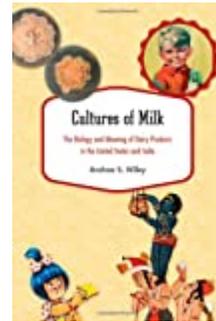


Andrea S. Wiley. *Cultures of Milk: The Biology and Meaning of Dairy Products in the United States and India.* Cambridge: Harvard University Press, 2014. xi + 193 pp. \$39.95 (cloth), ISBN 978-0-674-72905-6.



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Milk in India and the USA

Food ways of a group are determined by a variety of factors. These include biological needs of humans that emerge from the interactions between sustenance requirements, environmental factors, food system dynamics, historical practices, and religious or cultural customs. A majority of these factors endure from one generation to the next. Their impact is especially apparent in populations that are isolated from external influences, such as communities whose lifestyle and dietary patterns have not been modified by drastic changes such as migration and globalization. Humans within these groups then construct their dietary patterns by making food- and beverage-related practice decisions that accommodate these disparate determining factors. Regardless, dietary patterns rarely remain static; they are subject to change moderated by technology, politics, economics, environmental quality, regulations, and globalization. This results in (a) the structuring of complex food patterns with desirable and undesirable nutritional consequences and (b) trade-offs to balance food choice and selection to meet biological needs. The dietary structur-

ing of food-choice patterns may occur incrementally, unplanned even to the group itself as a consequence of nutrition and epidemiological transitory effects. The latter, characterized as food ways or dietary structures, are often logical and second nature to an insider or group member but difficult for an outsider to recognize or comprehend. Understanding the food ways of a group, therefore, requires a holistic contextual approach. This entails taking into consideration all the interacting elements while rationalizing the practices within the limits set by biology, psychology, sociocultural, and economic factors. Putting it simply, this approach enables us to understand what people eat and why they eat it. Andrea Wiley's *Cultures of Milk* is a wonderful addition to the food studies literature, illustrating a dichotomy in production and consumption patterns of milk using such a contextual approach.

Milk is the first, or mother's food of all humans. It is nature-made and enjoys the status of a special food (p. 5). Regardless of whether it is used as food or beverage, milk comes ideally packaged with the nec-

essary macro- and micronutrients, making it an important constituent of a balanced diet. Milk also provides myriad biologically active peptides, hormones, and immunoglobulins, all of which are needed for growth, development, and conferring the required immunity for humans. The scientifically well-established nutrient density of milk makes it a healthier choice for everyone, regardless of age. Another unique attribute is that milk is one of the very few foods (other than honey) to enjoy a non-predatorial status. That is, milk is not derived from processes that require hunting or gathering; milk is produced without compromising the growth or life of an animal or plant. More recently, the virtues of milk and its products, such as fermented milks, have been extended to its role as a "functional" food in preventing various chronic conditions such as obesity, osteoporosis, dental caries, cancer, and cardiovascular disease.

With milk's "perfect food" status (p. 8) as a central theme, Andrea Wiley explores the complex interactions between human biology and culture. Using different lenses of historical, medical, political, religious, and social issues, Wiley provides a detailed comparative analysis of milk production and consumption patterns in two dairying traditions—the United States since the 1600s and the Indian subcontinent over several centuries. She is less concerned with the specifics of the technology of dairy production; instead she hopes to illuminate the interplay of sources of milk, positioning milk in the diet as influenced by biophysical and sociocultural issues within these two major dairy-consuming nations. This book is perhaps among the first to highlight the culturally oriented production and consumption aspects of milk within the context of the less known South Asian dairy culture. In this regard this book is a welcome addition to a wide spectrum of scholarship that uses food to articulate contemporary issues such as health, globalization, and dietary change.

Existing in different hemispheres, the United States and India have their own unique cultural nuances with regard to the value placed on and the positioning of milk within each culture's dietary structure. Although the fluid milk consumption patterns of the United States and northern Europe have been well studied by academic researchers, the same cannot be said about the dairying culture in India. Despite the extensive portfolio of dairy-related food products produced and consumed in India, the dairy culture of India is less familiar to the world outside India. Perhaps this stems from the fact that India has never been a major player in the global dairy trade via export or import, although it is a major producer and

consumer. The domestic demand has consistently outstripped production efforts such as Operation Flood to fulfill the expanding population's needs, leaving very little for export. Further, major Indian dairy products such as curds (*dahi*), butter, and *ghee* (clarified butter) carry geographic and religious significance in the subcontinent directly influenced by the cultural aspects of the Indian cuisine. Consequently, the focus of Indian dairy products has perhaps been to fulfill in-house needs. In this regard Wiley's exposition of the Indian dairy scene highlights how the different ideologies related to the biological properties of milk are constructed and remodeled over time, shifting the positioning of milk at various points in history all while maintaining its specific food status.

The introduction of *Cultures of Milk* provides the reader with an excellent historical overview of the concurrent domestication of cattle and rise of dairy cultures in northern Europe and the development of the South Asian dairy culture. The brief cross-cultural overview of the milk consumption that follows provides a contextual understanding of each country's social milieu as influenced by ethical, biological, humoral, mythical, and economic factors. This lays the foundation upon which similarities and dissimilarities between the two cultures can be realized and better appreciated, underscoring that a food such as milk reflects change and continuity.

A fairly detailed section ensues on the shared "lactophilia," pertaining to the lactase-persistence mutation and its differential distribution in the two dairying cultures of South Asia compared to the United States. Lactase persistence is the ability to produce the lactase enzyme that is essential to digest the milk sugar lactose without any undesirable physiological gastro-intestinal effects. The persistence of this mutation therefore is of biological significance since it can be marker of the ability to consume fluid milk in active dairying cultures such as the United States and India. A closer examination of the persistence reveals that even within the United States there is a differential based on ethnic heritage, with the levels of persistence being highest among those of northern European ancestry. The South Asian population also has differential rates of lactase persistence, ranging from higher frequencies in the North and West—the dairy heartland of India—to low frequencies in the South and East. A major thrust of the book is the use of the common "lactophilic" orientation to explore the opposing consumption patterns in these two cultures. At first one would expect that milk consumption patterns would be high in both these countries, yet interestingly, substantial numbers in both countries do not share the

same enthusiasm to drink fluid milk but rather the preference to consume milk products, such as aged cheese in the United States or curds and ghee in India. Within the United States the ability or inability to digest lactose is well articulated both in terms of media attention and the availability of alternate dairy and nondairy products such as lactose-free milks, almond milk, etc. However, this is not the case within the Indian context, wherein lactose-persistence concerns are not highlighted. Instead attention is focused on the humoral properties of milk as they relate to its digestibility based on Ayurvedic traditions, and the push is to consume milk in a variety of products as a source of good nutrition, particularly proteins and fats in a vegetarian-friendly environment.

In the following chapters Wiley enumerates the purposes of milk in the United States and in India, in particular identifying the specific meanings and implications associated with milk within each culture. The meaning of milk is especially relevant as it relates to children, growth, the relationship between mother and child, and the expectations of society that children represent. These details reflect the overlap in consumption of milk in the United States and India. For example, breastfeeding is a common first-order recommendation in both cultures; however, in the absence of breastfeeding, cow or goat milk is considered a substitute for mother's milk, given that these sources are reflective of life in the same sacred way as mother's milk. In contrast, specific guidelines are implemented in the United States recommending infant formula over cow's milk, based on differences in nutritional content. Wiley points to another contrast wherein milk is looked at as a remedy or catalyst for growth (such as height), or for energy. In the United States, this notion is directed towards adolescents who aim to position themselves in the world through physical and intellectual growth, whereas in India, a similar sentiment was geared towards improving the lifestyle of the economically disadvantaged. In the United States, more recently, the introduction of sweetened products such as cocoa, yogurt, and ice cream that include milk has led to a plethora of consequences such as obesity. In India, those who are more easily able to afford milk products experience the same consequences.

Globalization is one of the major current influencers of a changing landscape with regard to consumption of milk, as well as attitudes towards and meanings of milk. With the introduction of multinational corporations, the processes by which milk and milk products are made are changing, and simultaneously, taste buds globally are changing as well. Wiley describes the English tradition

of adding tea and coffee to milk—a tradition that then spread to the United States and to India. However, the practice of preparing and drinking tea took different trajectories. In the English tradition milk and sugar were added separately to tea steeped in hot water, while the Indians preferred to steep tea, milk, and sugar all at once. This method not only minimized the equipment required for the elaborate English tea-drinking ritual but also provided another flavoring option for the traditional practice of drinking plain milk. In the United States, we now have large corporations such as Starbucks that have modified consumption patterns of milk such that milk is associated with other flavorings such as mocha, vanilla, and blended beverages such as Frappuccino. Starbucks is a rising presence in India today as well, offering the same beverages as it does in the United States. These changes in dietary habits are reflective of the lingering presence of milk in daily life, and consumer demand for milk products. Wiley points out, however, that despite globalization, there is still an attachment in India as well as in the United States to certain qualities of milk such as its association with the sacred cow and its capacity to propel growth. Moreover, such products are created to suit the Indian palate through the use of traditional flavorings such as cardamom.

In conclusion, there are indeed cross-cultural similarities in consumption patterns of milk, perhaps due to globalization, immigration, and the sharing of religious, medical, and nutritional discourses. Yet, there are core differences in cultures that historically made some communities dependent on milk, some worshipers of milk, some enamored with the possibilities that milk offered, and some, unfortunately, susceptible to the consequences of modified milk products. Wiley emphasizes that milk is worth analyzing because of its unique process of production and because of the association it has with religious icons in some cultures, and with media icons in others. This book shows that there may be food products that we are exposed to everyday, which we should perhaps consider more mindfully. That is, we can appreciate what we are eating if we understand where it came from and why it was produced the way it was. Moreover, if we look at what we eat through a lens that respects that others attach a different meaning to a particular product, then perhaps we will begin to think more about our food. That process which has become a mere activity can then become something enjoyable.

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