workers and large investments in capital had no efficiency advantage over firms with small work forces and limited capital investments. There were *no economies of scale* in any industry in 1850, 1870, or 1880. Nor did the introduction of water- or steam-powered technologies—the defining characteristics of factories—result in greater output. . . . "(italics added).[9]

Over time, of course, technological improvements in manufacturing processes emerged. Water, steam, and later electrical power supplanted human labor in production. Manufacturing output became standardized and routinized. At the same time, efficient transportation networks opened up regional and national markets to local manufacturers. Mass markets articulated with mass production. Workers in factories that adopted mass-production techniques became increasingly differentiated along task lines as capital in the form of machinery was substituted for labor in many industries. Michael Piore and Charles Sabel make the point well: "By World War I . . . industry after industry had come under the domination of giant firms using specialized equipment to turn out previously unimagined numbers of standardized goods, at prices that local producers could not meet."[10] The culmination of this transformation from craft production to mass production was most evident in the assembly lines of the Ford Motor Company. In fact, the system of mass-production manufacturing that is organized around assembly-line forms of social organization has taken on the name "Fordism" in the contemporary economic organization literature.[11]

Early Agricultural Development

Agriculture was not immune to the organizational changes experienced by the manufacturing sector. The organization and operation of modern American farms bears little resemblance to the way agriculture was organized in the mid 1800s. The forerunners of "scientific agriculture" can be traced to the lyceum and Chautauqua movements of the 1820 to 1840 era. During this period information about the latest advances in agriculture and farming was passed along through community-based educational efforts. Farm households came together in their local neighborhoods and communities to share information, to exchange ideas, and to learn new techniques in the local lyceums and through the traveling chautauquas.[12]

The organizing impetus behind scientific agriculture in the United States was the Morrill Act of 1862. This act established the land-grant system of colleges and universities that has become the model of modern agriculture throughout the world. The formation of the land grant system was the first organized and coordinated attempt to bring "rationality" and standardization to agricultural production. The Morrill Act set in motion the introduction of scientific principles and applied science to agriculture. It represented the genesis of the "American Way of Farming."[13]

The mission of the land-grant colleges and universities was expanded in 1887 when the Hatch Act was passed. This piece of legislation created an agricultural experiment station in each state; their mission was to support basic and applied research in the agricultural sciences. In 1914, the Smith-Lever Act established a mechanism to fund a nationally organized system of outreach. In theory, the Cooperative Extension

Service was to deliver to farms and farm households the knowledge and techniques developed at the land-grant universities.

Unlike manufacturing, which adopted assembly-line techniques in the early part of the twentieth century, it was clear to most agricultural scientists that the system of relatively small-scale, family-based farming that existed at that time could not be organized along mass-production lines. There was too much idle time for labor in the production process; hence the division of labor along specialized task lines was difficult, if not impossible. Furthermore, there were simply too many different and interrelated tasks involved in producing food and fiber to allow much headway to be made in dividing labor among those tasks. Finally, there was incredible variability in conditions across farms in terms of soils, climate, and other environmental variables. This environmental variability meant that farming enterprises took different forms in different places. Even within the same state or within the same county, the variability across farms could be tremendous. Unlike factories, which could standardize the production process, farms could not standardize the environmental conditions under which they produced food.[14]

Despite these caveats, the community of agricultural scientists at the U.S. Department of Agriculture (USDA) and on the campuses of America's land-grant universities, along with agribusiness leaders, assumed that productivity and output could be increased by standardizing and rationalizing the production process. The pressure to increase productivity to meet the needs of a rapidly expanding mass market for agricultural commodities was the driving force behind the introduction of "modern farming methods." The land-grant system rose to the challenge by devising new production techniques, new equipment, and new and improved crop varieties that continually boosted agricultural productivity.

However, the advocates of scientific agriculture were faced with a "clientele" of farmers who were rooted in tradition, suspicious of "book-learned" techniques, and averse to risk.[15] If agriculture was going to modernize and keep pace with advances in the manufacturing sector, it needed an organizational model or blueprint that could be presented to farmers as a rationale for accepting (buying into) the new ways of producing food. If American farmers were to break out of the mold of producing food in ways that were not markedly different from the ways of their ancestors, they needed some assurance that they would not go broke in the process.

The answer to the farmer's need for guidance was emerging in the field of economics. Throughout the early 1900s, the first generation of agricultural economists worked to devise a standard set of criteria that would allow farm enterprises to be evaluated along the same lines as manufacturing enterprises.

At the Seventh Annual Meeting of the American Farm Management Association in 1916, the vice president of the organization, H. W. Jeffers from Plainsboro, New Jersey, put it this way: "What is needed is a clear cut, standard farm plan for each type of farming in each region so that a person starting farming in a new region, or the farmer who is not making the farm pay, or the extension worker who is conducting demonstrations can make use of such a plan by modifying it to meet the local conditions."[16]

In working through this endeavor, economists found it was necessary to decontextualize the farm enterprise from the community and household settings in which it was embedded. That is, they found it necessary to remove the household and community context from the economic function of production agriculture. This was done by building a model of agriculture that rested squarely on individual decision making related to the four economic factors of production: land, labor, capital,

and management/entrepreneurship. The sine qua non of farming to economists was to provide the information needed to educate farm operators about how to balance the four factors to maximize both output and profitability. Social relations in the household and community, along with nonmarket transactions that might impinge upon the "rational calculations" of the farm operator, were deemed "externalities" and largely ignored as unimportant to agricultural production.[17]

From the very beginning, this organizational blueprint for agriculture was set up to industrialize farming by mimicking the model of mass-production manufacturing. As early as 1913, farm management specialists were guiding agriculture into the mainstream economy. Charles Brand, speaking to the annual meeting of American Farm Management Association, noted:

> Agriculture is a business industry, and as such is merely one part of the great business structure of the country. If farming is to continue profitable . . . we must in the next decade or two give the same attention to the business side of farming that we have in the past two decades to the producing side.[18]

When set in motion, the neoclassical "production function" model of farming was designed to increase agricultural productivity by substituting capital in the form of machinery, chemicals, and other purchased inputs and management inputs for labor and land. The goal was to increase agricultural production on less land and by using less labor. In this model the farm manager is the prime mover behind the whole operation. It is the farmer who orchestrates how the factors of production will be deployed on his farm.

Over the past hundred years, land-grant universities, the USDA, and more recently large agribusiness firms have thrown

farmers wave upon wave of new technologies on the path to industrialization. Willard Cochrane saw these new technologies as a "technological treadmill" that the farmers had to hew to if they expected to survive. Farmers who slipped off the treadmill were often branded as "laggards" and held in disdain by the efficiency-oriented agricultural community. It is easy to see why so many farmers failed to keep pace on the treadmill. As craft production gave way to mass production in the manufacturing sector and "scientific management" wrested control of the shop floor out of the hands of workers, American farmers were yoked to a set of technologies that promised to make production easier and more efficient—but at a cost. That cost was that fewer and fewer producers would be needed.[19]

Three Agricultural Revolutions

The industrialization of American agriculture was marked by three major technological "revolutions." The first, the "mechanical revolution," dates from the early 1900s, when tractors and associated farm machinery were introduced to the farm. In 1910 fewer than 1 percent of the nation's 6.4 million farms had a tractor. By 1950, there were over 3.4 million tractors on 5.4 million farms. The introduction of the tractor allowed a farmer to work more land and consequently reduced the need for farm labor. Not surprisingly, between 1910 and 1950, the number of workers on American farms decreased by 26.8 percent. Farmland, on the other hand, increased by 31.8 percent during this period, in part to meet the food needs of a rapidly growing population.

The second revolutionary change occurred shortly after the end of World War II, when the use of synthetic fertilizers and

pesticides skyrocketed on American farms. The "chemical revolution" was propelled by the conversion of bomb-making and other war-related chemical plants to agrochemical plants. As Richard Merrill notes, ". . . World War II can be thought of as the instigator of an agricultural revolution." The production of DDT, 2,4-D, and organic phosphates increased dramatically after the war. By the 1970s, there were "over 100 industrial plants producing about 1,000 pesticide chemicals variously combined in over 50,000 registered pesticides."[20]

Between 1945 and 1980, the use of synthetic fertilizers increased by 715 percent. One effect of the increased use of agrochemicals was to increase crop yields. This meant that less land was needed to meet the food and fiber needs of the country. In the thirty years between 1950 and 1980, 175 million acres of farmland were taken out of production. During this same period, crop yields increased by 75.4 percent.

Table 2.1 shows the relationships among numbers of farms, farm acreage, tractors, and amounts of fertilizer used on U.S. farms. Both the number of farms and the amount of farmland under production were high prior to the start of the two agricultural revolutions. However, as the number of tractors began to increase, the number of farms decreased. Likewise, as fertilizer use increased after World War II, both the number of farms and the amount of farmland in production decreased. Both mechanization and the use of chemical inputs contributed to farm consolidation as smaller holdings were combined into larger, more efficient units of production.

In the 1980s, a third agricultural revolution began to sweep across American farms—the "biotechnology revolution." Biotechnology, which includes genetic engineering and recombinant DNA technology, is increasing the output of both plant and animal agriculture. Unlike the mechanical and the chemical revolutions, biotechnology promises to have significant

Table 2.1. Changes in the Structure of Agriculture from 1910 to 1997: Farms, Acres, Tractors, and Fertilizer

Year	Farms	Acres (1,000s)	Tractors	Fertilizer (tons)
1910	6,361,502	878,798	6,000	5,547
1920	6,448,343	955,884	540,488	7,176
1930	6,288,648	986,771	920,000	8,425
1940	6,096,799	1,060,852	1,545,000	8,656
1950	5,382,162	1,158,566	3,394,000	20,991
1960	3,962,520	1,175,646	4,770,000	25,400
1970	2,954,200	1,102,769	4,619,000	38,292
1980	2,432,510	1,038,855	4,775,000	50,368
1990	2,140,420	987,420	4,305,000	47,700
1997	2,191,360	953,500	3,936,000	55,000

Sources: Agricultural Statistics, various years; U.S. Census of Agriculture, 1997.

impacts on nearly all aspects of agriculture and food production. It is still too early to tell how the biotechnology revolution will affect the use of land and labor. However, most observers believe that it is likely to result in a greater concentration of production on fewer, but larger farms. Less land and less labor will be required to meet our food and fiber needs.[21]

Today, the traditional farm management blueprint for agriculture is so ingrained in the minds of farmers, policy makers, and agricultural professionals that it has become "the world as given" to them. Most people associated with agriculture in the United States assume that staying on the agricultural treadmill and producing more food with less land and less labor is the *only* way agriculture can or should be organized. And, in fact, this is the model of production that is being exported to developing nations as the "American way of farming."

By adopting, without question, a strictly economic view of production agriculture, the stage was set for the development of a market-oriented, economically focused system of farming that could be uncoupled from communities and households. If agriculture could be viewed in the same manner as

manufacturing, then there was no reason not to expect a trend toward mass production, standardization, and homogenization of agricultural commodities. And, indeed, over the past hundred years this is exactly the path farming has taken.

The Social Construction of Modern Economic Categories

Mass production, whether in manufacturing or agriculture, has given rise to a mode of economic analysis anchored to "free markets" as mechanisms that order both production and consumption. This mode of analysis is based on constructs that have little connection to noneconomic social forms. The terms "industry" and "occupation," for example, are disembodied economic concepts that are most amenable to a strictly economic form of analysis.[22] They have been "constructed" apart from any social context (household, community, etc.) to which they might be naturally linked.

In the realm of farming, agricultural economists have focused virtually all their attention on the "economically efficient" production and marketing of selected "standard" commodities. Not all commodities have attracted the same amount of attention by the agricultural establishment. Those commodities that can be "mass-produced" in accordance with the precepts put forth by the neoclassical production function and that articulate with standardized mass markets have garnered most of the attention. Thus, for example, there are detailed econometric analyses of the production practices for all the major market-oriented commodities such as corn, wheat, and soybeans, and considerable research time and money are devoted to fine-tuning these models.

Nonstandard varieties or commodities that have not achieved "economies of scale" because they are too embedded

in household or community relations to get an "economically unencumbered" reading, have been largely ignored by the conventional agricultural community. Maple sugar, cedar oil, and various direct-marketed fruits and vegetables, for instance, are commodities that have historically been and continue to be important livelihood activities for many farm households and farm communities in the Northeast. However, these commodities have been overlooked by mainstream agricultural economics and treated in the academic literature as either "marginal" or "peripheral" farm enterprises. From a neoclassical, market perspective the income generated from maple, cedar, and direct marketing is small vis-à-vis the receipts from standardized, bulk commodities like milk, corn, or soybeans; yet cedar, maple, and direct-marketing activities help sustain, and in many instances totally support, many rural households, even though these activities cannot be easily quantified or categorized. The production of maple sugar and cedar oil and the direct marketing of fruits and vegetables are deeply embedded in the social fabric of the region and households of the Northeast.

In short, the picture of rural life presented to us by neoclassical economics, whether of its agriculture or nonagricultural aspects, is framed in terms of well-defined markets and constructed categories of land, labor, capital, and management, which are organized to fit the production function. These categories typically do not articulate with the community and household relations that can and do structure everyday economic activities. Although economists using such models could ignore the community contexts and social relations that are part and parcel of local economic life, they could not make them disappear. The embeddedness of economic life, ignored by mainstream economics for the past hundred years, surfaced about three decades ago in the

writings of development specialists who observed that, despite very low labor-force participation rates in many Third World countries, as measured by official statistics, most able-bodied men and women were engaged in all sorts of "economic" activities.

Civic Economy, Economic Embeddedness, and the Informal Economy

The term "informal economy" was coined in the early 1970s to refer to the earning and spending patterns of the urban subproletariat in the Third World.[23] It is not surprising that informal and semiformal economic arrangements became most apparent in developing countries, since it is in the Third World that the "seams" of the neoclassical viewpoint are most evident. During the 1950s and 1960s, the most widely accepted path to economic modernization for less-developed countries was to adopt the Western model of industrialization. This model posited that the best engines of economic growth for less-developed countries were open/free markets fed by large-scale, capital-intensive, mass-production enterprises run by multinational corporations. Agricultural economies could be transformed into modern, industrial economies by rationalizing the agricultural sector, moving people off of the land and into cities, and establishing and nurturing an urban-centered manufacturing export base.[24]

The spread of the Western model of market development and industrialization throughout most of the Third World during the 1950s through the 1970s was quite remarkable. However, it is important to note that the process of "modernization" was essentially a "top-down" endeavor. That is, the Western model of development was imposed on countries

throughout the Third World with little regard to existing institutions and social structures. Multinational factories were simply set down in less-developed countries around the world, while large-scale, mass-market retail establishments filled with consumer goods became fixtures in Third World cities around the globe. And while a small handful of countries have benefited from this economic development strategy and have made dramatic strides toward mirroring "modern," Western-like economies (e.g., Korea, Taiwan, Singapore), many others have not seen the hoped-for results.[25]

The embedded economy is most evident in those countries that have not succeeded in developing full-blown industrial economies. In these nations, only a relatively small fraction of the laborers work for wages and provide for most of their needs through commercial market transactions. Larger segments of the population survive in a world of local capitalism that includes not only the exchange of goods, services, and labor for money but also barter, informal work arrangements, and labor exchanges. For these people, the neoclassical conception of the economy as being separate from the household or community has little meaning. The flow of money through formal market channels and the constructed categories (occupations, industries, etc.) used by economists to chart growth and change in the developing world hide a social and economic reality that is far more complex and multifaceted than the picture that is often presented in official statistics and reports.

The Civic/Embedded Economy in the United States

About twenty-five years ago, social scientists in the United States and other advanced industrial countries "discovered" a

thriving civic economy in American cities.[26] Oftentimes, civic production and consumption activities are embedded in ethnic or racial enclaves. These activities not only serve as markers of economic well-being but also contribute to social, cultural, political, and environmental aspects as well.

Community and school gardens are a growing part of the civic economy of many American cities. They exist below the radar screens of most official data-gathering organizations and agencies in the United States. In New York City, for example, it is estimated that there are a thousand community gardens that operate on about three hundred acres of land. This "farmland" is used to produce fresh fruits, vegetables, flowers, herbs, and other products. No one has undertaken a comprehensive study of all of the economic, social, and environmental benefits that accrue to community gardens. However, from anecdotal evidence, we know that some of these community gardens provide fruits and vegetables to low-income neighborhoods where access to these products is limited or nonexistent. Community gardens develop "agricultural literacy" among urban residents who might otherwise have no way of learning about how their food is produced. And, as places where local residents can come together to work on a joint, mutually beneficial endeavor, community gardens foster social cohesion and neighborliness in places that are seemingly inhospitable to community formation.[27]

Like their counterparts in the Third World, however, many people in the American underclass have not been enveloped by the occupational and industrial categories used to define the formal economy. Most localities contain cadres of self-employed craftsmen and craftswomen, entrepreneurs, and individuals whose occupational and industrial profile are not easily determined. At best, their economic activities

are shoehorned into existing analytical frameworks for macroaccounting purposes. The fact that their day-to-day economic life does not correspond to notions about regular employment in formal labor markets is almost always lost in the process.

While the concept of embedded economic activity, especially the informal economy, has caught the attention of Third World development specialists and urban social scientists in advanced industrial societies, the concept has been less frequently applied to rural areas in the United States.[28] This omission is understandable given that the seams of the civic economy have been covered up by the spread of Wal-Marts, Borders Books, and fast-food franchises of every stripe and by the rigid occupational and industrial categories that have been laid down by generations of economists.

If one carefully reads any of a multitude of books on farming, agriculture, or farm life that have been published over the past twenty years, however, it is clear that the richness, multidimensionality, and civic qualities of economic life in rural America never disappeared.[29] They were simply ignored or glossed over by most observers. Ethnographic accounts of production agriculture reveal a richly textured set of intertwined household, community, and economic relations. Norms of reciprocity within farming communities, for example, are evident everywhere, though they are seldom integrated into the economic calculus of the farm business. The following exchange recorded in *Waucoma Twilight,* an ethnography of a small rural village in northeastern Iowa, illustrates this point.

> JEROME: I think people should work together, it should be not just one person working. That's my idea about a farmer, you know. If you got a little trouble, your neighbor

comes over and helps you quick, or you go over and help him, just like a little family, the whole bunch of them a family, you know.

RITA: It's one big family.

JEROME: You know, so they all kind of work together, not just I work this now and you work that, you stay on your side of the fence and I'll stay on mine. If you kind of mix up together, you all get along better than if you don't do that.[30]

At the community level, farmers' markets, community-supported agriculture, community kitchens, and U-pick operations represent the organizational, associational, and institutional characteristics of the civic economy. Like community gardens, these enterprises bridge the economic, social, cultural, and political dimensions of community life. Their effects and benefits are not easily tallied by economists. Yet we would all be poorer for their absence.

In summary, there are many examples that illustrate the extent to which the economic terrain in rural areas is much more "textured" than the economists would have us believe. The production-driven, market-based system of conventional agriculture espoused by the U.S. Department of Agriculture and the land-grant universities is being increasingly challenged by producers and consumers who hold to a broader vision of how economic enterprises are integrated into and contribute to household and community. For example, the sustainable agriculture movement represents an attempt to embed the economics of agricultural production within an environmental, community, and household context. By giving environmental and social factors equal footing with economics, proponents of sustainable agriculture are challenging the assumption that the economic aspects of farming should be the sole driving force in dictating how our food and fiber are produced.[31]

Despite the emerging recognition that a civic economy can be found in most communities, there are powerful forces that continue to push the agriculture and food system down the path toward increased consolidation and concentration. I turn to these trends in the next chapter.