H-Net Reviews in the Humanities & Social Sciences

Kendra Smith-Howard. *Pure and Modern Milk: An Environmental History since 1900.* New York: Oxford University Press, 2013. 240 pp. $34.95, cloth, ISBN 978-0-19-989912-8.

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In *Pure and Modern Milk*, Kendra Smith-Howard's history of the search for purity in milk, we are reminded that purity is not a stable construct. Smith-Howard writes that in the same moment "It is tempting to believe that nature can be controlled and equally alluring to be inspired to go back to nature." The history of milk in America, she argues, "reminds us that neither alternative is truly possible." The impossibility of either full control or true return stems from "the compromises, complexity and challenges involved in our dependence on other organisms for our very sustenance" (p.11).

Smith-Howard synthesizes the literature of diverse fields, including the history of agriculture, technology, breastfeeding, health, and marketing as an industry. She uses these secondary sources to illuminate original research in the USDA's archives as well as the advertising and agricultural science literature about milk from the Progressive Era to the present day. *Pure and Modern Milk* builds on other work that challenges ideals of the natural and a dichotomy between the natural and the processed or unnatural.

The book will be useful to food historians and historians of science but also to anyone interested in the history of marketing and the intersections between private industry marketing and public, state-sponsored regulation of goods in the market. The author's unique contribution to the already rich field of milk history is to consider the substance as an element equally in agricultural history and in cultural history. While it would have been interesting for readers in the field of food history to understand more about where Smith-Howard sees her work in relation to other histories of milk, this might have detracted from the book's ability to engage a wider audience.

Beginning in the Progressive Era, activists constructed milk as both a natural and a rural product while also advocating for intervention in its production to ensure "purity," as this concept was understood at the time. Purity meant that the product was free of biological adulteration such as dirt, bacteria, and even rodents. Smith-Howard provides a history of that discourse, arguing that how we define purity and nature reflects larger relationships to our environment and the many living things with whom we share it.

Smith-Howard argues that "environmental historians detailing changes to nature have more often traced changes to wild or urban landscapes than rural environments" (p. 14). As a corrective, she focuses attention on the simultaneous idealization and modernization of agricultural landscapes at the turn of the century. She uses milk as a way to look at a broader shift in how Americans thought about nature, cities, and health.

As urbanization and industrialization changed the American landscape, physicians "considered exposure to pure air and sunlight to be the best cures for diseases, such as tuberculosis and hay fever." Milk was constructed as a curative substance because of its association with rural life, a domesticated rather than a wild version of nature (pp. 20-21). In the interests of ensuring the "purity" that country dairies used to promote their products (butter and cheese as well as milk), Progressive reformers encouraged state intervention in dairying practices, in effect industrializing the rural in support of making it more like the idealized vision city-dwellers thirsted for.

One of the interesting revelations of Smith-Howard's book, especially in light of contemporary locavorism, is that in the early twentieth century diaries were expelled from cities by local laws. Because cities had come to be seen as unclean places and because some urban dairies used swill from breweries to feed cattle, "city milk" was deemed impure. This displacement meant that milk traveled much farther from udder to table and was consequently subject to many more risks of contamination and spoilage than before.

While twenty-first-century shoppers typically assume and demand that milk be sanitary, Smith-Howard found that "well into the twentieth century, the main measure of milk was its butterfat content, not its cleanliness" (p. 25). Only when milk distributors, who bought from small farms and sold to city markets, began to offer economic incentives for cleanliness did dairy farmers become interested. A program in Geneva, NY, run by local women, even published sanitation records for farms in the area, changing how the rural landscape was perceived by consumers. A farm could now be known as sanitary or unclean. As state authorities, physicians, and reformers struggled against milk-spread tuberculosis, the concepts of "safe" and "clean" in relation to milk diverged intriguingly. Some advocated stopping the spread of the disease by testing cows, while others favored pasteurizing the milk once it was collected. "Safe" milk could thus come from "dirty" dairies, disincentivizing farmers from undertaking the kinds of modernization projects that agricultural reformers, like their counterparts in home economics, hoped to see in rural America. Ultimately, both approaches were adopted, making "pure" and "country" milk more and more the product of industrial technologies.

Smith-Howard shows that the notion of milk as "nature's perfect food" was only possible through the work of Progressive campaigns to clean up the supply chain, from tubercular testing on farms to pasteurization at the distributor and refrigeration in transit. Corporate advertising and health bulletins also bolstered the liquid's reputation for purity, but they didn't construct it purely through words. By showing readers the interplay among these diverse agents, Smith-Howard offers an excellent model for how to bring together the histories of technology, the environment, and culture to make a strong argument.

Pure and Modern Milk further complicates our assumption that milk is a pure food by relating the controversy brought on by the introduction of margarine, which was both artificial butter and produced from "natural" oils. Smith-Howard also uncovers the history of industrial pollution produced by dairies and how forces both outside and inside the industry sought to deal with dairy waste. As a culture of outdoor adventure emerged in postwar America, nature enthusiasts found "aesthetically unpleasant and odiferous, putrefying dairy waste" in water ways throughout the dairying states (p. 94). For the managers of increasingly large dairy companies, this waste was seen as lost profit, resulting in the creation of new products, such as dried milk and paint made with casein, that transformed waste into profit.

Smith-Howard offers an excellent corrective, too, to the usual focus on suburbs in the postwar period of American history. Parallel to the boom in suburban development, she finds, was a simultaneous "grand reconstruction of the nation's barnyards," dependent, as all other development was, on the extension of the national highway system and a mass-consumer society (p. 99). By drawing attention to the modernization of agriculture, Smith-Howard helps us see the complexities lurking in the discursive dichotomy between urban and rural societies. Both nutritional and veterinary science also came into play in this era as milk—and its beloved products ice cream, butter, and cheese—became suspect due to fat content and residues from antibiotics used to treat and thus preserve herds. The use of DDT, another agricultural technology, as well as the fallout from nuclear tests became issues for the milk-buying public in the postwar years.

Fear of chemical contamination, Smith-Howard argues, replaced the fear of disease contamination in the postwar period. Technology, or more loosely, science, had once been seen as the insurer of purity in milk; during the 1950s it began to be seen as the threat to milk's purity. Distinctions drawn between the natural and the artificial now valorized nature and spread fear of the artificial. In the contemporary era, Smith-Howard concludes, conflict has emerged between dairy farmers' interest in productivity and efficiency and consumers' desire for milk that is "pure" of technological intervention. Smith-Howard makes a convincing argument that anxiety about milk as a product is persistent in American society, but anxiety has shifted from fear of "disease organisms" to fear of technology as the greater threat (p. 149).