

The Centralization of Food Systems and Political Power

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Abstract

This article focuses on those dimensions of Manning's book that deal with the relationship between the consolidation of agriculture and the centralization of political power. It argues that a sustainable future founded on principles of social and economic equity are likely not achievable without attending to the inequalities inherent in an industrial food system. [Keywords: agriculture, livestock, political economy, sustainability]

Richard Manning's book, *Against the Grain* (2004) is a sweeping yet eloquent reminder of a fundamental anthropological finding: as the food system goes, so goes the rest of society. The anthropological lesson of human social and political evolution suggests that the current global concentration of agricultural production, processing, and distribution into fewer hands portends a future of increasing human struggle and conflict. From the hunting and gathering !Kung Bushmen of the Kalahari Desert, to the horticultural Tsembaga of New Guinea, to the intensive agricultural Maya and Aztec civilizations, to the aristocratic estates and slaves of the American South, to the feudal landholders of Western Europe, to the highly industrialized hog production and processing factories in Canada and the United States, all illustrate the anthropological lesson that the ways food is gathered, grown and distributed fundamentally shape human societies. Through the prehistoric, historic, and contemporary record of human adaptation, a reasonably clear pattern is discernible: as the food system becomes more centralized, so too do political, economic, and even religious systems—though as Mark Moberg reminds us in his article, political change can precede

agricultural centralization. Richard Manning's book provides a public face for the anthropological finding that counters this prevailing myth: the economic assertion that industrialized agriculture with its rapid centralization of ownership and control over land and food frees the remainder of society from toiling the soil to pursue affluence. Rather it alienates and oppresses a society's inhabitants.

Over the past century, the global shift to an industrialized form of agriculture is arguably as important for our world order as the emergence of agriculture itself some 10,000 years ago. The advent of domesticated animals and plants brought with it profound changes in human adaptation—namely, the rise of cities, nation-states, the emergence of centralized political power, the institutional accentuation of classes, full-time conscripted armies, taxation, and many other characteristics resulting in a dramatic departure from a hunting and gathering past. The contemporary shift to a global industrial model of food production and distribution reveals equally compelling consequences for human adaptation.

All societies are formatively shaped by a food production and distribution infrastructure that is essential to their survival. In the past, local or regional systems of food production and exchange shaped individual societies in terms of their social organizations, economic systems, and political structures. When the shift from subsistence production for one's own consumption gave way to production for market exchange, the production of agricultural surplus no longer meant feeding a society's inhabitants, but rather allowed political control over the distribution of a basic resource to serve other interests, such as accumulating wealth. Yet, this type of centralization was largely local or regional—even the expansive Roman, Ottoman, or Viking Empires were regional in scope largely because each entailed the notion of political expansion from one area to another. Today's globalization process may be different, for with the centralization of agriculture in all areas of the globe, an

infrastructure is present that allows for a global centralization of food production and distribution by multinational corporations not bound by traditional nation-states. In other words, today's centralized global political order is not the result of political domination by one nation-state based empire over another, but rather a more insidious centralized world order emergent from a common centralized food system infrastructure controlled by nonstate entities. This emergent power wrests control of land and resources from local inhabitants and is notably present with the emergence of all instances of industrialized agricultural production.

Industrialized Food and Global "De-Agriculturalization"

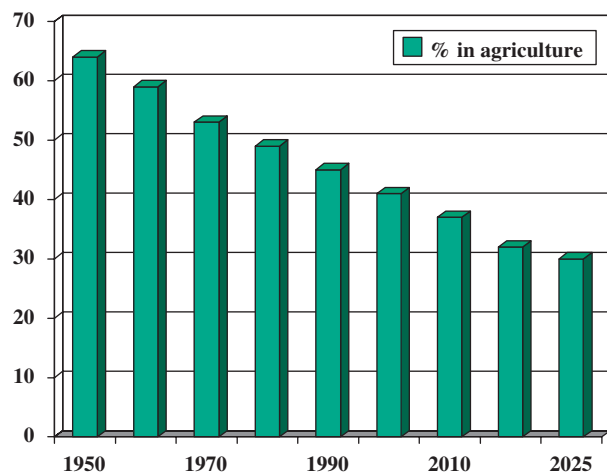
As Manning shows, industrialized agriculture involves a system of food production and distribution dependent on fossil fuel inputs such as fertilizers, pesticides, machinery, and gasoline (Barlett 1989; Thu and Durrenberger 1997). It is also characterized by the replacement of labor (farmers) with capital-intensive production and distribution technology for mass production. This industrialization of agriculture is viewed by some, and lauded by others, as a natural evolutionary model of economic growth and efficiency. A standard economics view of the industrialization of food production is that it is yet another example of industry maturation through achievement of economies of scale. However, broader empirical examinations of industrialized agriculture have revealed a large constellation of economic costs (externalities) frequently ignored by economists who tend to focus on a narrow range of variables to interpret efficiency and economies of scale (Durrenberger and Thu 1996; Thu and Durrenberger 1997; Thu et al. 1996). The rapid emergence of environmental and public health costs of industrialized agriculture, particularly in the livestock sector, reveals not only the myopia of traditional economic analyses, but their blatant inaccuracies as well. The "externalities" of economists are the experiential realities of those "on the ground," who suffer in the wake of an increasingly unjust industrialized food system.

Industrialized agriculture has significantly contributed to profound systemic change in how our world population lives and sustains itself, illustrated in the global movement away from agriculture. In 1950 almost two-thirds of the world's population was prin-

cipally engaged in agricultural activities. A mere 50 years later this figure was reduced to 40 percent (see Figure 1). The staggering numbers of people involved, the speed of change, and the social and cultural consequences of this metamorphosis reflect a vital change in our world order. According to projections contained in a joint report prepared by the United Nations, the International Labor Organization, and the Food and Agriculture Organization of the United Nations, the year 2025 will witness a world with less than one-third of its inhabitants engaged in primary production. If this prediction is realized it means that in the 75-year period from 1950 to 2025 the number of people in the world engaged in agriculture will have been more than halved. These changes, occurring within a single lifetime, may be as dramatic and far-reaching for the human world order as any change since the emergence of agriculture itself.

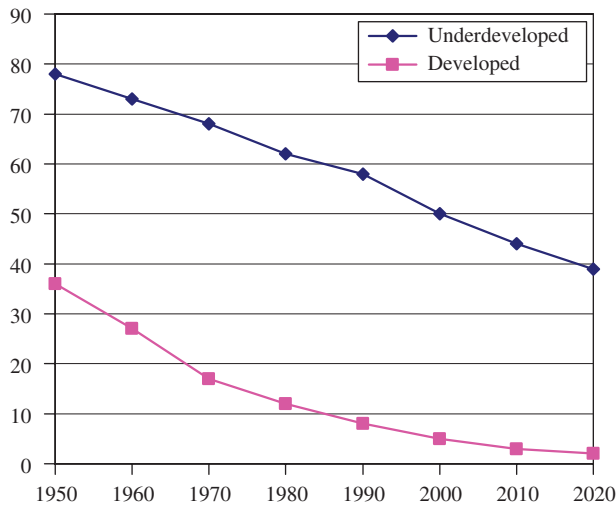
An examination of select United Nations' statistics reveals that this pattern of agricultural decline is indeed global—cross-cutting geographical and political borders. A division of the world into "developed" and "less developed" regions reveals a similar pattern at different stages (see Figure 2). More industrialized regions of the world reflect a process of agricultural change that has seemingly run its course, with only 8 percent of their combined populations engaged in primary production by 1990. Projections for the year 2025 indicate a further reduction of this agricultural population to approximately 2 percent.

Figure 1
Percentage of World Population in Agriculture



Source: UN FAO Statistical Yearbook 2004

Figure 2
Percentage Declines in Agricultural Populations:
Developed* and Underdeveloped States



Sources: UN, ILO, and FAO

*Developed States: North America, Japan, Europe, Australia–New Zealand

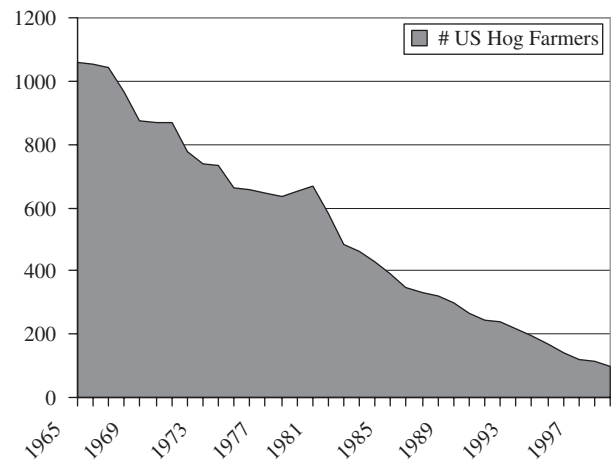
While the general pattern is the same, less developed regions have a much higher percentage of their population still in primary production. In 1990, 56 percent of the combined populations in less developed nations engaged in some form of agriculture as their primary source of income. Projections up through the year 2025 reveal a continuation of the pattern of declining agricultural populations in less developed regions.

The global decline in farmers parallels the inverse growth of multinational agribusinesses. For example, the largest privately held company in the United States is Cargill, which accounts for nearly half of the world's global grain production. Cargill has 124,000 employees in 59 countries as part of their nearly 51 billion dollar annual business. Kraft proclaims it reaches a billion people as one of the world's largest food companies with 98,000 employees and 192 manufacturing and processing plants in 70 countries worldwide. Other global food giants include the likes of Nestlé and ConAgra, which with Kraft collectively constitute a trillion-dollar industry, second only to the pharmaceutical industry as the largest in the United States. As farmers disappear and on-farm profit margins narrow or are nonexistent, profits for global food conglomerates soar. For example, Cargill recently experienced a six-fold profit increase from 333 million in 2001 to over 2 billion dollars in 2005.

The global pattern of agricultural industrialization and increasingly centralized control is exemplified in North American agriculture, particularly the livestock industry in recent years. The swine industry is a classic example of this industrialization process. There is very little difference between the total U.S. inventory of hogs in the year 2000 (59.3 million) compared with the total inventory of hogs produced over 80 years earlier in 1915 (60.6 million) (U.S. Department of Agriculture National Agricultural Statistics Service [USDA NASS] various years). While overall production volume has changed little, the structure of the industry has shifted radically. As revealed in Figure 3, the number of hog producers in the U.S. declined precipitously from the 1960s to the present. Notable in this regard is the concurrent emergence of relatively large production operations. In a six-year period from 1993 to 1999, there was a 250 percent increase in the total U.S. hog inventory concentrated in operations with 5000 or more hogs each (USDA NASS various years). The pattern is similar in Canada where the last two decades (1981–2001) have witnessed the loss of over 60,000 farms, a 22 percent decline (Statistics Canada various years). During the same period, over 40,000 farms have ceased raising hogs, representing a 72 percent decline in hog producers.

Anthropologists and rural sociologists have noted eroding social and economic consequences for rural areas that have accompanied this precipitous decline in farms. Rooted in the work of the anthropologist

Figure 3
Total U.S. Hog Farmers from 1965 to 1999 (in ,000s)



Source: (USDA National Agricultural Statistics Service)

Walter Goldschmidt (1947), a generation of research (Thu et al. 1996) has demonstrated that it is simply better for the social and economic fabric of rural communities to have more farmers producing food than to have production concentrated in the hands of a few. The core of the problem, identified by Goldschmidt over 50 years ago, is that when farming is practiced on a scale that exceeds a family's ability to provide the main source of labor and management, industrial relations of production tend to emerge, in which ownership and management are separated from labor. As a result, this industrialized form of agriculture tends to become disarticulated from surrounding communities, resulting in social inequities, poverty, and a range of attendant social, economic, and environmental pathologies.

Industrial Hog Production: Issues and Problems

We may illustrate some of the problems mentioned above by examining the growth of industrial hog production facilities and the concentration of swine into fewer hands with attendant technological changes. Most notably, this has involved a shift from pasture-based and open lot production to total animal confinement beginning in the early 1970s. In addition to the economic costs for rural areas, a wide variety of environmental and public health problems have emerged as a result of the industrialization of livestock production (Iowa State University and The University of Iowa Study Group 2002). Surface and groundwater contamination occurs from the huge volumes of manure produced. The extensive use of antibiotics to feed livestock, primarily served up as growth promotants in feed, are largely excreted in the liquid manure. Consequently, antibiotics, as well as antibiotic resistant bacteria, join the likes of nitrogen, phosphorous, heavy metals, and other swine manure constituents that find their way into, and degrade, surface and ground waters. The problem has become so pronounced in the United States that the Environmental Protection Agency was legally required to develop new regulations to issue discharge permits for large-scale animal production facilities—comparable to the types of permits typically issued to urban factories.

Another common environmental problem created by large concentrations of hogs and manure is the degradation of air quality. Some 160 volatile organic compounds are emitted from liquid hog manure and

their presence within confinement facilities results in the finding that a third of workers inside these facilities will develop one or more chronic respiratory problems in direct response to exposure to gas and dust mixtures (Merchant et al. 2002). Compounds such as hydrogen sulfide and ammonia, blended with dusts and endotoxin, also create problems for neighbors, having a devastating quality of life effect on farmers and other rural residents.

More than merely an unpleasant sensation, odor can have life-altering consequences for denizens of rural communities who relish a way of life premised on enjoying the out-of-doors (Flora et al. 2002; Thu and Durrenberger 1994). Neighbors of industrial swine production operations frequently share common views, values, expectations, and experiences concerning country living. The encroachment of a factory livestock facility near their homes and their properties is significantly disruptive of numerous individual and communal activities and expectations of rural living. The freedom and independence associated with life oriented toward outdoor living gives way to a sense of violation and infringement as activities associated with central dimensions of their lives are taken away (Thu 2002).

Political Justice

Despite the litany of problems associated with industrialized agriculture, the most fundamental issue is not the air, water, or even the decay of rural communities. Most problematic is the fundamental erosion of freedom and democracy via the centralization of political power that follows from industry consolidation. What does the continued consolidation and concentration of agricultural land and our food systems mean for the human order? As Manning's book makes clear, it means a distinct turn away from principles of equity, justice, free speech, and the stuff of which democracy is supposed to be made.

In 1996, famed U.S. talk show host Oprah Winfrey brought vegetarian activist Howard Lyman on her show to discuss Mad Cow Disease and the livestock industry. The show's content suggested the possibility that Mad Cow Disease could spread from cows to humans. To audience applause, an effervescent Oprah proclaimed that "It has just stopped me from eating another burger!" A legal battle ensued, brought against her by the Texas cattle industry. The Texas cattlemen contended that Oprah and her guests spoke

disparagingly about beef, which had a significant effect on consumer confidence resulting in considerable financial losses for the industry. Texas, similar to 12 other U.S. states, had passed Veggie Libel Laws which prohibit people from speaking disparagingly about agriculture. A representative example can be seen in South Dakota's Laws, which defines disparagement as follows:

Disparagement: *dissemination in any manner to the public of any information that knowingly implies that an agricultural food product is not safe for consumption by the public or that generally accepted agricultural and management practices make agricultural food products unsafe for consumption by the public.* [South Dakota, Title 20, Chapter 20-10A]

Aside from the glaringly obvious constitutional question of who decides what constitutes "generally accepted agricultural and management practices," in and of themselves, Veggie Libel laws are reason for concern. Unfortunately, they are not an isolated event, but rather part of an emerging pattern of attempts to curtail free speech over problems of industrialized agriculture. For example, in 2003, the agricultural industry in Minnesota passed an amendment to an organic transition cost-share bill that would blacklist groups who have "taken action" to prevent some type of agricultural activity:

The commissioner may not provide a grant to or contract with an individual or organization that in the previous 36 months has taken, or participated financially in, an action to prevent a person from engaging in agricultural activities or expanding an agricultural operation. [Minnesota Legislature]

Problems of suppression also extend to scientific research. Since science is supposed to provide the foundation to public policy, agency action, and legal adjudication, it is critically important that researchers be allowed the unfettered freedom to conduct their research and freely present their results. When Walter Goldschmidt examined the effects of industrialized agriculture in the Central Valley of California beginning in the early 1940s, research sponsored by the Bureau of Agricultural Economics in the U.S. Department of Agriculture, he found that a town surrounded by smaller independent farms had less poverty, more

churches, more civic activity, better standard of living, more schools, more public recreation facilities, and more democratic governance than an otherwise similar town surrounded by large corporate-owned operations. Thirty years later, in 1972, he provided this testimony to a Senate Subcommittee "On The Role of Giant Corporations in the American and World Economies":

I was ordered [in early 1940s] by my bureau chief in Washington not to undertake the second phase of the study. He did so in response to a buildup of pressure from politically powerful circles. These same sources of influence would have, as a matter of fact, prevented the publication of the report itself, had it not been for . . . the actions of the late Senator Murray of Montana. I was told, Mr. Senator and gentlemen, that the official manuscript of the study was literally in the file drawer of the desk occupied by Clinton Anderson, then the Secretary of Agriculture, and that it was released to Senator Murray only upon his agreement that there would be no mention anywhere in the published report of the Department of Agriculture. I could regale this committee beyond its endurance with stories about this public pressure—as, for instance, our small research team being vilified on the radio each noon, as we ate our lunch . . . by the newscaster sponsored by the Associated Farmers of California. [Walter Goldschmidt excerpted Testimony, U.S. Senate 1972]

The Bureau sponsoring Goldschmidt's work was dismantled. Unfortunately, Goldschmidt's experiences over a half century ago, are still very much alive today.

Discussion

Local maladies brought by industrial forms of agriculture leave community members and neighborhoods frustrated, distraught, and dismayed. More disturbing than the odor, water quality degradation, neighborhood social decay, or even the loss of family farms, is the realization by many that a government that should protect the public interest is frequently little more than a handmaiden of industrial agricultural interests. The larger cultural evolutionary and global contexts of these local and regional frustrations need to be brought to light so that the general public understands that their involvement in maintaining an

equitable and sustainable food system is fundamental for ensuring a democratic society. Fixing the problem in any one neighborhood's backyard should not mean chasing large-scale agricultural interests away to another neighborhood, another region, another province, or another part of the world. Rather, addressing the litany of problems brought about by facilities such as Industrial Livestock Operations means courageous pioneering and homesteading on the political prairies.

Manning's book reminds us that there is a connection between these larger-than-life issues, anthropology, and the mundane. The links between our food system and the challenges we face are the stuff of culture as Sidney Mintz makes clear. As such, they can be changed, as Manning describes at the end of his book by sketching rays of hope via the growth of alternative food movements. But change can be found in the banal and mundane if we do something simple at our next meal by asking: where is your food coming from and who's growing it? Don't accept anything less, otherwise what's the point of our anthropology? As for me, I'm going to take Manning's advice and go "hunting" for a locally brewed sensual beer.

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