

# PROTECTING AND CONNECTING: SEPARATION, CONNECTION, AND THE U.S. DAIRY ECONOMY 1840-2002

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Over the last century and a half, urban consumers of fluid milk in the U.S. have often mistrusted the sources of their milk. This paper traces the history of these feelings of risk and the reactions to them, using milk as an entry point into the food safety discussions of the times. There are two conflicting manners in which risk was addressed. In the first, milk production is increasingly separated from the consumer, both geographically and emotionally, through health regulations, increasingly complex production, transportation, and sanitary technology, and industry consolidation. In the second, feelings of mistrust and risk are responded to through policies and marketing strategies that attempt to forge feelings of connection between consumers and particular producers and lessen the emotional distance between city and country. While these two techniques often seemed contradictory, many movements within the dairy industry attempted to balance the two.

Food and agriculture scholars currently spend much of their time wondering about the relationship between consumer reactions to an increasingly globalized and industrialized mainstream food production and distribution system and the appearance of new alternate systems. As the theory goes, increasing alienation of consumers from the production sources of their food are accompanied by growing feelings of risk. This has created a demand, particularly among wealthier consumers, for alternate systems that reconnect them with the production sources of their food. For many, store-bought food now seems full of mysterious risks from unknown sources. Ronnie Cummins, the national director of the Organic Consumers Association ([www.purefood.org](http://www.purefood.org)) writes: “Look what’s cooking in your oven . . . . You can’t see, smell or taste the difference . . . . But you and your family are now part of a vast culinary and biological experiment” (Cummins and Lilliston, 2000, p.1). Buttel (2000) discusses the particularly negative response among consumers to bovine growth hormone in milk as being due to consumers’ balancing of small and uncertain lower food costs with “a host of actual, potential, or imagined risks” (p. 9).

The combination of impossible to discover paths between producer and consumer and a feeling that producers themselves are not trustworthy and may actually be producing unsafe products is countered by movements such as fair trade and organic which seek to foster feelings of connection and control within consumers. Reynolds (2000) argues that one alternative food system, the fair trade movement, responds to consumer insecurity by “demystifying global relations of exchange” (p. 297). Often this involves attempts to connect consumers to the place, or object, of production. A cup of peach Stonyfield Farm Organic yogurt currently sitting in my refrigerator contains on its lid the statement “I’m a cow, I’m not a guinea pig” and a pledge that Stonyfield pays their farmers not to use bovine

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growth hormone. You can call Stonyfield at 1-800-PRO-COWS. On the other hand, the quart of conventional Dean's milk sitting next to the yogurt contain no reference at all to cows or farms and merely announces the milkfat level, and added vitamins contained within, nutrition information, and a more standard information number. No assurances decorate the package, and I must rely on the invisible presence of company and government inspectors to assure me that the milk inside is safe.

These feelings of risk, and the attempts of consumers to reconnect to producers, may appear to us to be new phenomena. They are not. Let us look at one staple food, milk, and statements made about it a century ago. In a statement quoted in *The Chicago Housewife*, the head milk inspector of the City of Chicago in 1895 lamented that the source of infectious milk was "often in the distant country dairy," out of his jurisdiction (Impure Milk, 1895, p.1). University of Illinois dairy husbandry professor Wilbur Fraser stated: "Milk being an opaque liquid, its quality and cleanly condition cannot be easily detected by its appearance" (Fraser, 1903, p. 253). In other words, milk held risks, difficult for the consumer to discern, and was produced in places out of control of the authorities, a very similar situation to the one that worries consumers today.

This paper traces the history of these feelings of risk, and the reactions to them in the United States over the last century and half, using milk as an entry point into the food safety discussions of the times. Interestingly, the solutions found by one generation often led, at least partially, to the anxieties of the next. Dairies were pushed out of cities in the mid-1800's, leading to jurisdiction problems in the 1890's. Trust placed in government inspectors and large dairies in the early twentieth century helped lead to consolidation and lessening connections in later years. In general, the story is one of two conflicting themes. In the first, milk production is increasingly separated from the consumer, both geographically and emotionally, through health regulations, increasingly complex production, transportation, and sanitary technology, and industry consolidation. In the second, feelings of mistrust and risk are responded to through policies and marketing strategies that attempt to forge feelings of connection between consumers and particular producers and lessen the emotional distance between city and country.

### SEPARATING PRODUCTION FROM THE CITY: THE SWILL MILK MOVEMENT OF THE 1800's

Public interest in public health aspects of milk began as the consumption of fluid milk increased, primarily in large cities, during the mid-1800's (DuPuis, 2002). In 1842, New York social reformer Robert M. Hartley published a book on the milk supply of large cities in which he focused on the evils of "swill milk," milk coming from cows fed distillery slops, which provided much of the milk produced and consumed in the city at the time. The book supports its claims by appealing to religion, temperance, and motherhood. Dairymen were castigated for working on the Sabbath. Hartley stated that the milk question "is one of humanity, morality and religion . . . Maternal affection . . . should incite her to consider this subject her own." Cows fed swill (distillery slops) were described as "more distempered and disgusting than any thing we can conceive of in human form" and production of swill milk was labeled "a grievous offense against God, and high treason against humanity" (Hartley, 1977 [1842], pp. 332-333; 330). Hartley argued that milk should be brought in from regions outside the city. He extolled "men of enterprise who live in grass regions, within a convenient distance of the city" to begin manufacturing pure milk (Hartley, 1977 [1842], p. 334). Hartley saw potential in the new railroads being built around New York, which would allow milk to be brought in from rural regions surrounding the city.

Hartley's book led the New York Academy of Medicine to investigate conditions in the swill milk industry in 1848, but they tabled the discussion until 1858, when *Leslie's Illustrated Weekly*, a national tabloid, published a series of articles indicting the industry for mistreatment of animals, for maintaining dirty stables, and for producing a product that, it was claimed, was poisonous to children. *Leslie's* provided the public with detailed descriptions and illustrations of the mistreatment of swill-fed cattle, the most famous of which depicted the milking of a cow so weak that she needed to be suspended from a harness. Despite popular interest, the issue was not taken up by a regulating body until 1862, when the New York State Legislature passed a law prohibiting the sale of adulterated milk and the maintenance of a swill stable (Young, 1989, pp. 35-39; Okun, 1986, pp. 6-24).

The swill milk issue was, at root, one of separation between urban areas and urban vices (i.e. alcohol), from the production of "clean" milk. Swill milk was particularly urban, produced in dirty and morally

defunct “dens of disease,” as a Chicago newspaper named them in the late 1870’s (Chicago outlawed swill milk much later than New York). “There is a general understanding that no one fountain is able to send forth sweet and bitter water, but from the wonderful distillery proceed both gin and milk” (quoted in Piper, 1879). The article goes on to describe the cattle yards, with high walls and low ceilings—just taller than the cows themselves. “The cattle are chained to poles. They are never bedded down, and of course the floor is constantly soaked with liquid manure, and when the cattle lie down they rest only on the wet boards” (quoted in Piper, 1879, pp. 27-28). This situation was awful, and it could be seen as the result of urbanization—there was no room left for cows to graze within the city. A Milwaukee health commissioner stated in 1887, on the eve of new regulations, “Many of our vendors will be driven out of business, and I don’t much care if they are. Cows properly belong in the country” (quoted in Leavitt, 1982, p. 169).

As urban land grew more scarce and cities put regulations into effect, the cows left the city. The mid-1870’s Chicago article estimated that forty percent of the fluid milk for sale in Chicago was from swill cattle, coming from approximately six thousand cows (Piper, 1879, pp. 32-33). By 1903, 97% of daily consumption was being carried in by railroads (Ward, 1903, p. 23). Some dairy cattle remained in the city, but primarily on private residences. In 1910, the agricultural census reported that there were 2,471 dairy cattle inside the city limits of Chicago, down from 5,901 in 1900. By 1920, only 1,061 dairy cattle remained (U.S. Bureau of the Census, 1920, 1910). These few remaining dairy cattle were mainly at private residences. A 1903 report states that there were only 30 dairy herds producing market milk within the city, with a total between them of just 430 cows (Alvord and Pearson, 1903). The 1920 census reports that the 1,061 dairy cattle in the city were on 866 enclosures, and average of just 1.22 cows per inclosure, indicating that most of these cows were privately owned (U.S. Bureau of the Census, 1920). In 1927, the number of privately owned cows in the city was approximately half of this, and the city discontinued regular inspections of privately owned cows within its borders (Chicago Dept. of Health, 1931, p. 625).

### PROTECTING THE FLOW, ENSURING CLEAN URBAN MILK SUPPLIES 1880–WORLD WAR II

Laws passed that limited the production of swill milk and led to the demise of the urban cow were generally positive developments. Urban cows were generally raised in cramped conditions unfit for any animal. It did, however, put urban officials in a difficult position. By pushing milk outside city boundaries, they also made this “perfect food” more difficult to regulate and distanced the consumer from the producer. Swill milk aside, much urban milk had been produced in a backyard or extremely nearby. As M.L. Rosenau, a prominent public health officer and Harvard Medical School professor stated: “When the producer and the consumer were near neighbors and closely acquainted with each other, the one had a personal interest in the product he furnished the other” (1913, p. 259). The increased distance also meant that the milk received by the consumer was older and more likely to be contaminated. Even so, Rosenau responded to calls for a small herd to be brought back into the city to furnish milk for infants and invalids by stating: “It is practically impossible to keep a cow in a healthy condition for any length of time in a city” (1913, p. 261).

As the city cow declined, a class of milk dealers arose. The beginnings of regulation often followed soon after this change. The first ‘mass market’ for milk originated in New York City in the mid-1800’s. New York City was also the site of the earliest pure milk movement in the United States (Okun, 1986). In 1885, Chicago first began testing milk samples, and in 1892 the city created a bureau of milk inspection and minimum standards for fluid milk (Chicago Dept. of Health, 1895, p. 145). A 1928 thesis on the Chicago milk market describes both the demise of city cows and the rise of public health interest in a safe milk supply as “developments . . . usually occurring in a city attaining metropolitan status” (Blaine, 1928, p. 2). The urban cow was a victim of the coming of a more modern age, characterized by a greater division of labor, standardized products, regulation, and a greater amount of food production occurring outside the home.

Many approaches were used to reassure urban consumers. First, connections with a particular farmer were replaced by a connections to a particular dealer, through their representative, the milkman. In the nineteenth century, milk was sold either door-to-door or at stores in bulk. Dealers would pour the milk into

a receptacle provided by the buyer. As concerns about milk rose, dealers began to improve technology, first by bottling and then by pasteurizing milk. Pasteurization was utilized among some dealers long before it was required by law. For instance, the Bowman Company in Chicago began delivering pasteurized bottled milk in 1899, eight years before it was required (Bowman Dairy Collection). Particular dealers, thus, attempted to build loyalty and trust through increased quality. Interestingly, this increased quality was accomplished through protections that distanced consumers from their food, such as pasteurization and bottling. This was the time of the rise of the germ theory of disease, and procedures that separated and protected food from contamination were both popular with consumers and important public health improvements. However, as technology increased and became required by the city, economies of scale grew larger, and concentration occurred within the industry. While consumers may not have known which farm their milk came from, consumers had a human face (the milkman) to connect with their product.

A second approach was to establish trust through government regulations, private certifications, and technological procedures, specifically, pasteurization. The conflict between advocates of pasteurization and certification as methods for safeguarding the milk supply has been discussed in detail elsewhere (DuPuis, 2002; Block, 1999; Levenstein, 1988). For our purposes here, let us concentrate on the root of the conflict, a clash between faith in personal connections and faith in technology. Advocates of certification believed trust would best be gained by having an elite group of doctors closely supervise a group of carefully chosen and regulated dairies. Advocates of pasteurization believed trust would best be gained by relying on new scientific methods which cleaned the milk itself, forming a protective wall between consumers and untrustworthy farmers.

Despite objections that it would lead to “dirty dairying,” pasteurization became the dominant method, primarily because certified milk was too expensive and required more of farmers than the health departments were able to demand (Parker, 1917, pp. 262-282). By World War II, the milk supply that was provided to cities was almost entirely pasteurized. Laws requiring pasteurization of milk were some of the most important improvements in public health of the early twentieth century. Milk borne epidemics that regularly shook cities in the first two decades of the century were by 1940 almost entirely a thing of the

past. In addition, over time, primarily through regulation, many of the requirements of the certified milk inspectors were adopted by farmers. The words of the chairman of the certifying body to the progressive Chicago City Club in 1909 were sage:

This certified milk . . . is a fancy milk and is not within the reach of all . . . what is more important, perhaps, is the fact that it will set a pace for other dairymen. This high-grade milk, produced under every possible precaution, is a fashion or a model after which other dairymen can and will model, and by and by these ideals in milk production will pervade every farm within this region (Certified Milk for Chicago, 1909, p. 436).

An interesting side-story to the pasteurization-certification question that has direct parallels in today's dairy economy was tuberculin-testing. Tuberculosis was the scourge of early twentieth century America and milk from tuberculous cattle was one of the few vectors which had been identified and could be controlled. Unlike most laws preventing contamination or requiring clean milk through pasteurization, the tuberculin-testing of cattle affected individual cows, in which farmers were highly invested. Farmers were offered money from the state for cattle that needed to be destroyed, but in many cases farmers felt the payments were not enough. Many farmers refused to believe that tuberculosis could be passed from cow to human. Among many early twentieth century urban pure-milk advocates and public health officials, a willingness to participate in TB-testing was a measure of the general attitude of a farmer, much as current food advocates often associate organic production, is with a certain moral status. A Baltimore health official wrote in 1925:

We have learned by experience that the farmer who is progressive enough and intelligent enough to go through the expense and trouble of having his herd tuberculin tested . . . is the type of milkman who is most likely to be a real dairyman, and who does the other things which are generally recognized as essential in the sanitary production of milk (Shrader, 1925, p. 769).

Over time, more and more restrictive regulations were passed. These regulations increasingly made it so the milk stream was protected from human hands, or other forms of contamination, from the time it left the cow until the time it arrived at the home of the

consumer. It also promoted the decline of both smaller dealers and farmers who could not afford the new equipment required. Public health officials were not worried by this. As a Buffalo public health official wrote in 1914:

The retarding element in the betterment of the whole is the small producer who keeps cows mainly for manure . . . to whom sanitation does not appeal, and from whom compliance is lacking . . . . The policy should be to foster the large producer, who makes milk the principal business, to gradually eliminate the minor one referred to, and the best method to accomplish this is through the permit system (Fronczak, 1914, p. 1022).

At first, these permits differed greatly from place to place, but after the 1930's, they tended to follow the federally suggested "Grade A" regulations for farmers and dealers producing and distributing fluid market milk. Pasteurization and "Grade A" requirements created a situation in which the particular farmer, or even the particular dealer, from whom milk came from mattered very little. In contrast, there were "star" farmers in the certified milk movement. One example was H.B. Gurler's, located west of Chicago. Gurler was often asked to give advice on the production of clean milk and his milk won awards at the 1900 Paris World's Fair. Certified milk was sold on the basis of its connections to reliable and modern farmers such as Gurler. On the other hand pasteurization specifically hid the farmer from the consumer. As cities adopted the Grade A milk ordinance, differences in quality disappeared even more. If one was able to put trust in regulations and technology, trust in a particular dealer and delivery person, or a farmer like Gurler, ceased to be as important.

### **WORLD WAR II—TODAY:**

#### **MASS MARKETING AND ITS DISCONTENTS**

Pasteurization and other restrictions, in particular tuberculin-testing of cattle, were not accepted easily by farmers. Farmers had long been in a difficult position. Competition for their milk between dealers was small, and farmers had to sign annual contracts which locked them into a particular price. In the 1920's the situation changed. Due to changes in federal law allowing them an antitrust exemption, farmers were able to more easily unite into cooperatives. As this occurred, and particularly as the depression began,

farmers frequently used their newfound power to strike, stating that they accepted the consumers' desires for an assured, clean source of reasonably cheap milk, but that consumers must be willing to pay a reasonable price. The outcome of this situation over most of the country was the federal milk marketing order program (some states, in particular California, developed their own systems). Begun during the New Deal, and coming to maturity during the post-World War II years, this program allowed the farmers providing milk to a particular city to ask the federal government to set up a milk marketing order which set a minimum price for milk going to fluid uses in the region. The method in which this price was set changed over time and differed between orders, but, interestingly, usually utilized a price formula that allowed farmers nearer to the city to receive more for their milk than those further away. This method, based on the von Thünian idea that cities are surrounded by a dairy district, codified the idea of physical separation between the "places" of milk production and consumption (Block and DuPuis, 2001). The program also generally accomplished the goal of stabilizing consumer milk prices and providing an assured year-round supply of milk for urban consumers. Despite these provisions, however, the average distance milk traveled to the consumer continued to increase as areas near cities urbanized and transportation technology improved. As this occurred, the milk marketing orders increased in size.

The situation during the last half of the twentieth century was thus one in which the quality and price of milk were controlled. At the same time, continued improvements in technology, in particular the adoption by farmers of bulk cooling tanks which allowed for three times weekly rather than daily milk pickup, allowed milk to last longer. Milk became the prototypical government-controlled commodity. Its consumption was promoted by such devices as the four food groups and advertisements created through the National Dairy Council. The council was supported by a mandatory fee deducted from the price of milk received by farmers participating in the milk marketing order program. In times of overproduction, the government often bought supplies to further support the price. All of this was supported by a huge amount of lobbying in Washington which made the dairy programs a "sacred cow". At the consumer level, the assured milk supply made differences between suppliers almost disappear. Milk was placed near the back of the store, and sold in generally simple packages so that it actually became hard to discern which

company had bottled the milk you bought. Direct home delivery almost disappeared. Longer lasting milk, refrigerators, convenience and grocery stores which sold milk cheaper than the delivery services, and the near disappearance of contamination problems took away consumers' incentive to use a milkman.

In general, it seemed as if consumers had accepted a government controlled, mass produced, mass marketed, product which appeared never to vary and came (as far as they knew) from nowhere. Somewhere, however, this acceptance weakened. First, milk consumption declined. According to 1999 dairy industry statistics, total beverage milk consumption per capita declined from almost 250 pounds/per capita/year in 1975 to 206 in 1997. This decline has a variety of causes, including immigration of an ever larger percentage of non-Europeans, and the general reaction against foods containing fat (whole milk consumption in 1997 was less than half of what it was in 1975). While the decline in consumption has been occurring for decades, in the 1990's a new form of resistance appeared related to the use of Bovine Growth Hormone (BGH) in increased the production of milk by dairy cows. Only one gene controls the amount of milk produced by a cow, and the ease of isolating and creating a means of injecting this gene led the use of bovine growth hormone in dairy cows to be one of the first applications of biotechnology to a mass consumed food (DuPuis, 2002). To many consumers, bovine growth hormone appeared to symbolize the out-of-control nature of the industrial food industry in general, and in specific their mistrust of scientists who claimed that milk produced from cows treated with BGH was safe. As sociologist Lawrence Busch put it "consumers place more emphasis on values than they do on scientists' assessment of risks" (Busch, 1991, p. 96). What values consumers are trying to protect is not always easy to see. In an article on the subject, E. Melanie DuPuis, summarizes them as "not in my body," a refusal to incorporate a particular type of food branded as of low health and, sometimes, moral, quality into the self (DuPuis, 2000). But why did BGH milk spark such a response? Perhaps, as Margaret Mason pointed out in

the *Washington Post* at the height of the issue, because "If our milk, which is supposed to be nourishing and comforting, is riddled with still more drugs—pumped out of sick and stressed cows—what is left?" (Mason, 1994, p. C5). This seems to echo the words of earlier urban milk activists. Milk is pure yet dirtied, wholesome yet dangerous. Furthermore, BGH is associated with particular types of farms. Unlike during the Progressive Era, in which larger, more scientifically advanced farms were more trusted, BGH is predominantly used on larger farms, primarily because it works best in high-yielding cows and it adds a new layer of management that is cheaper if spread out over a larger number of animals.<sup>1</sup> The anti-BGH movement, thus, also became associated with supporting smaller, family farms.

As in earlier periods, the response to uncertainty varies. There has been very little response from most American milk consumers, who continue to buy standard brands of milk without regard to BGH, implicitly accepting the continued industrial dairy complex. This complex has actually grown even less geographically structured, as the milk marketing order system has lost most of its regional structure. It is now easier than ever to ship milk across the country. Despite this, however, consumers in Europe and an ever-growing group of consumers in the United States have chosen to pay extra (a dollar or sometimes more extra per half gallon!) for "organic" milk, which is assured to be BGH-free. The marketing of these products is very interesting. Organic and local milk producers have returned to creating connection with particular producers and promoting the moral level of their own particular type of farming. In this case, primarily organic production utilizes a minimum of hormones, in cows eating feed grown using no chemical fertilizers and pesticides. Many organic milks also market themselves as coming from relatively small family farms. In some ways, this differs from the marketing tactics of previous high-end dairy farmers. Gurler, described above, was, for his time, a high-technology, large-scale farmer. Most dairy farmers at the turn of the last century did not have the freedom to go to Paris or speak to groups of business leaders in Chicago. Gurler must have had a large enough operation to support these trips and the employees who kept the farm running. In many ways, today's food activists seem to be desiring less rather than more technology. However, in many other ways the themes remain the same, connection, and the use of certain technologies (in this case organic production) which can be seen as a bell-weather for "moral" production.

<sup>1</sup>According to the University of Wisconsin Program on Agricultural Technology Studies, for instance, seventy percent of Wisconsin farmers polled with farms having over 200 cows used BGH, while less than ten percent of those having between 25 and 48 cows used the hormone. "Adoption of Various Dairy Technologies By Size of Herd, 1999" ([www.wisc.edu/pats/dtechadopt.htm](http://www.wisc.edu/pats/dtechadopt.htm)).

However, this less-technology desiring, anti-modern consumer has its limits. Certainly, organic consumers do not wish to return to the days of unsanitary, unregulated milk. In some ways, the confidence which current consumers have in the general sanitary level of milk allows them to look further into the product, to question its overall healthfulness and the particular practices of producers.

Organic producers vary in size and marketing orientation. By far the largest, Horizon Organic, runs two large dairies in Maryland and Idaho and buys milk from organic producers across the country. Their marketing focuses on their production techniques and the cattle themselves. A glance at the Horizon web site ([www.horizonorganic.com](http://www.horizonorganic.com)) shows their trademark happy cow and highlights their trademark “pure from the beginning,” and pledges that Horizon cows are “produced without dangerous pesticides or chemicals . . . and never given growth hormones or antibiotics.” This is topped off with a direct moral plea, “Together we change the world—one organic acre at a time.” Horizon does mention supporting particular family farms, but the fact that much Horizon milk come from the two, very large, modern farms, mitigates against using this as a principal marketing issue. Other, mainly smaller organic dairies promote more direct connections to specific farmers. Organic Valley, an organic milk brand marketed by a Wisconsin cooperative, tells a story on its milk carton of a milk farmer who “turns on the barn light at 6 A.M.” “His small herd of 50 cows knows the routine and is slowly making its way from the pasture to the barn.” After discussing how Organic Valley milk sticks to a strict organic standard, the carton reads: “There is just no substitute for old-fashioned careful management, possible only with the family farms of Organic Valley.” It is obvious that by ingesting Organic Valley milk, you are not only safe because of its organic production methods, you are also both supporting, and protected by, a particular type of farm. In some cities, even more direct connections have been made. Oberweis Dairy (1-888-MILK-TO-U), a quickly growing high-end dairy located in suburban Chicago, sells non-BGH, but not necessarily organic, milk delivered directly to the customer, going back to the concept of placing trust in a quality dairy rather than a farm. Even more direct is Straus Family Creamery, an organic dairy located in Marin County, north of San Francisco, which markets its own products produced from just two farms. Their web site ([www.strausmilk.com](http://www.strausmilk.com)) reads, “We are organic dairy farmers who make products

with our own milk. We are committed to taking care of the land, our animals and reducing waste. We are dedicated to making the highest quality dairy products on the market using the simplest and purest ingredients available.” The Straus family business is profiled in the current issue of *Sierra* magazine. The article concentrates on how the family farm was able to survive by utilizing organic farming to make its milk differ from its neighbors. This is the reason many farmers take on organic production techniques (Hattam, 2002).

### ANALYSIS AND CONCLUSIONS

Organic milk companies and Oberweis are adopting marketing strategies that lie directly within the traditional marketing schemes for milk in the United States—milk is pure and wholesome, and combine this with a seemingly post-modern view of a return to a less standardized agriculture. This less standardized agriculture, though, is similar to earlier movements such as certified milk. Both certified and organic milk are produced by farmers meeting a long list of strict standards that most milk does not. Both also tend to associate some moral value with these standards and both most often associate consumers with particular farmers.

The health codes put into place over the course of the nineteenth and twentieth centuries protected milk from cow to consumer. They also separated the consumer, both geographically and mentally, from the source of their milk. This led to a great decline in contamination worries and, at first, to an increase in milk consumption, but has lately led to renewed mistrust. Today, worries about health do not generally lie in the contamination of the milk, but in the process of production done at the dairy itself. This is not unlike the period before proceeding the 1930’s, in which the wholesomeness of a particular bottle of milk was generally trusted to the dairy and local regulations.

In general, the history of the connection between milk production and consumption and the related history of regulation and marketing is one that begins with the separation of milk production from the cities in mid-1800’s. It then proceeded into a period of reaction to the decreased control which this separation wrought, with consumers, regulators, and dealers choosing between regulation and technologies. This was followed by the post-World War II heyday of mass-produced and consumed, tightly regulated milk, and the current backlash against this. The history thus is

one of the creation of purity through separation, with an opposite reaction when uncertainty does occur, of the creation of connection. Unfortunately, as is seen both with organic and certified milk, it is primarily the rich who can afford to pay for this connection. Mass produced milk is, and has been, the norm for the majority of Americans for the last hundred years.

This story relates to the more general story of the relationship between city and country in the United States during the past century and a half. In general, during this time, the border between “city” and “country” has become more defined. Fields, gardens, and animals that had once shared city space with homes, stores, and banks, have generally disappeared, while agricultural spaces have become increasingly depopulated. This separation of food production from food consumption was often legislated by the cities themselves, which saw their own environments as too foul for food production. Yet, this made them more dependent on not only country as a place but also on rural people. From the city, urban producers have often desired that the source of their food was a clean, pastoral, non-urban space, and often, particularly in earlier times saw “backward” rural producers as the source of “dirt” in their food. Regulations were passed to control the actions of producers and to make sure that country milk remained as “pure” as its idealized surroundings. The mass produced, standardized milk of the last half of the twentieth century was actually an outgrowth of a compromise that assured urban consumers clean milk and farmers an assured market. Unfortunately, this left little room for any individual connections between producers and consumers. While many consumers accept this situation, as dairy farms grew increasingly large and appeared to incorporate such “urban” ideas of production as BGH, and large indoor dairy houses (both of which could be argued to have been developed in rural America, but are certainly not part of an agrarian ideal), a lack of trust has grown, resulting in a desire among some consumers to purchase milk that they feel has been produced on more traditionally “rural,” and therefore purer, farms.

This appears to be the opposite of the movement, a century ago, to promote a more modern, “urban” view of milk production. However, both movements saw problems and immorality in the predominant farming systems and both promoted a particular type of farmer as being moral; this “moral farmer” was defined by a list of requirements. Both movements tried to demonstrate that knowing where milk

originated had a direct bearing on its quality. This perceived relationship between food and its source has been pointed out by a number of authors, including Murdoch, Marsden, and Banks (2000) who call this connection “embeddedness.” Examples of “embedded” foods include Michigan cherries, Vermont cheese, and Kentucky bourbon. As Murdoch, et. al., suggest, however, it is not easy to predict what an increase in consumer interest in embeddedness will lead to. In the case of milk, its reliance on a list of standards led eventually to rules which made one gallon of milk so similar to the next that place disappeared. Such a pattern has also occurred with Horizon Organics today. Perhaps this give and take, between standardized and specialized, between industrialized and agrarian production, between urban-rural separation and connection, actually typifies American food production policy and the attitudes of American consumers. While the industrial system dominates, desire for connection is a recurring theme. Tim Vos, an organic farmer and scholar, asks “Will organic farming simply be co-opted by the productivist paradigm?” (Vos, 2000). While American attitudes may change, both small-scale farmer Vos and industrial Horizon Organics should remember that despite appearances, neither the desire for standardization nor for specialization and connection is likely to disappear any time soon.

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