the Mediterranean, the New World, and Africa, and he examines developments from prehistory to the present. The purpose of the erudition is to discover the origins of alcoholic beverages and their ancient production, nature, and function. It is an ambitious agenda to say the least, but no one is better qualified than McGovern to undertake such a task.

As for their origins, fermented alcohol occurs naturally, as demonstrated by howler monkeys gorging themselves on the bright orange fruit of palm trees, thereby consuming the alcohol equivalent of two bottles of wine in twenty minutes. Such behavior has led the biologist Robert Dudley to propose, in what is known as the drunken monkey hypothesis, that human predilection for alcoholic drinks has its roots in the evolutionary history of primates. If this answers the biological question, McGovern advances his own hypothesis, the Palaeolithic hypothesis, to answer the cultural question: “Palaeolithic humans might have discovered how to make grape wine” (p.12). He admits the scant evidence from the period does not prove the hypothesis, but the more plentiful evidence from the Neolithic period, beginning around 8000 b.c., can at least document the early history of alcoholic beverages.

Analysis of deposits left on pottery shards demonstrates that the earliest alcoholic drink thus far discovered is from the archaeological site at Jiahu in Henan province of north-central China dating from 7000 B.C., and the brew was not a simple one but a combination of grape and hawthorn-fruit wine, honey mead, and rice beer. Far from leaving it at that, McGovern approached a brewer and invited him to re-create the original, as he likewise did with other ancient beverages. The resulting product, called Chateau Jiahu, “hit all the right notes—an inviting, grapy nose, a Champagne-like effervescence with extremely fine bubbles, a tingling aftertaste that invites you to drink more, and a brooding yellowish color” (p.46).

Coming later than the alcoholic beverage from Jiahu was the first confirmed evidence of grape wine and barley beer on pottery shards, both found in the Zagros Mountains of Iran, dating from 5400–5000 B.C. and 3400–3100 B.C., respectively. Chemical analyses of the shards also revealed that a tree resin with antioxidant and antimicrobial properties had been added to the wine; while other analyses indicate that in some places of the ancient Middle East the alcoholic drink of choice was (as at Jiahu) a mixed beverage, in this case containing grapes, grains, honey, herbs, and other fruit, especially figs. These analyses indicate, firstly, the ingenuity of the Neolithic winemakers and brewers and, secondly, the tendency for humans to utilize a very wide range of ingredients in their quest for alcoholic beverages: date wine in Mesopotamia; mare’s milk beer in Central Asia; cherries, cowberries, cranberries, lingonberries, and cloudberries in northern Europe; corn, cacao, manioc, and cactus beer in the Americas; sorghum and millet beer and palm and banana wine in Africa, to cite a few examples. In fact, McGovern suggests that cereals were not domesticated for the purpose of supplying bread or gruel but for the purpose of supplying alcoholic beverages.

McGovern contends that alcoholic beverages were important mind-altering companions in the rituals of shamanistic religion, which had the important functions of placating spirits and preserving the community from dangers. Similarly, alcohol had similar functions in the development and rituals of many other religions. Because art and music had central roles in these rituals, it follows that alcohol was important in their development as well. Moving beyond these assertions, McGovern argues that human self-consciousness and innovation were likewise “heightened and encouraged by the consumption of an alcoholic beverage” (p.27). Aside from areas that are too inhospitable to produce plants with a high sugar content, the Arctic and Tierra del Fuego, almost every known culture has produced its own alcoholic beverage. In short, alcohol has accompanied human development, and far from being the bane of civilization it has “made us what we are today” (p.281). This is a provocative and of course improvable theory, but whether or not people accept it McGovern deserves credit for challenging assumptions about the role of “demon drink” in human history.

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Liquid Materialities: A History of Milk, Science and the Law
Peter Atkins
Farnham, UK: Ashgate, 2010
356 pp. $24.95 (cloth)

In the introduction to Liquid Materialities, his insightful new book on the history of milk, Peter Atkins questions whether recently written food histories have really been about food. “We have surprisingly little literature about the stuff in foodstuffs,” he states (pp.4–5). Atkins’s point is that most recent food histories have often utilized food to reveal historical patterns and processes, such as its social use and the regulations that surrounded it, rather than focusing specifically on the history of how a particular food was defined and created over time.

In Liquid Materialities, Atkins has crafted a material history of milk. While some of the stories within it are
similar to other recent milk histories, Atkins focuses almost entirely on the history of the substance itself, creating what he calls “an archaeology of qualities” (p.xx). Stories such as the development of farmer cooperatives, or regulations around milk pricing, are nowhere to be seen. Instead, Atkins focuses here on how the substance itself changed, concentrating in particular on the evolution of the instruments of milk regulation and the role laboratories and experts played in testing and enforcing milk laws.

Liquid Materialities is somewhat limited in its scope. It generally focuses on the period between 1830 and 1950, and most, but not all, of its primary documentation comes from the United Kingdom. It is also to be the first of four histories of milk by Atkins, the others focusing on milk and disease, the political ecology of British dairying, and infant feeding. These subjects, thus, are not present here, which in certain cases, in particular infant feeding, leaves a void, since it was and is so important to the context of milk regulation and the cultural promotion of milk.

Liquid Materialities begins with a theoretical discussion of work inspiring the book, in particular the food histories and geographies of the past twenty years and their focus, or lack thereof, on material. Following this theoretical discussion, Atkins tells an illustrative story of the 1876 trial of an immigrant milk dealer in New York City, and the debates that accompanied the trial about the accuracy of the lactometer, a device for measuring fat content through specific gravity. The ultimate guilty verdict and subsequent downfall of the accused milk dealer clearly indicate the intimate relationship between instruments and regulation. The book continues in an amazingly informative and interesting discussion of milk-testing laboratories themselves and the struggle to define what “natural” milk was, as well as standards for commercial sales. Related chapters cover expertise, focusing on disputes between government and local chemists; and standards, focusing on the variance in standards for milk content among different cities within the United Kingdom. Later chapters carry on these themes, concentrating, for example, on adulteration and the great variance among British cities in terms of both the number of milk samples tested by authorities and adulterated samples found. Atkins also investigates the evolving and geographically variable definition of “natural” milk, which could be defined as milk as it emerges from the cow, or pure “cleaned” milk. Finally, other chapters focus on the morality, politics, and legal meanings of clean, natural milk.

The story of milk being taken apart by nutritionists and others, discovering the vitamins, fat, sugar, and other constituents inside, promoting it as “the perfect food” because of this high variety of nutrients, and protecting it from adulteration and contamination has been well told by DuPuis, Atkins himself, and others. What this book adds is that milk itself was a disputed and highly evolving substance. Atkins has done food history a great service by his intensive, well-researched focus on this topic that remains extremely relevant today to a world struggling again to decide whether purity means the absence of germs or food as it comes from the farm. While Liquid Materialities may cover the history of milk as a substance in a greater amount of detail than the casual food studies reader might desire, Atkins gives new insights into the development of the nature of this staple food, and through these insights, sets a model for the study of other foods.

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