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# Regulating Milk: Women and Cows in France

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MATHILDE COHEN\*

## Regulating Milk: Women and Cows in France and the United States†

*Animal milk, most commonly cow's milk, is one of the most heavily regulated commodities in both France and the United States. With the increasing popularity of breastfeeding and the possibility of pumping, freezing, and storing breast milk, a cottage industry has emerged for people wishing to buy, sell, or donate milk produced by humans. Yet the legal landscape for human milk remains inchoate, prompting public health officials and medical professionals to call for tighter regulation.*

*Animal and human milk are typically viewed as two distinct substances with little in common beyond a name. In contrast, this Article highlights the analogies between the two liquids as well as the female bodies that produce them. To do so, it draws on historical and comparative perspectives—France and the United States; human milk in the twenty-first century and animal milk in the nineteenth and twentieth centuries. Similar political forces and cultural norms are at stake in milk regulation then and now, here and there. More precisely, the Article shows that the campaign for increased oversight of human milk is driven by motivations similar to those which inspired cow's milk reform in the nineteenth century: economics, sexual control, and scientism. Through this regulatory agenda, the providers of milk—human lactating mothers and animal lactating mothers—are commodified in surprisingly analogous ways.*

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## INTRODUCTION

In Western culture, people have ambivalent attitudes about milk. Animal milk has long been considered, both nutritionally and culturally, a “perfect” food.<sup>1</sup> Similarly, human milk<sup>2</sup> is presented in scientific and popular culture as “liquid gold,” the ideal source of nutrition and medicine for infants, and even perhaps adults, offering protection against a host of illnesses.<sup>3</sup> Yet animal and human milk are also subject to the “yuck factor.” With a slight change in context or perspective, milk can be demoted from drink of the gods to an object of disgust. Consider a cup full of raw cow’s milk.<sup>4</sup> Is the whitish, creamy liquid a delicious and nutritious drink or a repulsive substance harboring potentially lethal bacteria? What about human milk bought online from strangers—is it a superior, life-giving fluid or a vile body waste product? This Article proposes a twofold comparison. On the one hand, I compare animal milk and human milk, two types of bodily substances, which are also foods and which have become cultural objects, if not cult objects. On the other hand, I use comparative law to analogize the way in which two legal systems, the United States and France, regulate milk.

Though we usually see them as distinct substances, the stories of animal and human milk are closely connected. The consumption of fresh, fluid milk is a relatively recent phenomenon in human history: “[C]ow’s milk began its real life as an American food in the mid-nineteenth century, primarily as a breast milk substitute for infants and a beverage for weaned children.”<sup>5</sup> In France too, animal milk consumption has been tied to the search for substitutes to breast milk to feed babies.<sup>6</sup> In recent years, animal milk has been condemned as

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1. ERNA MELANIE DUPUIS, NATURE’S PERFECT FOOD: HOW MILK BECAME AMERICA’S DRINK 4 (2002); ANNE MENDELSON, MILK: THE SURPRISING STORY OF MILK THROUGH THE AGES 45 (2008); DEBORAH M. VALENZE, MILK: A LOCAL AND GLOBAL HISTORY 48 (2012).

2. Throughout the Article, I use the terms “breast milk” and “human milk” interchangeably though I prefer “human milk” given that all milk is “breast milk,” as ecofeminist Carol Adams is known for saying.

3. See, e.g., Katherine Carroll, *Body Dirt or Liquid Gold? How the “Safety” of Donated Breastmilk is Constructed for Use in Neonatal Intensive Care*, 44 SOC. STUD. SCI. 466 (2014) (listing some of the benefits of breastfeeding).

4. Throughout the Article, I use the word “cow” as a synecdoche to designate all lactating animals that are exploited by humans for their milk. By extension, much of what is said about cow’s milk can be applied to other commonly consumed types of animal milk such as goat, sheep, buffalo, camel, mare, donkey, reindeer, or yak milk.

5. See DUPUIS, *supra* note 1, at 5. See also Florence Dupont, *Le lait du père romain*, in CORPUS ROMAINS 115, 122 (Philippe Moreau ed., 2002) (pointing out that milk was considered a “barbarian” food in Rome, only fit for the “uncivilized”) (translated by author).

6. See Catherine Rollet, *Allaitement, mise en nourrice et mortalité infantile en France à la fin du XIXe siècle*, 33 POPULATION 1189, 1192 (1978). See also Marie-France Morel, *Théories et pratiques de l’allaitement en France au XVIIIe siècle*, 1976 ANNALES DE DÉMOGRAPHIE HISTORIQUE 393, 416 (reporting that eighteenth-century French doctors advocated in favor of feeding infants animal milk, which they claimed was far superior to human milk because animals, unlike women, are not subject to passions and vices).

a cruel and unhealthy product,<sup>7</sup> while human milk is heralded as a superfood. With the increasing popularity of breastfeeding and the possibility of pumping, freezing, and storing breast milk, a “cottage industry has sprung up facilitating the sale and donation of human breast milk.”<sup>8</sup> The primary customers are parents of young babies, be they mothers who, for one reason or another, cannot breastfeed, or fathers, including gay couples, who want their babies raised on human milk.<sup>9</sup> There is also an adult customer base, such as those who drink human milk for health, nutrition, or as a fetish.<sup>10</sup> The practice is not without risks. A *New York Times* article reported a few years ago “that breast milk bought from two popular Web sites was often contaminated with high levels of bacteria.”<sup>11</sup> In light of these dangers, medical professionals in France and the United States advocate for stricter control over human milk production and distribution in ways that are reminiscent of dairy regulation. Much like nineteenth-century milk reformers lobbied for a safe cow’s milk supply in the cities,<sup>12</sup> twenty-first-century public health officials are calling for the regulation of human milk.

At first sight, reproductive and sex markets may seem more appropriate comparators for human milk than animal milk. Similar

7. See generally Greta Gaard, *Toward a Feminist Postcolonial Milk Studies*, 65 AM. Q. 595, 595 (2013) (critiquing the appropriation of women’s and animals’ milk from a postcolonial perspective).

8. Nicholas Bakalar, *Breast Milk Donated or Sold Online Is Often Tainted Study Says*, N.Y. TIMES (Oct. 21, 2013), <http://www.nytimes.com/2013/10/21/health/breast-milk-donated-or-sold-online-is-often-tainted-study-says.html>.

9. See *infra* notes 76–79 and accompanying text. Note that while the majority of parents seeking human milk describe their gender as male or female, human milk donors and recipients include persons who would describe themselves as transgender, agender, queer, or as having other forms of gender identity. On the gendering and ungendering of lactation, see generally Mathilde Cohen, *The Lactating Man*, in MAKING MILK: THE PAST, PRESENT AND FUTURE OF OUR PRIMARY FOOD 141 (Mathilde Cohen & Yoriko Otomo eds., 2017).

10. The medicinal and nutritional use of human milk has been documented by historians. See, e.g., Julie Laskaris, *Nursing Mothers in Greek and Roman Medicine*, 112 AM. J. ARCHAEOLOGY 459, 460 (2008) (describing the therapeutic uses to which Egyptians, Greeks, and Romans put human milk); Marylynn Salmon, *The Cultural Significance of Breastfeeding and Infant Care in Early Modern England and America*, 28 J. SOC. HIST. 247 (1994) (recounting the practice of using human milk as a food for the weak and medicine for the sick in seventeenth- and eighteenth-century England and America). See also FIONA GILES, *FRESH MILK: THE SECRET LIFE OF BREASTS* 134, 143 (2003) (relaying stories of adult nursing, women putting their milk in tea, or using it in cooking or on breakfast cereals, and providing cooking recipes calling for human milk). On human milk as a fitness drink, see, e.g., Chavie Lieber, *Meet the Men Who Drink Breast Milk*, N.Y. MAG. (May 28, 2014), <http://nymag.com/thecut/2014/05/meet-the-men-who-drink-breast-milk.html>.

On lactation porn, see Alison Bartlett, *Maternal Sexuality and Breastfeeding*, 5 SEX EDUC. 67, 75 (2005).

11. See Bakalar, *supra* note 8. See also Thomas Andrew Gustafson, *Breast Milk Bought Online Has High Levels of Bacteria*, NATIONAL PUBLIC RADIO (Oct. 21, 2013), <http://www.npr.org/sections/health-shots/2013/10/21/238797756/breast-milk-bought-online-has-high-levels-of-bacteria> (warning that “milk sold on one popular website had more bacterial contamination than that from a milk bank”).

12. See *infra* Part I.A.

to egg donation, adoption, surrogacy, and sex work, human milk is a highly gendered bodily “product,” which can be donated or sold. Buying and selling human milk could be characterized as “taboo trades,” in Kimberly Krawiec’s sense,<sup>13</sup> or “repugnant markets,” in Alvin Roth’s sense.<sup>14</sup> While some people want to engage in these types of transactions, others think they should either be prohibited or limited to gifts and in-kind exchanges where money does not change hands. Milk is peculiar, however, in that, unlike other embodied forms of labor, it is also a food, cutting across species in two ways.<sup>15</sup> Humans do not typically eat other humans’ body parts or bodily fluids, yet human milk is their primal food.<sup>16</sup> Humans do not typically turn to animals for sex cells, wombs, or sex, yet they commonly consume animal milk.<sup>17</sup> More fundamentally, there is an objective likeness between animal and human milk. Milk is a fluid secreted by females of all mammalian species—a product of evolution designed specifically for the nutrition of infant mammals.<sup>18</sup>

13. Kimberly D. Krawiec, *A Woman’s Worth*, 88 N.C. L. REV. 1739, 1740 (2010) (defining as taboo a “trade in which the good or service exchanged is both legal and alienable, but in which transfer for profit (as opposed to some other motivation, such as affection or altruism) is banned or limited”). See also Alan Page Fiske & Philip E. Tetlock, *Taboo Trade-Offs: Reactions to Transactions that Transgress the Spheres of Justice*, 18 POL. PSYCHOL. 255, 256 (1997) (defining a “taboo trade-off” as a “mental comparison or social transaction that violates deeply-held normative intuitions about the integrity, even sanctity, of certain forms of relationship and the moral-political values that derive from those relationships”).

14. See Alvin E. Roth, *Repugnance as a Constraint on Markets*, 21 J. ECON. PERSPECTIVES 37 (2007) (calling “repugnant” those markets, in which the distaste for certain kinds of transactions may give rise to constraints on those transactions, or even make them illegal).

15. See generally Mathilde Cohen, *Le lait humain est-il un aliment comme un autre?*, in QUE MANGER? PRATIQUES, NORMES ET CONFLITS ALIMENTAIRES (François Dubet ed., forthcoming 2017) (arguing that, despite being our primary food, milk is treated by law as medicine or as a human tissue rather than a food product).

16. But see Cynthia W. Coyle et al., *Placentophagy: Therapeutic Miracle or Myth?*, 18 ARCHIVES WOMEN’S MENTAL HEALTH 673, 675 (2015) (reviewing the literature on placentophagy, whereby people eat their own placentas or donor placentas for the prevention of postpartum depression, pain relief, or other health benefits). See also Rachel E. Sachs & Carolyn A. Edelstein, *Ensuring the Safe and Effective FDA Regulation of Fecal Microbiota Transplantation*, 2 J.L. & BIOSCI. 1, 4 (2015) (noting that “protocols for encapsulating stool have . . . been validated,” opening the door to the consumption of fecal transplant pills).

17. Interspecies animal–human embryos no longer belong to the realm of science fiction, however. See Marie Fox, *Legislating Interspecies Embryos*, in THE LEGAL, MEDICAL AND CULTURAL REGULATION OF THE BODY: TRANSFORMATION AND TRANSGRESSION 95 (Stephen W. Smith & Ronan Deazley eds., 2009).

18. See Caroline M. Pond, *The Significance of Lactation in the Evolution of Mammals*, 31 EVOLUTION 177 (1977). Suckling the young at the breast is another typical feature of mammals, allowing for animal–human cross-nursing: human females have been known to breastfeed young animals, and animals—human babies. See Samuel X. Radbill, *The Role of Animals in Infant Feeding*, in AMERICAN FOLK MEDICINE 21, 21 (Wayland D. Hand ed., 1976) (“Often animals, instead of women, are employed to act as wet nurses, and the infants are placed directly at the animals’ udders to suck.”). See also Londa Schiebinger, *Why Mammals Are Called Mammals: Gender Politics in Eighteenth-Century Natural History*, 98 AM. HIST. REV. 382, 394–95 (1993).

Although milk composition is unique to every species, the same major nutrients are present in the milk of all mammals.<sup>19</sup>

The analogy between human and animal milk is sure to offend some. Much of human life and thinking, especially in Western cultures such as France and the United States, is concerned with distinguishing humans from other animals. Because of the negative cultural associations between women and cows in particular,<sup>20</sup> the comparison between the two types of milk may appear suspect. In many languages, including English and French, the word “cow” is a derogatory slang term for a woman.<sup>21</sup> Far from being necessarily negative, however, the animal–human milk association is celebrated in some cultures. In the ancient Roman religion, Diva Rumina was the goddess of lactating mothers and suckling offspring, be they human or animal.<sup>22</sup> In Hinduism, “milk and cows are sacred and women’s association with them provides her with a counterbalancing aura of holiness.”<sup>23</sup> In this Article, the woman–cow connection is the basis for an ecofeminist argument.<sup>24</sup> Analogizing human

19. See ANDREA WILEY, *RE-IMAGINING MILK: CULTURAL AND BIOLOGICAL PERSPECTIVES* 9–10 (2d ed. 2016). See also Olav T. Oftedal & Sara J. Iverson, *Comparative Analysis of Non-Human Milks: A Phylogenetic Variation in the Gross Composition of Milks*, in *HANDBOOK OF MILK COMPOSITION* 749 (Robert G. Jensen ed., 1995) (comparing the milk composition of a hundred nonfarm animals).

20. See, e.g., Jill Lepore, *Baby Food: If Breast Is Best, Why Are Women Bottling Their Milk?*, *NEW YORKER* 34, 35 (Jan. 19, 2009), <http://www.newyorker.com/magazine/2009/01/19/baby-food> (“Pumping is no fun—whether it’s more boring or more lonesome I find hard to say—but it has recently become so common that even some women who are home with their babies all day long express their milk and feed it in a bottle. *Behind closed doors, the nation begins to look like a giant human dairy farm.*” (emphasis added)).

21. See Joan Dunayer, *Sexist Words, Speciesist Roots*, in *ANIMALS AND WOMEN: FEMINIST THEORETICAL EXPLORATIONS* 1, 13 (Carol J. Adams & Josephine Donovan eds., 1995). This linguistic fact did not escape the old and new breastfeeding culture. In eighteenth-century France, breastfeeding was seen as embarrassing and disgusting, in part because “it projected the animalized image of the woman as a ‘dairy cow.’” ELISABETH BADINTER, *LE CONFLIT: LA FEMME ET LA MÈRE* 241 (2010) (translated by author). In contemporary America, new or expecting mothers are bombarded with messages reminiscent of the dairy industry. They are warned about of the possibility of “low milk supply” and given advice on how to “speed up” and “increase production” by pumping or nursing more frequently. Unsurprisingly, many a nursing mother reports “feeling like a cow.” See, e.g., KATHLEEN HUGGINS, *THE NURSING MOTHER’S GUIDE TO WEANING*, at xxii (2008); HEATHER ZOLLER & MOHAN J. DUTTA, *EMERGING PERSPECTIVES IN HEALTH COMMUNICATION: MEANING, CULTURE, AND POWER* 74 (2008); KATHLEEN HUGGINS & JAN ELLEN BROWN, *25 THINGS EVERY NURSING MOTHER NEEDS TO KNOW* 134 (2009).

22. See CRISTINA MAZZONI, *SHE-WOLF: THE STORY OF A ROMAN ICON* 93–94 (2010).

23. DAVID D. GILMORE, *MISOGYNY: THE MALE MALADY* 212 (2001). Cows and women were put on the same level as Brahmans, the highest ranking of the four *varnas*, or social classes, according to the Hindu socio-cosmic order, all three being “guarantors of purity.” The Nepali Legal Code of 1854 went so far as to declare: “[T]his kingdom is the only kingdom in the world where cows, women, and Brahmans may not be killed.” See Axel Michaels, *The King and the Cow: On a Crucial Symbol of Hinduization in Nepal*, in *NATIONALISM AND ETHNICITY IN A HIMALAYAN KINGDOM: THE POLITICS OF CULTURE IN CONTEMPORARY NEPAL* 79, 80 (David Gellner et al. eds., 1997).

24. Developed in the 1980s and gaining prominence in the 1990s, ecofeminism—an intellectual movement combining feminist theory, environmentalism, and critical animal studies, can be described as attempts to uncover interspecies

to nonhuman females is not intended to debase “women,” but to uncover the different, mutually reinforcing, forms of oppression intersecting gender and species.<sup>25</sup> More specifically, I argue that some of the social and legal norms that have shaped the relationship of the French and Americans to animal milk equally apply to human milk.

Why compare the United States to France? These are two of the biggest dairy consuming and producing countries in the world,<sup>26</sup> which regulate animal milk production with little concern for animal welfare. Yet, the French and Americans entertain different cultural and regulatory approaches to human and animal milk, presenting us with a puzzling chiasm. The American sanitary regulation for animal milk is stricter than the French, resulting in a federal ban on raw milk.<sup>27</sup> France, the birthplace of pasteurization,<sup>28</sup> is laxer, in part because raw milk is a necessary ingredient in its prized cheeses. With respect to human milk, the picture is reversed. The United States is the more permissive country, a land of no law, where American women can freely trade their milk. In France, human milk is so stringently governed that French women are prohibited from giving their milk to others, even for free, unless they turn to state-controlled milk banks.

To explore these cultural and legal tensions, I compare the emergent debate over the regulation of human milk to the age-old debate over animal milk regulation. More specifically, despite its public health, medical, and food safety rhetoric, the campaign waged against informal human milk exchanges in both countries is driven by motivations surprisingly similar to those which prompted animal milk reform in the nineteenth century. Despite differing legal regimes pertaining to milk, in both countries, legal discourses draw

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relations. *See, e.g.*, CAROL J. ADAMS & JOSEPHINE DONOVAN, *ANIMALS AND WOMEN: FEMINIST THEORETICAL EXPLORATIONS* (1995) (a collection of pioneering essays exploring the connections between feminism and the status of animals). I do not rely on the first expressions of ecofeminism, which were grounded in biological essentialism and binary sex and gender distinctions, but in its later formulation as a project aimed at uncovering the intersectionality of gender and animal oppression. *See* Greta Gaard, *Misunderstanding Ecofeminism*, 3 *Z PAPERS* 20 (1994) (presenting the various strands of ecofeminism and their reception).

25. One of the ecofeminist movement’s agendas is to outline interdependencies between social categories of powers, adding species and the environment to the intersectional triad of gender, race, and class. The groundbreaking text is CAROL J. ADAMS, *THE SEXUAL POLITICS OF MEAT: A FEMINIST VEGETARIAN CRITICAL THEORY* (1990).

26. *See* PATRICK F. FOX ET AL., *DAIRY CHEMISTRY AND BIOCHEMISTRY* 13 tbl.1.2 (2d ed. 2015).

27. The Food and Drug Administration (FDA) requires that all animal milk intended for human consumption be pasteurized if it is to be sold across state lines. 21 C.F.R. §§ 133.182, 1240.61 (2014).

28. *See* BRUNO LATOUR, *THE PASTEURIZATION OF FRANCE* (Alan Sheridan & John Law trans., Harvard University Press 1988) (1984) (tying Louis Pasteur’s inventions, including his 1864 discovery of the process that destroys pathogens through heat, to other social forces, such as the public hygiene movement, the medical profession, and colonial interests).



on animal milk regulation to normalize and naturalize human milk regulation, and vice versa. First, the laws surrounding both types of milk are economically driven. In either case, legal intervention came to be seen as necessary when there were substantial profits to be made. Second, given the biological and cultural associations between milk and sexuality, these laws often have undertones of sexual control. Milk regulation tends to be really about repressing female sexual autonomy. Finally, both countries' regulatory agendas are prompted by scientism, by which I mean the readiness to see science as infallible, subjecting female bodies to its dominion under the guise of producing a safe, standardized product. The Article proceeds as follows: Part I retraces the history of animal milk regulation in the United States and in France. Part II turns to the regulation of human milk, past and present, in the two countries. Finally, Part III compares animal and human milk regulation, arguing that current calls for greater oversight of human milk markets bear a striking resemblance to the agendas of nineteenth-century milk reformers.

### I. ANIMAL MILK REGULATION

Absent human intervention, animal milk must be consumed immediately, on the spot—"from the nipple to the mouth," as sociologist Pierre Boisard put it.<sup>29</sup> Milk can neither wait nor travel. If not ingested immediately, it spoils. With nineteenth-century industrialization and urbanization, animal milk—most often cow's milk—began to be consumed far from its source, both in space and time, raising food safety concerns and prompting legislative and regulatory interventions.<sup>30</sup> In the 1800s, when the French and American populations shifted to urban centers, food poisoning resulting from tainted milk was a major cause of infant mortality. Fresh milk was not yet a beverage of mass consumption. It was usually reserved for young children and a few wealthy adults.<sup>31</sup> The problem was not only that the methods of production were unsanitary, but also that handling and transportation were precarious.<sup>32</sup> Milk was sold from open cans. There were no refrigerated modes of transportation. Middlemen engaged in a panoply of deceitful practices to increase their sales volume, such as masking spoilage by adding adulterants.

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29. Pierre Boisard, *Le lait et la machine*, in *MÉMOIRES LACTÉES*. BLANC, BU, BIBLIQUE: LE LAIT DU MONDE 192, 193 (Philippe Gillet ed., 1994) (translated by author).

30. See SAMUEL H. PRESTON & MICHAEL R. HAINES, FATAL YEARS: CHILD MORTALITY IN LATE NINETEENTH-CENTURY AMERICA 23–24 (1991).

31. See FRANÇOIS VATIN, LE LAIT ET LA RAISON MARCHANDE 43 (1996).

32. See, e.g., *Swill Milk: History of the Agitation of the Subject—The Recent Report of the Committee of the New-York Academy of Medicine*, N.Y. TIMES (Jan. 27, 1860), <http://www.nytimes.com/1860/01/27/news/swill-milk-history-agitation-subject-recent-report-committee-new-york-academy.html> (denouncing the "swill milk scandal," which caused a spike in the mortality of New York infants fed with milk from cows that were raised on "swill," that is, residual mash from distilleries and adulterated).

Below, I outline the development of animal milk regulation in both the United States and France in response to these safety concerns.

A. *The U.S. Campaign for "Pure" Milk*

In the mid- to late nineteenth century, public health reformers mobilized as a result of mounting rates of milk-related infant mortality.<sup>33</sup> By then, scientists and medical professionals had connected the chemical composition of milk to infant nutrition and health.<sup>34</sup> Beginning around 1880 in the United States, reformers "refocused their attention on improving the quality and purity of urban milk supply and on making clean and wholesome milk available to those infants at highest risk."<sup>35</sup> They believed that "[i]f proper nutriment could be made available then the major cause of infant death could be removed."<sup>36</sup> The result was the so-called pure milk campaign, which aimed to protect milk from adulteration, dilution, spoilage, as well as microbial contamination. Starting with Massachusetts in 1882, lawmakers around the country passed anti-milk adulteration bills.<sup>37</sup> To ensure the compositional integrity of milk, inspectors were dispatched to make the rounds of dairies and monitor transportation and storage.

Unlike adulteration, bacterial contamination remained undressed until the end of the nineteenth century, when the discoveries of Louis Pasteur and other bacteriologists began to spread. It became apparent that milk could carry harmful bacteria and transmit microbes. In response, two competing approaches developed, which became known as the "nutritionist" versus the "hygienist" school. On the one hand, nutritionists, often pediatricians, argued that raw milk was nutritionally superior to pasteurized milk and that regulation should focus on the production, handling, and transportation of such milk. They objected to pasteurization, arguing that chemically adulterating milk presented a danger to infants.<sup>38</sup> They supported the so-called certified milk movement, which aimed at guaranteeing sanitary raw milk by entrusting the oversight of production and handling to medical milk commissions. Initially, their approach prevailed. However, it proved too costly, requiring equipment and facilities that average dairies could not afford and resulting in milk that was too expensive

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33. See RICHARD A. MECKEL, *SAVE THE BABIES: AMERICAN PUBLIC HEALTH REFORM AND THE PREVENTION OF INFANT MORTALITY, 1850-1929*, at 5 (1990).

34. See *id.* at 68 nn.23-24.

35. *Id.* at 6 (noting that reformers shifted their attention from general environmental conditions to milk).

36. *Id.* at 62.

37. See *id.* at 68 (pointing out that between 1880 and 1895 twenty-three American municipalities passed or strengthened ordinances governing the sale of milk).

38. See *id.* at 87 (citing an American Pediatric Society 1898 report questioning the safety of purified milk for infants).

for many to purchase.<sup>39</sup> On the other hand, the hygienists advocated in favor of “purifying” milk by heating it to kill microbes, that is, by pasteurizing it—a practice that had been already developed in Europe at the time.<sup>40</sup> The argument they advanced was both a scientific and a social one: namely, that proper pasteurization techniques did not damage milk’s chemical composition and that it was the only way to make safe milk available to the poor. Ultimately, the hygienist approach gained the upper hand. New York City adopted a compulsory pasteurization ordinance in 1912. Other cities soon followed.<sup>41</sup>

Since then, milk legislation has blossomed on multiple fronts, both at the state and federal levels.<sup>42</sup> From the regulation of dairy farmers to the regulation of transportation and distribution, milk is controlled from stable to grocery shelf. In 1924, the federal government stepped in when the United States Public Health Service, the primary division of the U.S. Department of Health, developed the Standard Milk Ordinance, a model regulation designed to help states and municipalities control the production, processing, packaging, and sale of milk and milk products. This set of minimum standards and requirements is known today as the “Pasteurized Milk Ordinance,”<sup>43</sup> which still governs milk production throughout the country. Since the 1920s, federal intervention has grown steadily, culminating in 1987 with the Food and Drug Administration’s (FDA) requirement that *all* dairy products for human consumption be pasteurized to be sold across state lines, with the exception of a few varieties of aged cheese.<sup>44</sup> It was not until the 2011 Food Safety Modernization Act

39. *See id.* at 83.

40. Yet a third approach consisted in condensing milk, by removing some of its water, a technique developed by Nicolas Appert in France in 1827. In the United States, Gail Borden reinvented the technique in 1857, turning concentrated milk into a hugely successful commodity sold nationally. *See Boisard, supra* note 29, at 196–97.

41. *See* DAVID E. GUMPERT, *THE RAW MILK REVOLUTION: BEHIND AMERICA’S EMERGING BATTLE OVER FOOD RIGHTS* 46–47 (2009).

42. *See* Mathilde Cohen, *Of Milk and the Constitution*, 40 HARV. J.L. & GENDER 115 (2016) (arguing that milk has been the object of a quasi-constitutionalization in American law).

43. *See* SCOTT HENDRICK & DOUG FARQUHAR, SUMMARY OF RAW MILK STATUTES AND ADMINISTRATIVE CODES, NATIONAL CONFERENCE OF STATE LEGISLATURES 2 (2012), [http://www.ncsl.org/documents/agri/NCSL\\_Raw\\_Milk\\_Memo.pdf](http://www.ncsl.org/documents/agri/NCSL_Raw_Milk_Memo.pdf). In 1927, another major federal intervention was Congress’s enactment of the Milk Importation Act, 21 U.S.C. §§ 141–49 (1927).

44. The current pasteurization requirement is codified in 21 C.F.R. § 1240.61(a) (1987):

No person shall cause to be delivered into interstate commerce or shall sell, otherwise distribute, or hold for sale or other distribution after shipment in interstate commerce any milk or milk product in final package form for direct human consumption unless the product has been pasteurized or is made from dairy ingredients (milk or milk products) that have all been pasteurized . . . .

Pasteurization is defined by federal regulation as “the process of heating every particle of milk and milk product in properly designed and operated equipment” according to the temperatures set forth in tables in the text of the regulations. *Id.* § 1240.61(b). Note that, *de facto*, a broad ban has existed on the interstate transport and sale of raw milk products such as cheese since 1949. *See infra* note 254.

that the dairy industry fell under a preventative control rule, shifting the focus from pasteurization to contamination prevention by implementing a safety collection and processing plan.<sup>45</sup> Although the majority of the states have adopted the Pasteurized Milk Ordinance as a set of minimum standards,<sup>46</sup> there is no nationwide ban on *intrastate* commerce in raw milk.<sup>47</sup> Individual states remain free to regulate the sale and distribution of raw milk within their borders.<sup>48</sup>

The antibiotic and bacteriophobic aspects of American culture are reflected in the legal history of raw milk and the predilection for pasteurization, even though a new cultural shift is presently on the way, with the “good” bacteria in raw milk being heralded as beneficial by some.<sup>49</sup> As the next subsection shows, the French regulation of raw milk has focused less on “killing” microbes and bacteria than on controlling the milk production process.

### B. France: Pasteur Versus Raw Milk Cheeses

Despite France’s claim to the invention of the pasteurization process, French authorities have been laxer than their American counterparts in imposing pasteurization, making it clear that there are significant differences in social norms about what constitutes safe food. Instead of mandating pasteurization *ex post*, on the model of the American war on bacteria, the French regulatory approach followed a nutritionist strategy focused on monitoring the milk production process *ex ante*.<sup>50</sup> France’s approach reflects the cultural importance of cuisine and culinary traditions in everyday life, which

45. See Letter from National Milk Producers Federation (NMPF) and the International Dairy Foods Association (IDFA), to the U.S. Food and Drug Administration (FDA), Comments on the Pasteurized Milk Ordinance and the Food Safety Modernization Act (Nov. 14, 2013), <http://www.nmpf.org/files/file/Issues%20Watch%20Food%20Safety/2013%20PMO%20Comments%20Submitted%20to%20FDA.pdf> (an official letter to the FDA from various dairy industry interests requesting the exemption of the dairy industry from the Act).

46. See U.S. Department of Health and Human Services, Food and Drug Administration (FDA), Grade “A” Pasteurized Milk Ordinance, at v, vi (Apr. 26, 2010).

47. The Center for Disease Control (CDC) would like to see such a ban. It records incidents related to raw milk and in a letter entitled “The Ongoing Public Health Hazard of Consuming Raw Milk,” it reaffirmed its campaign to prohibit raw milk sales and consumption. Letter from the Center for Disease Control (CDC) to State and Territorial Epidemiologists and State Public Health Veterinarians (May 9, 2014), <https://www.cdc.gov/foodsafety/pdfs/raw-milk-letter-to-states-2014-508c.pdf>.

48. See HENDRICK & FARQUHAR, *supra* note 43. Presently, twenty-eight states permit raw milk to be sold within their borders, though often with restrictions, such as limits on the amount a farmer can sell, labeling rules, advertising bans, or requirements that customers purchase directly from the farm. Twelve states allow for the sale of raw milk in retail stores; thirteen states allow for the sale of raw milk on farms; five states allow for the sale of raw milk at farmers’ markets or other venues; and twenty states prohibit the sale of raw milk.

49. See Anne Mendelson, “In Bacteria Land”: The Battle over Raw Milk, 11 GASTRONOMICA 35, 40 (2011).

50. See Henri Belvèze & Éric Thévenard, *La bataille des fromages au lait cru*, in RISQUES ET PEURS ALIMENTAIRES 213, 220 (Marian Apfelbaum ed., 1998).

prominently include raw milk cheeses.<sup>51</sup> As Roland Barthes famously wrote in 1957, “[w]ine is felt by the French nation to be a possession which is its very own, just like its three hundred and sixty types of cheese and its culture.”<sup>52</sup> The French government has been all the more cautious in enacting food safety legislation, and more recently, in negotiating with European Union regulators, that aggressively hygienist legal interventions would jeopardize traditional foods such as cheeses and generate massive resistance in the population.<sup>53</sup> That there may be no such thing as “American cuisine,”<sup>54</sup> or any distinctive national tradition involving the use of raw milk, may have made it easier for American lawmakers to mandate the pasteurization of milk products.

For much of the nineteenth and twentieth centuries, French reformers’ efforts concentrated on milk production, transportation, and distribution, rather than pasteurization.<sup>55</sup> As sociologist François Vatin has shown, until the beginning of the twentieth century, pasteurization was not considered to be primarily a sanitary measure, but rather a preservation technique to extend milk’s shelf life and facilitate its transportation.<sup>56</sup> The first attempt at regulating milk nationally via a 1924 decree<sup>57</sup> only mentions pasteurization as an aside, for labeling purposes, mandating that milk sold as “pasteurized” be in fact “cleared of all its pathogenic microbes.”<sup>58</sup> The

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51. The “gastronomic meal of the French,” which includes a cheese course, has received international recognition as a social practice, having been declared “Intangible Cultural Heritage of Humanity” by the United Nations Educational, Scientific and Cultural Organization (UNESCO). See UNESCO, *Evaluation of Nominations for Inscription in 2010 on the Representative List of the Intangible Cultural Heritage of Humanity*, 5.COM 6.14 (2010).

52. ROLAND BARTHES, *MYTHOLOGIES* 58 (Annette Lavers trans., Granada 1972) (1957).

53. See Amanda Hesser, *The French Resist Again: This Time, Over Cheese*, N.Y. TIMES (May 20, 1998), <http://www.nytimes.com/1998/05/20/dining/the-french-resist-again-this-time-over-cheese.html> (describing the French resistance to proposed European regulations that would have banned raw milk cheeses).

54. See Sidney Mintz, *Eating American*, in *FOOD IN THE USA: A READER* 23 (Carole Counihan ed., 2002) (explaining the controversial idea that there is no such thing as American cuisine and recognizing the existence of a variety of cooking styles and regional cuisines). Of course, there is a wide variety of Native American cuisines, but milk was never a traditional tribal ingredient. See generally DEVON ABBOTT MIHESUAH, *RECOVERING OUR ANCESTORS’ GARDENS: INDIGENOUS RECIPES AND GUIDE TO DIET AND FITNESS* (2005) (providing an overview of traditional indigenous diets).

55. For instance, the Paris police closely monitored the *garçons laitiers*, the intermediaries between producers and consumers, who were often blamed for violating basic hygiene and adulterating milk by adding water to it. See VATIN, *supra* note 31, at 48.

56. See FRANÇOIS VATIN, *L’INDUSTRIE DU LAIT: ESSAI D’HISTOIRE ÉCONOMIQUE* 44ff. (1990).

57. See ALESSANDRO STANZIANI, *HISTOIRE DE LA QUALITÉ ALIMENTAIRE (XIXE–XXE SIÈCLE)* 259–89 (2005) (showing that before the twentieth century the regulation of animal milk was haphazard, often relying upon local authorities).

58. See Décret du 25 mars 1924 portant règlement d’administration publique pour application de la loi du 1er août 1905 sur la répression des fraudes, en ce qui concerne le lait et les produits de la laiterie [Decree of March 25, 1924 Establishing a Public Administration Regulation to Apply the Statute of August 1, 1905 on Fraud Repression for Milk and Milk Products] tit. I, art. 3, JOURNAL OFFICIEL DE LA RÉPUBLIQUE FRANÇAISE [J.O.] [OFFICIAL GAZETTE OF FRANCE], Mar. 30, 1924, p. 3031 (translated by author).

main purpose was to protect milk's freshness, its lack of adulteration, and animals' health and feeding inasmuch as they impacted the quality of milk.<sup>59</sup> It was not until a 1935 statute that milk was given a legal status and that elements of French dairy production were subject to mandatory pasteurization.<sup>60</sup> The 1935 statute exempted from pasteurization "milk produced by farms subject, after declaration, to official veterinarian and medical control" as well as milk sold directly by producers to consumers or via the intermediary of *ramasseurs* and *fruitières*, which until the 1970s represented the majority of milk consumed in France.<sup>61</sup> In 1950, a decree mandated that in all cities of more than 20,000 inhabitants, dealers sell exclusively pasteurized milk bottled in sealed containers.<sup>62</sup> However, the decree was subject to exceptions and postponements, remaining unevenly applied.

It is primarily due to market forces, rather than legal intervention, that pasteurized milk became the norm starting in the 1970s with the concentration of the dairy industry.<sup>63</sup> Paradoxically for a country where raw milk had remained a staple for so long and is still the object of cultural veneration as cheese, France is today one of the biggest consumers of ultra-high temperature processed (UHT) milk, that is, milk which has been heated at a higher temperature than regular pasteurization, eliminating a greater part of the microbiota.<sup>64</sup> The increased competition between a handful of dairy companies and the cost of managing the cold chain (the economic losses due to food spoilage are enormous) have contributed to the generalization of UHT processing. Kept in sterile cartons, UHT milk can stay fresh for months and be stored without refrigeration, an obvious advantage from the point of view of producers and distributors.

59. See *id.* arts. 2–4. There had been a few precedents: an April 1742 ordinance had restricted the sale of milk to "good quality milk" that was not spoiled and had not been diluted or mixed with any other substance. See Manuelle Sautereau & Bernard Le Luyer, *Du lait qui tue au lait qui sauve: Histoire d'une révolution médicale et culturelle (1870–1930)*, 37 *CAHIERS D'HISTOIRE* 279, 292 (1992). See also PIERRE-OLIVIER FANICA, *LE LAIT, LA VACHE ET LE CITADIN: DU XVII<sup>E</sup> AU XX<sup>E</sup> SIÈCLE* 275–76 (2008) (describing several legal campaigns launched in eighteenth- and nineteenth-century Paris to prevent milk frauds).

60. See *Loi du 2 juillet 1935 tendant à l'organisation et à l'assainissement des marchés du lait et des produits résineux* [Law of July 2, 1935 to Organize and Stabilize Markets in Milk and Resinous Products], *J.O.*, July 3, 1935, p. 7026.

61. See *id.* arts. 4–5 (translated by author).

62. See *Décret du 23 février 1950 relatif à l'embouteillage obligatoire du lait dans les agglomérations urbaines groupant plus de 20,000 habitants* [Decree of February 23, 1950 Pertaining to the Mandatory Bottling of Milk in Urban Areas of over 20,000 Residents], *J.O.*, Feb. 24, 1950, p. 2213. See also VATIN, *supra* note 31, at 49.

63. See VATIN, *supra* note 56.

64. While standard pasteurization typically consists in heating milk to about seventy-two degrees Celsius (161–67 degrees Fahrenheit), with UHT treatment, milk is briefly exposed to intense heat in the range of 145 degrees Celsius (290 degrees Fahrenheit). In UHT-processed milk, virtually all microorganisms are killed. See Marc Heyndrickx et al., *Understanding and Preventing Consumer Milk Microbial Spoilage and Chemical Deterioration*, in 2 *IMPROVING THE SAFETY AND QUALITY OF MILK: IMPROVING QUALITY IN MILK PRODUCTS* 97, 98–108 (Mansel W. Griffiths ed., 2010).

France's current milk legislation must be situated within the interplay of supranational norms, in particular European norms, which govern its food law. The globalization of the food industry, combined with the European Union's growing centralization of food safety regulation, have by and large preempted domestic milk laws. In its early days, the then European Community did not provide much food regulation: one of its main objectives was the free movement of goods, which included foodstuffs.<sup>65</sup> Following a series of food contamination scandals in the 1990s, however, European regulators endorsed a Pasteurian agenda<sup>66</sup> aiming to harmonize and sanitize member states' food legislation. In the 2000s, the European Food Safety Authority (EFSA) was created. New rules were enacted to improve the safety of the entire food supply chain through "good" hygienic practice subjecting food products to microbiological criteria and temperature limits. The resulting legislation came to be known as the "hygiene package."<sup>67</sup> The production of raw dairy products was briefly threatened by this regulatory agenda, but in the face of protests and resistance in countries such as France and Italy, European law permitted the survival of raw milk, conceding that member states retain a margin of discretion in the area.<sup>68</sup> As a consequence of EU food regulation, member states reorganized their official controls systems. French farmers must now abide by more stringent rules, requiring, among other things, that they institute, implement, and maintain permanent food safety procedures based on a standardized management system.<sup>69</sup> Producers who wish to sell raw milk are

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65. See Kaarin Goodburn, *Introduction: The Development of EU Food Law*, in EU FOOD LAW 1 (Kaarin Goodburn ed., 2001).

66. I use the adjective "Pasteurian" in the sense put forward by Bruno Latour. See LATOUR, *supra* note 28, at 39 (describing Pasteur and his disciples' success in the nineteenth century in mobilizing political and social forces around the hygiene movement: Pasteurians and hygienists became "the spokesm[e]n for these new innumerable, invisible, and dangerous agents" known as germs and microbes).

67. The "hygiene package" consists of five legislative parts: Regulation (EC) 852/2004 of Apr. 29, 2004, On the Hygiene of Foodstuffs, 2004 O.J. (L 139) 3; Regulation (EC) 853/2004 of Apr. 29, 2004, Laying Down Specific Hygiene Rules for on the Hygiene of Foodstuffs, 2004 O.J. (L 139) 55; Regulation (EC) 854/2004 of Apr. 29, 2004, Laying Down Specific Rules for the Organization of Official Controls on Products of Animal Origin Intended for Human Consumption, 2004 O.J. (L 139) 206; Council Directive 2002/99, 2002 O.J. (L 18) 11 (EC), which deals with animal health issues; Council Directive 2004/41, 2004 O.J. (L 157) 33 (EC), which repeals the old legislation, a total of seventeen directives.

68. See Regulation 853/2004, pmb., § 23 ("As regards raw milk and raw cream intended for direct human consumption, it is appropriate to enable each Member State to maintain or establish appropriate health measures to ensure the achievement of the objectives of this Regulation on its territory.").

69. The so-called Hazard Analysis and Critical Control Point (HACCP) system. The core idea behind HACCP is to identify all the hazards inherent in a product or process and design preventive measures for pathogen reduction, which can be monitored, thereby increasing accountability but leaving much responsibility for food safety to producers rather than to the government. The HACCP principles were devised in the United States in 1971 by the Pillsbury Company to ensure the safety of food produced for the U.S. space program. The principles were adopted in 1996 by

subject to stricter standards than those supplying the dairy industry with milk to be pasteurized, making raw milk a more difficult and expensive commodity to produce.<sup>70</sup>

### C. Summary

The current legal regime for animal milk in France and in the United States either mandates or incentivizes pasteurization, leading to national markets in which “standardized,” i.e., pasteurized, homogenized, and often fortified, milk dominates the field. Both legal regimes were devised with the stated objective of benefiting human consumers, rather than milk-producing animals—objectified as things associated with a rationalized food supply system.<sup>71</sup> Tellingly, in the United States, federal and state bans on raw milk do not apply to milk products for animal consumption. Whatever danger lies in raw milk, animals are not deemed worthy of being protected against it. More importantly, neither the French nor the American regulatory framework governs the conditions in which cows or other “dairy” animals are raised and treated. In both countries, farm animals are generally unprotected by anti-cruelty laws. In the United States, they are omitted from the federal Animal Welfare Act<sup>72</sup> and many state criminal anti-cruelty laws exempt standard agricultural practices.<sup>73</sup> The French Penal Code makes it a crime to commit an “act of cruelty against an animal,” including farm animals.<sup>74</sup> But commonly accepted farming practices are not considered to be acts of cruelty. As

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the Food Safety and Inspection Services. In Europe, the HACCP principles were integrated into community regulations as early as 1991—a sign that transatlantic regulatory approaches to food safety are converging to some extent. See Karen L. Hulebak & Wayne Schlosser, *Hazard Analysis and Critical Control Point (HACCP) History and Conceptual Overview*, 22 RISK ANALYSIS 547, 549–50 (2002).

70. Raw milk producers must obtain a special authorization from the *préfet* (the state representative at the local level), pass a series of inspections, demonstrate their livestock’s health, and follow a host of hygiene rules governing the production process—from the proper equipment cleaning method and refrigeration conditions to periodic microbiological testing. For the latest legislation governing raw milk production, see Arrêté 0168 du 13 juillet 2012 relatif aux conditions de production et de mise sur le marché de lait cru de bovins, de petits ruminants et de solipèdes domestiques remis en l’état au consommateur final [Order 0168 of July 13, 2012 Pertaining to the Conditions of Production and Marketing of Raw Milk from Bovines, Small Ruminants, and Domestic Solipeds Sold as is to Final Consumers], JOURNAL OFFICIEL DE LA RÉPUBLIQUE FRANÇAISE [J.O.] [OFFICIAL GAZETTE OF FRANCE], July 21, 2012, p. 11990. The EU standards on raw milk production are spelled out in Regulation No. 853/2004, annex III, sec. IX.

71. Curiously, France’s first national regulation pertaining specifically to milk did exhibit a concern for animal welfare, which later disappeared from milk regulation. See Decree of Mar. 25, 1924 (prohibiting the sale of milk from “malnourished and manifestly overworked animals”) (translated by author).

72. See Animal Welfare Act of 1970, Pub. L. No. 91–579, 84 Stat. 1560 (1970) (only applying to farm animals during transportation and slaughter by requiring vehicles transporting animals for slaughter to stop every twenty-eight hours to allow for exercise, food, and water).

73. See WILSON G. POND, FULLER W. BAZER & BERNARD E. ROLLIN, ANIMAL WELFARE IN ANIMAL AGRICULTURE: HUSBANDRY, STEWARDSHIP, AND SUSTAINABILITY IN ANIMAL PRODUCTION 113 (2011).

74. See CODE PÉNAL [C. PÉN.] [PENAL CODE] art. 521-1 (translated by author).



a result, on both sides of the Atlantic, animals raised for their milk live a particularly miserable life.<sup>75</sup>

Before turning back to animals, the next Part describes the state of the law regarding human milk, in which the American and the French regulatory approaches appear to have switched. The United States has so far maintained a *laissez-faire* attitude to human milk markets, while the French endeavor to establish a government-regulated market.

## II. HUMAN MILK REGULATION

For a variety of reasons, ranging from socio-medical,<sup>76</sup> to cultural,<sup>77</sup> to economic,<sup>78</sup> some parents who are unable or unwilling to breastfeed nonetheless want their infants to be fed human milk.<sup>79</sup> This need has created a booming market for human milk. For centuries, this market was in the human services, i.e., through the employment of wet nurses, but since the mid-twentieth century, a market for human milk itself, disembodied from its “producers,” has developed.

### A. Regulating Wet Nurses

Until relatively recently, human milk was not easily separable from the bodies that produced it and remained unregulated as an

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75. See *infra* Part III.

76. When the parents are two bio-men, lactation is generally understood to be impossible. See Cohen, *supra* note 9 (reviewing the literature on male lactation and arguing that it can be conceived along a spectrum from the actual production of milk by bio-male mammals to male-identified parents’ use of human milk to feed their children, to males’ social role in supporting female lactation). Similarly, when parents adopt, breastfeeding is not always a feasible option—though some women have had success inducing lactation through manual stimulation and/or drugs. Women who have given birth can be physically unable to breastfeed, for example, because of nipple malformation or other breast abnormalities, or because of interventions, such as mastectomies or breast implants, while others are advised against it because of the medication they are taking. Trauma can also make breastfeeding difficult. Still others may not produce enough milk to feed their babies.

77. For instance, among the Parisian upper classes in the nineteenth century, breastfeeding was considered inappropriate. See Anne Martin-Fugier, *La fin des nourrices*, 105 *LE MOUVEMENT SOCIAL* 11, 12 (1978). These days, socioeconomic as well as racial and cultural differences seem to have an impact on breastfeeding, with upper-middle-class whites presenting the highest rates of breastfeeding. See Laurence Grummer-Strawn et al., *Racial and Socioeconomic Disparities in Breastfeeding—United States, 2004*, 55 *MORBIDITY & MORTALITY WKLY.* 335, 335–38 (2006); Karen A. Bonuck et al., *Country of Origin and Race/Ethnicity: Impact on Breastfeeding Intentions*, 21 *J. HUM. LACTATION* 320, 320 (2005).

78. The workplace environment is often hostile to nursing parents, with few employers providing them with the space and time to pump so as to maintain their milk supply, forcing them to diminish or stop nursing. See Alan S. Ryan et al., *The Effect of Employment Status on Breastfeeding in the United States*, 16 *WOMEN’S HEALTH ISSUES* 243, 247 (2006). See also *infra* notes 245–50 and accompanying text.

79. This desire can stem from a variety of reasons, ranging from beliefs about proper infant nutrition to medical reasons, e.g., because their infant was born pre-term, or because she suffers from nutritional or digestive disorders, immunologic deficiencies, or other ailments. See American Academy of Pediatrics, Policy Statement, *Breastfeeding and the Use of Human Milk*, 129 *PEDIATRICS* e827 (2012), <http://pediatrics.aappublications.org/content/129/3/e827.full/>.

independent commodity.<sup>80</sup> It did not fully escape the purview of the law, however. Wet-nursing, that is, nursing the baby of another for pay, has a long history of legal and social regulation.<sup>81</sup> The French wet-nursing regime was much more extensive and far-reaching than its American counterpart, in part because wet-nursing was such an entrenched cultural phenomenon in France.<sup>82</sup> Though religious messages and medical advice linked breastfeeding to a moral and caring ideal of mothering, as early as the thirteenth century, French aristocrats “refuse[d] to breastfeed and call[ed] for wetnurses.”<sup>83</sup> They were followed, in the seventeenth century, by the upper middle class and, in the eighteenth century, by the new class of urbanites composed of skilled craftsmen and shopkeepers.<sup>84</sup> In this respect, modern France makes for a particularly interesting case study. In neighboring European countries, where middle and upper class mothers breastfed their babies more commonly, wet nurses were fewer and by and large unregulated.<sup>85</sup>

In the United States, as far as historians know, regulation of wet-nursing was minimal and irregular.<sup>86</sup> Far from being a culturally accepted and state-sponsored activity, wet-nursing has a long history of marginalization, starting in the colonial era.<sup>87</sup> Practical and religious reasons explain the limited acceptance of wet-nursing. In some colonies, wet nurses were scarce because women were scarce, while in others, the expansion of slavery allowed the wealthy class of planters to use enslaved women as wet nurses.<sup>88</sup>

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80. Though breast pumps and hand expression techniques have existed since antiquity and perhaps even earlier, the availability of safe storing, preserving, and shipping techniques is very recent. See Cohen, *supra* note 9, at 153–54 (hypothesizing that in imperial Rome women used breast pumps to express milk). See also Michael Obladen, *Guttus, Tiralatte and Téterelle: A History of Breast Pumps*, 40 J. PERINATAL MED. 669 (2012).

81. Contracts for wet nurses going as far back as ancient Egypt and Babylonia have been found. See VALERIE FILDES, *WET NURSING: A HISTORY FROM ANTIQUITY TO THE PRESENT* 6 (1988).

82. See *id.* at 221–39.

83. See BADINTER, *supra* note 21, at 236 (translated by author).

84. *Id.*

85. See FANNY FAY-SALLOIS, *LES NOURRICES A PARIS AU XIXÈME SIÈCLE* 78 (1980) (quoting the article *Nourrice* in the *NOUVEAU DICTIONNAIRE DE MÉDECINE ET DE CHIRURGIE* 171 (Paris, J.B. Baillière 1877)).

86. See JANET GOLDEN, *A SOCIAL HISTORY OF WET NURSING* 3 (1996) (explaining that evidence on American wet nurses of the past centuries is elusive, with historians lacking precise figures on the number of infants who were wet-nursed and of women who acted as wet nurses). The first federal law pertaining to the welfare of mothers and infants in the United States, the Sheppard-Towner Maternity and Infancy Act, 42 Stat. 224, was not enacted until 1921, following the creation of a Children's Bureau, Pub. L. No. 116, 73 Stat. 79, established by a federal statute of April 9, 1912, and tasked with investigating and reporting “upon all matters pertaining to the welfare of children and child life among all classes of our people.” *Id.* 73 Stat. at 79. By contrast, the French had been enacting laws on wet-nursing since the Middle Ages.

87. See Paula A. Treckel, *Breastfeeding and Maternal Sexuality in Colonial America*, 20 J. INTERDISCIPLINARY HIST. 25, 46–48 (1989).

88. See, e.g., Joan B. Wolf, *Is Breast Really Best? Risk and Total Motherhood in the National Breastfeeding Awareness Campaign*, 32 J. HEALTH POL. POL'Y & L. 595, 621 (2007) (describing how slaves known as “mammies” were forced to nurse their

In the eighteenth century, English Puritans “eschewed wet-nursing for religion reasons,” on the premises that breastfeeding was God’s prescribed method of nourishing children.<sup>89</sup> Some reformers “castigated those women who chose not to nurse their own infants as vain, Eve-like, and sinful in nature.”<sup>90</sup> The powerful Catholic Church in France encouraged wet-nursing so that a wife remain sexually available and fertile, given the taboo on intercourse with a breastfeeding woman<sup>91</sup> and the natural postpartum infertility that occurs when a woman is nursing.<sup>92</sup> Protestant countries such as the United States regarded wet-nursing as a betrayal of a mother’s duty and were more tolerant of the natural contraceptive effects of breastfeeding<sup>93</sup>—or perhaps more willing to commend and practice sexual abstinence.<sup>94</sup>

Another line of division originated in different political economies. As historian Catherine Rollet has pointed out, the “relative importance of the public and the private sectors is the first area of differentiation between countries,” with continuous government involvement in France and the private sector playing a pivotal role in the United States.<sup>95</sup> In the United States, infant well-being was ultimately thought to depend “upon the health, intelligence, the devotion and the maternal instinct of the mother.”<sup>96</sup> This credo left a modest role to the state. The tenet that American parents are both responsible for (and sovereign in) their children’s development found a constitutional translation in the first half of the twentieth century

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white owners’ children). See also FILDES, *supra* note 81, at 128–29 (noting that early settlers had turned to Native American as well as African-American women to nurse their children). But see Treckel, *supra* note 86, at 31 (stating that most women in colonial America nursed their own children and emphasizing that slave wet nurses represented a smaller phenomenon than usually assumed).

89. GOLDEN, *supra* note 86, at 22.

90. Treckel, *supra* note 87, at 32.

91. In both colonial America and early modern Europe, the religious and medical literature claimed that sexual intercourse harmed the quality and quantity of milk. See, e.g., Vanessa Maher, *Breast-Feeding in Cross-Cultural Perspective: Paradoxes and Proposals*, in *THE ANTHROPOLOGY OF BREAST-FEEDING: NATURAL LAW OR SOCIAL CONSTRUCT* 1, 6 (Vanessa Maher ed., 1992).

92. See, e.g., Maylin Simpson-Herbert & Sandra L. Huffman, *The Contraceptive Effect of Breastfeeding*, 12 *STUD. FAMILY PLANNING* 125 (1981) (explaining that lactation typically delays the return of menstruation, a phenomenon known as postpartum amenorrhea, which often indicates a woman’s inability to conceive again).

93. See FILDES, *supra* note 81, at 207. See also VALERIE FILDES, *BREASTS, BOTTLES AND BABIES: A HISTORY OF INFANT FEEDING* 105 (1986).

94. See Treckel, *supra* note 87, at 33. See also Yvonne Knibiehler, *Le lait, la femme*, in *L’ALLAITEMENT MATERNEL: UNE DYNAMIQUE À BIEN COMPRENDRE* 95, 104 (Dominique Blin, Michel Soule & Édith Thoueille eds., 2007) (noting that in sixteenth-century France, a split emerged in infant feeding practices between Catholic families committed to using wet nurses and Huguenots who began to promote and practice breastfeeding by birth mothers as part of the Reform’s new construction of motherhood).

95. Catherine Rollet, *The Fight Against Infant Mortality in the Past: An International Comparison*, in *INFANT AND CHILD MORTALITY IN THE PAST* 38, 43–45 (1997).

96. See MECKEL, *supra* note 33, at 121.

with the notion that families should be free from government interference when it comes to procreation and childrearing.<sup>97</sup>

In contrast, French public authorities became involved in infant feeding via regulation of wet nurses prior to the French Revolution and have remained continuously implicated ever since. Catherine Rollet points to political philosophy explanations for these diverging approaches: not only does France have a tradition of centralized power, while the United States is characterized by federalism, but governments become "more involved when demographic difficulties are most urgent, as was the case in France around 1865 and again in the first quarter of the twentieth century."<sup>98</sup> France, once one of the most populous nations in Western Europe, saw its population growth slow down starting in the early 1800s, generating huge anxieties as to the future of the country.<sup>99</sup> During the same period, the population of the United States, a country of massive immigration and high birthrate, continued to grow steadily.<sup>100</sup> As early as 1778, the lawyer and administrator Antoine-François Prost de Royer questioned the child-rearing customs of his French contemporaries, using the United States as an exemplar and enviously noting that "Americans double their population every twenty years."<sup>101</sup> He went on to praise American mothers: "Chaste spouses, tender mothers, frugal housekeeper, virtuous citizens, *Philadelphians breastfeed their children*."<sup>102</sup>

In France, at the peak of the wet-nursing profession in the 1880s, close to 100,000 infants were placed in the care of wet nurses—about 10% of the children born in the country at the time.<sup>103</sup> Wet-nursing reinforced race and class inequalities and generally had exploitative implications: only the white aristocracy, the bourgeoisie, and urban artisans could afford wet nurses, typically recruited from the lower classes, especially the peasantry, but also from slaves in the colonies

97. The idea of a constitutionally protected right to reproduction stems from *Skinner v. State of Oklahoma ex rel. Williamson*, 316 U.S. 535 (1942). Parents' due process right to control their children's education and childrearing decisions was declared in *Meyer v. Nebraska*, 262 U.S. 390 (1923) and reaffirmed in *Pierce v. Society of the Sisters*, 268 U.S. 510 (1925).

98. See Rollet, *supra* note 95, at 45.

99. See Jean-Pierre Bardet, *La chute de la fécondité: Le constat*, 3 HISTOIRE DE LA POPULATION FRANÇAISE 355 (1988).

100. See Michael R. Haines, *The Population of the United States, 1790–1920*, in 2 THE CAMBRIDGE ECONOMIC HISTORY OF THE UNITED STATES 143 (Stanley L. Engerman & Robert E. Gallman eds., 2000).

101. ANTOINE-FRANÇOIS PROST DE ROYER, MÉMOIRE SUR LA CONSERVATION DES ENFANTS, LU DANS L'ASSEMBLÉE PUBLIQUE DE L'ACADÉMIE DES SCIENCES DE LYON 10 (Lyon, Aimé de la Roche 1778) (translated by author).

102. *Id.* (emphasis added).

103. See Catherine Rollet, *L'allaitement artificiel des nourrissons avant Pasteur*, ANNALES DE DÉMOGRAPHIE HISTORIQUE 81, 82–83 (1983) (noting that about half those infants were bottle fed rather than breastfed by wet nurses and that the figure is under-inclusive as it does not include the numerous wet nurses who instead of hosting infants in their homes lived with the infant's family).

and immigrants in the mainland.<sup>104</sup> Wet nurses' offspring were sacrificed, as the women were often required to reserve their milk for their richer and whiter nurslings and to hand over their own babies to others to be fed by hand (which was close to a death sentence at a time when there was no safe alternative to breast milk).<sup>105</sup>

Wet-nursing represented a significant economic pathway between the city and the countryside. As such, it became the subject of regulation as early as 1350.<sup>106</sup> Initially, legislation focused on the economic relation rather than on health or safety. As a form of special-interest legislation, it protected primarily the interests of the intermediaries between wet nurses and parents in a lucrative business. Regulatory efforts were thus directed at the *recommandaresses* and the *meneurs*, two key middle persons. *Recommandaresses* helped urban families find wet nurses (and servants more generally), while the *meneurs*, akin to wet nurse panderers, combed the countryside in search of nursing women willing, or needing, to breastfeed for pay. A 1611 ruling of the Paris Parlement, the most influential court of last resort at the time, established a monopoly of sorts in favor of *recommandaresses* by instituting a fine and a prison sentence for *meneurs*, midwives, and innkeepers who procured wet nurses without the mediation of *recommandaresses*.<sup>107</sup> In 1781, a Code of Wet Nurses, compiling laws applicable to wet nurses, was published in Paris, a testament to the growing number of rules and regulations covering the profession.<sup>108</sup>

104. See ELSA DORLIN, *LA MATRICE DE LA RACE: GÉNÉALOGIE SEXUELLE ET COLONIALE DE LA NATION FRANÇAISE* 158 n.12, 200–12 (2006) (discussing the use of African slaves as wet nurses for white colonists' infants and the reconstruction of white motherhood which ensued); Rebecca Lynn Winer, *Conscripting the Breast: Lactation, Slavery and Salvation in the Realms of Aragon and Kingdom of Majorca, c. 1250–1300*, 34 J. MEDIEVAL HIST. 164 (2008) (describing the use of enslaved Muslim wet nurses in what is now Northern Spain and the French town of Perpignan); Emmanuelle Romanet, *La mise en nourrice, une pratique répandue en France au XIXe siècle*, 8 TRANSTEXT(E)S TRANSCULTURES J. GLOBAL CULTURAL STUD. 1 (2013) (presenting wet-nursing, based on a Lyon case study, as the exploitation of a social class by another); Rachel G. Fuchs & Leslie Page Moch, *Pregnant, Single, and Far from Home: Migrant Women in Nineteenth-Century Paris*, 95 AM. HIST. REV. 1007 (1990) (describing the French wet-nursing industry before World War I as shaping women's occupational experiences by linking migration and single women's pregnancies).

105. On the mortiferous effects of bottle feeding, see Manuelle Sautereau, *Aux origines de la pédiatrie moderne: Le Docteur Léon Dufour et l'œuvre de la "Goutte de lait" (1894–1928)*, 41 ANNALES DE NORMANDIE 217, 221–22 (1991).

106. See King Jean le Bon's ordinance of January 30, 1350 (fixing a set salary for wet nurses and a fee for the *recommandaresses*, the intermediaries between wet nurses and parents). See E. ANDRAL ET AL., 28 ANNALES D'HYGIÈNE PUBLIQUE ET DE MÉDECINE LEGALE, at 7 (2e série Paris, J.B. Baillière et fils 1867).

107. This decision condemned to "a fine of 50 pounds and a prison sentence first time offending *meneurs* who failed to take wet nurses to the *recommandaresses*' bureau and to a fine midwives and innkeepers who hosted, poached, or offered wet nurses for employment." See Léon Le Fort, *La mortalité des nouveau-nés et l'industrie des nourrices en France*, 86 REVUE DES DEUX MONDES 363, 373 (Mar. 15, 1870) (translated by author).

108. CODE DES NOURRICES, OU RECUEIL DES DÉCLARATIONS DU ROI, ARRÊTS DU PARLEMENT, ORDONNANCES ET SENTENCES DE POLICE CONCERNANT LES NOURRICES (Paris, P.D. Pierres 1781).

In the mid-nineteenth century, children in the care of wet nurses began to be considered a state responsibility due to their steep death rate and the state's natalist interest in ensuring population growth. High mortality may have been due to a variety of factors, including horrific transportation conditions for the wet nurse and her nursling when they left the urban areas where parents resided to return to the wet nurse's rural abode,<sup>109</sup> poor hygiene, neglect, and the fact that nurslings were often fed inadequate foods such as pap (bread soaked in water or animal milk) or panada (cereals cooked in broth) instead of breast milk.<sup>110</sup> A centralized wet nurse placement agency was established, with a municipal office, the so-called "Direction Municipale des nourrices," dispatching Parisian infants with wet nurses to the countryside under medical and administrative surveillance.<sup>111</sup> State-employed physicians examined wet nurses before they could take on young clients and inspected nurslings monthly to ensure that they were properly fed, cared for, and had not contracted maladies transmissible through breast milk such as syphilis.<sup>112</sup> A corps of civil servants was put in charge of overseeing and paying wet nurses, visiting infants every couple of months to verify that "the wet nurse's milk is not shared with another child, that each infant has his own crib, that he is taken out for a walk daily."<sup>113</sup>

The wet-nursing legislation, as it evolved from the late eighteenth century and throughout the nineteenth century, rested on the implicit assumption that wet nurses were disreputable creatures who must be controlled and disciplined to save French children. By the mid-eighteenth century, a substantial literature had emerged on the topic of the preservation of children. A recurrent theme was the promotion of breastfeeding by the birthmother and the corollary demonization of wet nurses.<sup>114</sup> It was not until the 1874 loi Roussel,

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109. Wet nurses sometimes lived in the household, but often children were sent to the countryside to be nursed.

110. See, e.g., Nancy Senior, *Aspects of Infant Feeding in Eighteenth-Century France*, 16 EIGHTEENTH CENTURY STUD. 367, 373 (1983) (alluding to the "bad living conditions" of wet nurses and to nurslings' poor survival rate).

111. Ordonnance de police du 26 juin 1842 concernant les nourrices, les directeurs de bureaux, etc. [Ordonnance of June 26, 1842 Pertaining to Wet-Nurses, Bureau Directors, etc.]. The municipal bureau replaced the Bureau Général des nourrices et recommandaresses pour la ville de Paris, which had been established by a July 12, 1769 royal edict. The old institution of *recommandaresses* was abolished and replaced by a corps of public administrators.

112. Note that the reverse was often true as well: wet nurses could, and regularly did, contract syphilis from their nurslings.

113. See Le Fort, *supra* note 107, at 375, 379–80 (translated by author) (describing the centralized French wet-nursing system and lamenting the fact that in practice, oversight is minimal, with parents bypassing the central bureau's administrative hurdles by recruiting wet nurses through unregulated *petits bureaux* or word of mouth).

114. See Senior, *supra* note 110, at 378 (arguing that from the sixteenth century onward, medical authorities instructed that the mother should nurse her own children, with some such as Guillemeau declaring that "the mother who refuses to nurse her child is the same as a mother who kills her own child").

which reinforced the wet-nursing monitoring system already in place,<sup>115</sup> that legislators for the first time exhibited some concern for wet nurses and their own children's health and well-being.<sup>116</sup> Wet nurses could no longer obtain the medical certificate necessary to take on a nursling for pay unless their own infant had reached seven months of age or was breastfed by another woman.<sup>117</sup>

The split between the French and American attitudes to infant feeding and the diverging roles of the state in infant feeding decisions are deeply rooted in the history of these countries. Yet, despite these different cultural and regulatory approaches, wet nurses ultimately met with a similar fate in both the United States and France. With the growing safety and availability of animal milk, wet-nursing waned toward the end of the nineteenth century, the practice having practically disappeared by the 1920s. The end of wet-nursing marked the beginning of new forms of human milk trade, increasingly decoupled from the female bodies that produce it.

### B. *Regulating Human Milk*

The development of commercially produced animal milk and formula<sup>118</sup> led to a revolution in infant feeding starting at the beginning of the twentieth century across much of the industrialized world.<sup>119</sup> The rates of breastfeeding dropped, accompanied by a decline in the use of wet nurses. In the 1950s, to address the shortage of maternal milk, the mainstream solution was no longer to turn to a wet nurse, but rather to animal milk-based substitutes. French law acknowledged this new reality by abrogating in 1977 the set of laws which pertained to wet nurses.<sup>120</sup> While wet nurses disappeared, the first human milk banks emerged. These

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115. See Loi du 23 décembre 1874 relative à la protection des enfants de premier âge et en particulier des nourrissons [Law of December 23, 1874 Concerning the Protection of Young Children and Infants in Particular] arts. 7, 9, JOURNAL OFFICIEL DE LA RÉPUBLIQUE FRANÇAISE [J.O.] [OFFICIAL GAZETTE OF FRANCE], Dec. 22, 1874, p. 461 (requiring, under criminal penalty, that parents placing children in the care of wet nurses, and wet nurses receiving nurslings, register with their local town hall).

116. See Martin-Fugier, *supra* note 77, at 27–30.

117. See Law of Dec. 23, 1874, art. 8 (Fr.).

118. Cow's milk is the starting material of most infant food products. According to historian Deborah Valenze, German émigré Henri Nestlé developed infant formula in the 1860s in Switzerland based on powdered cow's milk and roasted grain. See VALENZE, *supra* note 1, at 190.

119. See, e.g., Amy Bentley, *Feeding Baby, Teaching Mother: Gerber and the Evolution of Infant Food and Feeding Practices in the United States*, in FROM BETTY CROCKER TO FEMINIST FOOD STUDIES 62, 63 (Arlene Voski Avakian & Barbara Haber eds., 2005) (pointing out that in less than a century infant feeding patterns changed in the United States from months of near-exclusive breastfeeding to bottle-feeding and the introduction of solids early on).

120. See Loi 77–505 du 17 mai 1977 relative aux assistantes maternelles [Law 77–505 of May 17, 1977 Pertaining to Child Care Workers], J.O., May 18, 1977, p. 2815 (abrogating articles L.169 to L.175 from the Code of Public Health and transforming wet-nursing regulation into the regulation of home daycares thus reinforcing the polysemy of the word *nourrice* in French, which means both wet nurse and nanny).

are organizations processing milk given by a “donor”<sup>121</sup> for use by a recipient other than the donor’s baby. Through milk banking, the *service* of wet-nursing is transformed into the *job* of producing bottles of milk, allowing human milk to become regulated as a *product* separated from the female body that secretes it. Technology played a decisive role in the development of milk banking. Naomi Bromberg Bar-Yam, the founder of the New England milk bank, points out that the invention of the electric breast pump in the 1920s<sup>122</sup> allowed a further disjunction between “the producer (the mother/wet nurse), the product (human milk), and the consumer (the baby) of human milk. Breastmilk, rather than breastfeeding, became the commodity of exchange.”<sup>123</sup> Human milk could now be processed in the lab and transformed into a standardized, interchangeable, disembodied product packaged in neat bottles.

Today, avenues for circulating human milk have multiplied. It passes hand-to-hand either through for-profit and nonprofit milk banks or informally through peer-to-peer exchanges. In what follows, I contend that different models of human milk legislation have emerged in France and the United States. The United States leaves formal as well as informal milk exchanges mostly unregulated, while the French government closely monitors milk banks, prohibiting peer-to-peer exchanges altogether.

## 1. Milk Banks

### a. The Story of Milk Banking

Kara Swanson has shown that human milk became the first body product to be institutionally organized in disembodied form, before blood and semen, the other two commonly banked bodily fluids.<sup>124</sup> In 1910, Dr. Fritz Talbot pioneered a human milk collection and distribution service in Boston.<sup>125</sup> From the start, American milk banks were the result of private initiatives, developing free of government regulation and relying on philanthropy rather than public monies. Early milk banks reproduced the race and class stratifications that had defined wet-nursing. Donors were typically low-income, single, and often immigrant mothers

121. Note that women providing milk have long been called “donors” even when they were compensated. Although I prefer the expression “milk provider,” I use it interchangeably with “donor” as a concession to the common language use.

122. See Jessica Martucci, *Breast Pumping*, 15 VIRTUAL MENTOR 791 (2013).

123. Naomi Bromberg Bar-Yam, *The Story of the Mothers’ Milk Bank of New England*, in *GIVING BREASTMILK: BODY ETHICS AND CONTEMPORARY BREASTFEEDING PRACTICE* 98 (Rhonda Shaw & Alison Bartlett eds., 2010).

124. KARA W. SWANSON, *BANKING ON THE BODY: THE MARKET IN BLOOD, MILK, AND SPERM IN MODERN AMERICA* 17 (2014).

125. See GOLDEN, *supra* note 86, at 187.



providing milk to hospitals in exchange for maternal health care, room, and board.<sup>126</sup>

In France, human milk collection started at the beginning of the twentieth century via a network of nursing women who were kept in maternity wards so that their milk surplus could be donated to premature or sick infants, a system known as "The White Salvation."<sup>127</sup> Little is known about the demographics of French donors during these initial years but the fact that they were provided with room and board and prohibited from leaving the premises suggests that they too must have been low-income and single.<sup>128</sup> Doctors in charge used the animalized verb *traire* (to milk) instead of *tirer* (to pump) to describe milk expression by these confined women,<sup>129</sup> condoning the fact they were kept under "permanent surveillance" so as to produce larger quantities of raw milk.<sup>130</sup> The earliest milk bank proper, that is, relying on donors who expressed milk from home or visited daily, was established in 1947 at the Institut de Puériculture de Paris.<sup>131</sup>

Human milk banking was an extension of the *Goutte de lait* (literally "drop of milk") movement, which had developed since the 1890s.<sup>132</sup> The *Gouttes de lait* were milk depots with the dual mission of providing subsidized, safe, modified cow's milk for babies<sup>133</sup> as well as offering hygiene and infant care instructions "to ladies, voluntary workers, and nurses, and even to medical men."<sup>134</sup> The *Gouttes de lait* can be regarded as the precursors, and perhaps even the prototypes, of milk banks.<sup>135</sup> The very same Latin word "lactarium," later chosen

126. The profile of donors after World War II was different. By then, usually white, married women of higher socioeconomic classes were selling milk as a supplemental income rather than an occupation like wet-nursing, seeing themselves as primarily motivated by altruism. See SWANSON, *supra* note 124, at 168–69.

127. See Yvonne Knibiehler, *L'allaitement et la société*, 16 RECHERCHES FÉMINISTES 11, 26 (2003) (*Le Secours blanc* in French).

128. See Henri Briand, *Le centre des donneuses de lait de femme de l'assistance publique de Paris*, 25 LE NOURRISSON: REVUE D'HYGIÈNE ET DE PATHOLOGIE DE LA PREMIÈRE ENFANCE 228 (1935) (describing one of these early human milk collection initiatives in Paris).

129. *Id.* at 233. Note that, conversely, in some French regions, farmers used to say "tirer les vaches" rather than "traire les vaches." (Private conversation with dairy farmer from southwestern France.)

130. Marcel Lelong & Alfred Rossier, *La production mercenaire de lait de femme et les centres de collecte et de distribution de lait de femme*, 34 LE NOURRISSON: REVUE D'HYGIÈNE ET DE PATHOLOGIE DE LA PREMIÈRE ENFANCE 97, 97 (1946). (The underlying idea was that raw milk collected from donors escaping constant supervision would not be as trustworthy, requiring pasteurization.)

131. See R. Nobre et al., *Le lactarium*, 3 J. DE PÉDIATRIE ET DE PUÉRICULTURE 159 (1999).

132. See G.F. McCleary, *The Infants' Milk Depot: Its History and Function*, 4 J. HYGIENE 329 (1904).

133. At first, the French milk dispensaries were privately funded, charitable institutions, but consistent with the narrative of different degrees of state involvement in infant care in the United States and France, they soon obtained the support of the state and localities, morphing into municipal agencies in the 1930s.

134. Review, *Nutrition and Nurture*, 2 BRITISH MED. J. 86, 87 (1922).

135. There was a sinister side to the *Goutte de lait*, especially in the colonies, where the movement was prompted by worries about white women's ability to raise children in the "tropics" and the will to produce more black African bodies "to send to

to designate human milk banks, was used for one of the early cow's milk depots established in Versailles in 1904, attached to a model dairy farm.<sup>136</sup> Similar to animal milk depots at the turn of the century, after World War II, human milk banks were cast as a public health issue to be funded by the French state. In 1948, just one year after the first independent lactarium was established, milk banking became the subject of extensive regulation, at a time when the multiple American milk banks already in existence operated by and large uncontrolled.<sup>137</sup> This difference may have been due to France's longstanding wet-nursing legislation: French regulators could rely on a readily available set of norms and best practices to transfer to the milk banking context.<sup>138</sup> Milk banks may have also been seen as an eminently public good, participating in the postwar welfarist and natalist ideology.<sup>139</sup> The provision of social welfare was deemed to be a precondition to the return of national prosperity and the reconstruction of a country that had experienced unprecedented destruction during the war.

In the United States milk banks remained private, albeit mostly nonprofit enterprises that appeared and disappeared in successive waves throughout the twentieth century—their popularity was adversely impacted by the rise of formula in the 1950s

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Europe the wealth buried in its [Congo's] soil," as a colonial woman declared in 1926. See Nancy Rose Hunt, "Le Bébé en Brousse": *European Women, African Birth Spacing and Colonial Intervention in Breast Feeding in the Belgian Congo*, 21 INT'L J. AFR. HIST. STUD. 401, 405 (1988) (showing that in colonies such as Congo, the *Gouttes de lait* provided women with animal milk with the aim to reduce the duration of breastfeeding, thereby increasing their fertility).

136. See Thierry Lefebvre, *Grandeur et décadence du Lactarium Linas*, 63 REVUE D'HISTOIRE DE LA PHARMACIE 333 (2015) (recounting the story of the Versailles "lactarium").

137. See Circulaire no. 241 du 25 novembre 1948 relative à la création des centres de collecte et de distribution de lait de femme (lactariums) [Circular No. 241 of November 25, 1948 Pertaining to the Creation of Collection and Distribution Centers of Women's Milk (Lactariums)] (on file at Archives nationales Pierrefitte, direction générale de la santé, bureau de la maternité, 19760166/31, dossier du lactarium de Dijon). See also Arrêté ministériel du 9 août 1954 relatif aux conditions d'installation et de fonctionnement des lactariums [Order of August 9, 1954 Concerning the Conditions of Installation and Functioning of Milk Banks], JOURNAL OFFICIEL DE LA RÉPUBLIQUE FRANÇAISE [J.O.] [OFFICIAL GAZETTE OF FRANCE], Aug. 27, 1954, p. 8327 (specifying the testing protocol for donors and their milk, which included controlling the milk for fraud and pasteurizing it).

138. See, e.g., Ordonnance 45-2720 du 2 novembre 1945 sur la protection maternelle et infantile [Ordonnance 45-2720 of November 2, 1945 on Maternal and Child Protection], arts. 21, 24, J.O., Nov. 5, 1945, p. 7297 (reinforcing wet-nursing regulation in a way that foreshadows milk banking regulation as it required that a potential wet nurse be vetted for her alcohol consumption, produce a "medical certificate attesting that she is capable of breastfeeding and is free of any communicable diseases, that she underwent screening tests for syphilis and tuberculosis." She was also compelled to present an administrative certificate establishing "whether her last child is alive, and if so, at least six months of age" (translated by author)).

139. On the French conception of welfare state, see LISA DiCAPRIO, *THE ORIGINS OF THE WELFARE STATE: WOMEN, WORK, AND THE FRENCH REVOLUTION* (2007).

and 1960s, as well as by the HIV/AIDS crisis of the 1980s.<sup>140</sup> In 1929, Kara Swanson reports, at least twenty American cities had so-called “mothers’ milk stations” buying and selling human milk. Some of these stations distributed unpasteurized human milk called “certified milk,” a category borrowed from the dairy industry, while others used pasteurized milk only.<sup>141</sup> By the late 1940s, however, milk banks became marginalized as the overwhelming majority of non-breastfeeding women resorted to formula rather than bottled human milk.<sup>142</sup> Milk banking was reinvented in the 1970s when the growing rejection of formula, motivated by the drive for “natural” motherhood, fostered a renewed interest in breastfeeding.<sup>143</sup> After another lull in the 1980s, resulting from the discovery that HIV/AIDS could be transmitted through milk, milk banks began to reemerge in the 1990s and are prospering again today.<sup>144</sup> Though milk banks had customarily remunerated donors before the HIV crisis, their rebirth was tied to a new norm of “gift,” resting on the assumption that unpaid donors are worthier of trust.<sup>145</sup> During the same period, French milk banks proved more stable than their American counterparts due to being regulated and subsidized by the state.

#### b. The Legal Status of Human Milk and Milk Banks

Milk bank regulation differs in France and the United States in a number of critical ways. American milk banks are independent, privately owned organizations, whether for- or nonprofit, operating relatively free from federally or state-imposed rules.<sup>146</sup> In contrast, French milk banks function under strict centralized

140. The 1980s brought the fear of disease transmission with the first cases of HIV transmission via human milk reported in the medical literature. This led to more complex and costly screening and processing procedures, resulting in numerous milk banks closing. By the end of the 1980s there were only eight or nine milk banks in North America. See Bromberg Bar-Yam, *supra* note 123, at 99.

141. See SWANSON, *supra* note 124, at 33, 50.

142. See *id.* at 160.

143. *Id.* at 183.

144. *Id.*

145. On the shift from compensating milk providers to a norm of gratuitous donation, see Frances Jones, *History of North American Donor Milk Banking: One Hundred Years of Progress*, 19 J. HUM. LACTATION 313, 314 (2003). The idea that unpaid donors are safer donors goes back to Richard Titmuss’s classic comparison of blood donation in the United States and the United Kingdom and his claim that the British system, relying on unpaid donors, had much less transfusion-transmitted diseases and blood wastage. See RICHARD M. TITMUSS, *THE GIFT RELATIONSHIP* (1970). Anthropological and sociological research since then has complicated this view, uncovering its race, gender, and class assumptions. See also Roth, *supra* note 14, at 44 (arguing that some transactions which are accepted as gift and in-kind exchanges become repugnant when money is added to the trade).

146. See generally Linda C. Fentiman, *Marketing Mothers’ Milk: The Commodification of Breastfeeding the New Markets for Breast Milk and Infant Formula*, 10 NEV. L.J. 29 (2009) (reviewing the various legal regimes applying to milk banks).

control.<sup>147</sup> There is only one stand-alone lactarium; the others are branches of public (and more rarely, private) hospitals, subject to a host of legislative and administrative regulations.<sup>148</sup> The designation “lactarium,” rather than “bank” not only reflects a historical connection with animal milk depots, but also the idea that human milk is a bodily product which is not for sale.<sup>149</sup> Since 2005, all lactariums operate under the control of the Agence nationale du médicament et des produits de santé (ANSM), the administrative agency in charge of monitoring the safety and effectiveness of drugs and biologics—the French analog of the FDA’s Center for Biologics Evaluation and Research and the Center for Drug Evaluation and Research.<sup>150</sup> French law treats human milk as a “health product” (*produit de santé*),<sup>151</sup> an undefined, catch-all category created in 1988, which encompasses drugs, contraceptives, organs, tissues, cells, animal or human products, cosmetics, and tattoo supplies.<sup>152</sup>

Under French law the sale of human milk is illegal because milk is considered a bodily part similar to an organ.<sup>153</sup> Article 16-1 of the French Civil Code states, “The human body, its elements and its products may not form the subject of a patrimonial right.”<sup>154</sup> Lactariums possess the exclusive right to process and distribute human milk.<sup>155</sup> They are prohibited from paying donors for their

147. See, e.g., Lois D.W. Arnold & Marie Courden, *The Lactariums of France, Part 2: How Association Milk Banks Operate*, 10 J. HUM. LACTATION 195 (1994) (describing the functioning of French lactariums). The collection, processing, storage, and distribution of human milk are regulated in great detail by the Code de la santé publique, a compilation of the statutes and decrees pertaining to public health. See, e.g., CODE DE LA SANTÉ PUBLIQUE [C. SANTÉ PUBL.] [CODE OF PUBLIC HEALTH] art. L.2323-1.

148. See Lois D.W. Arnold *The Lactariums of France, Part 1: The Lactarium Docteur Raymond Fourcade in Marmande*, 10 J. HUM. LACTATION 125 (1994).

149. The French use the banking metaphor for blood (blood banks are known as *banques de sang*). However, just like milk, blood cannot be bought or sold in France. The rejection of the term bank in the context of milk may be due to milk’s female gender coding, the preconception that women are naturally generous, and that unpaid female labor is the norm.

150. See Alexandre Lapillonne et al., *La nutrition du prématuré*, 18 ARCHIVES DE PÉDIATRIE 313, 320 (2011) (Until 2012, the ANSM was known as the Agence française de sécurité sanitaire des produits de santé (AFSSAPS)).

151. C. SANTÉ PUBL. art. L.5311-1, 8.

152. *Id.* art. L.5311-1.

153. See IRMA ARNOUX, LES DROITS DE L’ÊTRE HUMAIN SUR SON CORPS 82 (1994) (noting that the peer-to-peer sale of human milk was not prohibited until the 1990s, when the HIV epidemics led the government to grant lactariums the monopoly over the collection and distribution of human milk).

154. CODE CIVIL [C. CIV.] [CIVIL CODE] art. 16-1 (*translation at* <https://www.legifrance.gouv.fr/Traductions/en-English/Legifrance-translations>).

155. See C. SANTÉ PUBL. art. L.2323-1. See also Circulaire de la Direction générale de la santé/2A/2B no. 223 du 20 mars 1987 relative à l’interdiction des dons directs de lait maternel [Circular 2A/2B No. 223 of the General Directorate of Health Pertaining to the Direct Donation of Maternal Milk], BULLETIN OFFICIEL DU MINISTÈRE CHARGÉ DE LA SANTÉ [OFFICIAL BULLETIN OF THE HEALTH MINISTRY] no. 87/30, p. 71–74; Loi 89–899 du 18 décembre 1989 relative à la protection et à la protection de la santé de la famille et de l’enfance [Law 89–899 of December 18, 1989 Pertaining to the Protection of Family and Childhood Health] JOURNAL OFFICIEL DE LA RÉPUBLIQUE FRANÇAISE [J.O.] [OFFICIAL GAZETTE OF FRANCE], Dec. 19, 1989, p. 15735.

milk<sup>156</sup>—which, incidentally, has resulted in a state of near-constant shortage. Before the HIV/AIDS crisis, lactariums did compensate donors “for the time spent for the milk donation.”<sup>157</sup> Since 1992, donors can no longer be indemnified.<sup>158</sup> The official explanation for this shift is that compensation would be contrary to the principle of gratuity of contracts pertaining to bodily parts.<sup>159</sup> In practice, insiders say that the change was prompted by the HIV epidemic and the belief that unpaid donors are more trustworthy.<sup>160</sup> The reasoning was that paid donors might be incentivized to lie about their health status and to increase the volume of their donation by diluting their milk in animal milk or other fluids.<sup>161</sup> But this explanation fails to account for French law’s double standard when it comes to the sale of body parts. Some money does change hand in milk banking, at least institutionally. Lactariums neither compensate donors nor charge parents for milk, but the NICU units that dispense human milk to hospitalized infants do pay a government-set fee to lactariums.<sup>162</sup> Despite French authorities’ protestation to the contrary, human milk is thus bought and sold.

A decidedly more *laissez-faire* approach prevails in the United States. Federal entities and most state legislatures have remained silent on the issue of human milk. The U.S. government seems, implicitly, to categorize human milk as a food as opposed to a bodily fluid given that the federal regulations surrounding blood and other tissues do not apply to it.<sup>163</sup> Neither the American Association of Tissue Banks nor the FDA classifies human milk as a human tissue—in fact, they do not classify it as anything. The FDA, which regulates the ingredients and labeling of infant formula, does not

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156. See Circulaire de la Direction générale de la santé no. 589 du 24 novembre 1992 [Circular No. 589 of November 24, 1992] (specifying that lactariums must “solicit milk from donors who are imperatively unpaid” (translated by author)).

157. See H. Merlin, *Le don de lait maternel en France*, 14 *PRESCRIRE* 283, 284 (1994) (translated by author).

158. See Circular No. 589 of November 24, 1992.

159. On this idea, see CONSEIL D’ÉTAT, *SCIENCES DE LA VIE, DE L’ÉTHIQUE AU DROIT* 40 (1988).

160. This statement is based on confidential conversation I have had with French milk bank personnel between 2014 and 2016.

161. Interview with a lactarium director in the Paris region (2014) (transcript on file with author).

162. See Arrêté 0070 du 18 mars 2009 relatif au prix de vente et au remboursement par l’assurance maladie du lait humain [Order 0070 of March 18, 2009 Concerning Human Milk’s Sales Price and Reimbursement by the National Health Insurance], J.O., Mar. 24, 2009, p. 5262, text no. 10 (setting the price of donor’s milk at €80 per liter of fresh or frozen milk and €133 per 100 grams of freeze-dried milk).

163. See, e.g., 21 C.F.R. § 1270.3(j)(5) (2009) (excluding human milk from the definition of human tissue in regulations addressing human tissue intended for transplantation). In addition the National Organ Transplant Act of 1984, Pub. L. No. 98–507, prohibits the buying and selling of many nonrenewable body products, which can only be given, but it does not cover human milk.

regulate human milk.<sup>164</sup> At the state level, the collection and sale of human milk is not prohibited anywhere. Some states explicitly exclude replenishable bodily fluids and tissues such as human milk, hair, or sperm from the scope of their laws prohibiting the sale of bodily material.<sup>165</sup> Others do not have laws on the books classifying or regulating breast milk at all.<sup>166</sup> Four states only (California, Maryland, New York, and Texas) regulate milk banks.<sup>167</sup> Three of those (California, New York, and Maryland) do so on the premise that human milk is in fact a human tissue, requiring tissue-banking licenses for organizations to use banked milk.

Milk banks themselves have striven to fill this regulatory gap. Following the HIV/AIDS crisis in the 1980s, which posed a major threat to their legitimacy as safe providers of infant nutrition, nonprofit milk banks actively sought federal oversight. In 1985, personnel from twelve milk banks called their own meeting in D.C. to found a professional organization, the Human Milk Banking Association of North America (HMBANA).<sup>168</sup> HMBANA lobbied for federal oversight,<sup>169</sup> but the FDA declined to regulate milk banks. As a result, HMBANA developed its own voluntary guidelines which apply to its member banks.<sup>170</sup> A subbranch of the

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164. See generally 21 C.F.R. § 107 (2009). However, the FDA has begun to regulate human milk-based fortifiers qua infant formula. These fortifiers are produced and marketed by for-profit companies and milk banks. See, e.g., *Regulatory Information*, PROLACTA BIOSCIENCE, <http://www.prolacta.com/regulatory-information> (last visited June 21, 2017) (stating “Prolacta’s added-mineral products are to be regulated as infant formulas. As such, Prolacta Bioscience is required to be in compliance with Federal regulations governing the production and labeling of such items as covered by statute in 21 C.F.R. 100–169, and, in particular, parts 105–107 dealing with infant foods”).

165. See Sarah E. Waldeck, *Encouraging a Market in Human Milk*, 11 COLUM. J. GENDER & L. 361, 387–88 (2002).

166. See generally *Breastfeeding State Laws*, NATIONAL CONFERENCE OF STATE LEGISLATURES SURVEY, <http://www.ncsl.org/research/health/breastfeeding-state-laws.aspx> (last visited July 26, 2017).

167. CAL. HEALTH & SAFETY CODE §§ 1647–48 (1999); N.Y. Pub. Health Law § 2505 (1980); N.Y. COMP. CODES R. & REGS. tit. 10, §§ 52.9.1–8 (2000); MD. CODE REGS. 10.50.01 (1986); 25 TEXAS ADMIN. CODE § 227.1; TEXAS HEALTH & SAFETY CODE ANN. § 161.071 (2001).

168. See SWANSON, *supra* note 124, at 191.

169. See Lois D.W. Arnold & Maria Asquith, *The Evolution of Services in Modern Human Milk Banking*, 7 J. HUM. LACTATION 87 (1991); Patricia Wen, *Breast-Milk Banks Push for More Federal Oversight*, BOSTON GLOBE, Oct. 24, 2002. See also Mary Rose Tully, *Human Milk Banking Ass’n of N. Am., A Proposal for Collaboration Between the FDA and the Human Milk Banking Association of North America to Assure the Quality and Safety of Donor Human Milk* (Apr. 14, 2000), <http://www.fda.gov/ohrms/dockets/dockets/00n0001/ts00019.pdf> (“There appears to be an increasing need for federal oversight of donor human milk banking, as witnessed by the current concern expressed at USDA over use of donor human milk for WIC recipients, and a few random attempts by breastfeeding mothers to give away or sell their milk locally or via the Internet.”).

170. Lois D.W. Arnold, *Donor Human Milk Banking: More Than Nutrition*, in *BREASTFEEDING AND HUMAN LACTATION* 775, 776 (Jan Riordan & Kathleen Auerbach eds., 2d ed. 1999); Ctrs. for Disease Control & Prevention, *Guidelines for Preventing Transmission of Human Immunodeficiency Virus Through Transplantation of Human Tissue and Organs*, MORBIDITY & MORTALITY WKLY. 1, 2, 5 (May 20, 1994).

FDA charged with the regulation of food and dietary supplements, the Center for Food Safety and Applied Nutrition, agreed to help HMBANA develop these standards.<sup>171</sup> That is as far as the federal government has been willing to go—a far cry from its active involvement in animal milk regulation.

c. Human Milk Processing: The Dairy Model

Both the French regulation of lactariums and the HMBANA guidelines echo dairy industry routines in terms of administrative design and substantive norms. In the United States, animal milk is treated as a potentially toxic liquid, calling for pasteurization. In France, producers are required to adopt systematic protocols to protect it from biological, chemical, and physical hazards in the production process.<sup>172</sup> The influence of the dairy model is hardly surprising, given the similarity of the “products” and the fact that “[t]he dairy sector is historically one of the first (if not the first) food sectors which introduced processing steps and chemical as well as microbiological criteria along the production chain to both safeguard and monitor the quality of the processed dairy product.”<sup>173</sup>

HMBANA banks operate under the supervision of medical advisory boards, and membership in the association requires sites to conduct self-assessments, which are reviewed annually by the HMBANA executive board.<sup>174</sup> Noncompliance may result in suspension from HMBANA. French milk banks must abide by the safety monitoring imposed by the Agence nationale de sécurité du médicament et des produits de santé, the administrative agency specializing in the assessment of health risks, tasked with periodically inspecting lactariums.<sup>175</sup> In both countries, the chain of quality control for animal milk production is comprised of three main steps, replicated in the human milk-banking context. The vetting mechanism typically begins with the health assessment of the animal or human milk providers, continues by scrutinizing the milking and processing conditions, before reviewing the final packaging, transportation, storage, and distribution methods.

Dairy herds are periodically screened for a variety of ailments that could affect milk quality. Human donors are asked to share

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171. See Tully, *supra* note 169 (stating that “FDA staff have regularly given input into the development and updating of the *Guidelines* since 1987”).

172. See *supra* Part I.

173. See Heyndrickx et al., *supra* note 64, at 97.

174. See HUMAN MILK BANKING ASSOCIATION OF NORTH AMERICA, GUIDELINES FOR THE ESTABLISHMENT AND OPERATION OF DONOR HUMAN MILK BANKS (2011).

175. See *supra* note 150 and accompanying text.

their personal<sup>176</sup> and medical history.<sup>177</sup> If selected, they are subjected to serological testing.<sup>178</sup> Food safety rules require that farmers wash their cows' udders before milking and sanitize the milking equipment between each milking session. Human donors are trained in sanitary methods of pumping and storing milk, including washing their hands with water as hot as possible, washing their breasts (unless they have showered recently), and regularly cleaning their pump.<sup>179</sup> Farmers must regularly send samples of animal milk to specialized laboratories for pathogen, yeast, mold, vitamin, and other types of testing. Once collected, human milk is typically subject to bacteriological testing by the milk bank before processing.<sup>180</sup> In dairy processing, multiple cows' milk is pooled, homogenized, pasteurized, and fortified. Similarly, human milk banks pool donors' milk so as to produce a standardized product that meets specific nutritive guidelines. The human milk is pasteurized (except in rare cases where doctors specifically prescribe it raw) and often enriched with

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176. Banks typically only accept donors who are nursing their own children, the thought being that because they nourish their own, they have the best incentives to follow a lifestyle ensuring that their milk is of the highest possible quality. Exceptions are usually made for women whose infants died, as donating milk has been shown to help some bereaved mothers deal with their loss. See J.M. Welborn, *The Experience of Expressing and Donating Breast Milk Following a Perinatal Loss*, 28 J. HUM. LACTATION 506 (2012).

177. Prospective donors must present a doctor's statement vouching for their and their babies' good health. They must also answer a detailed verbal and written questionnaire about their medical history and lifestyle.

178. Before they make their first donation, women are tested for hepatitis B, HIV-1, HIV-2, adult T-cell leukemia virus, and syphilis, all of which can be transmitted through milk. See HUMAN MILK BANKING ASSOCIATION OF NORTH AMERICA, *supra* note 174; AFSSAPS, *The Good Practice Rules for the Collection, Preparation, Qualification, Treatment, Storage, Distribution and Dispensing on Medical Prescription of Human Milk by the Milk Banks* (2007), [http://association-des-lactariums-de-france.fr/wp-content/uploads/lactarium\\_guide\\_bonnes\\_pratiques\\_5\\_janvier\\_2008\\_traduction\\_anglais.pdf](http://association-des-lactariums-de-france.fr/wp-content/uploads/lactarium_guide_bonnes_pratiques_5_janvier_2008_traduction_anglais.pdf).

179. They are instructed on *how* to clean a breast pump and store their expressed milk in optimal conditions, e.g., they may be required to maintain a maximum temperature in their freezer and to use sterile containers. See A. Rossier & Jacqueline Bertrand, *La méthode de contrôle et de conservation du lait maternel au lactarium*, 30 LE LAIT 252, 254 (1950) (revealing that as early as during the first years of their existence, the French lactariums envisioned that they would be subject to maximum bacterial counts on the model of the dairy industry. As a result they resorted to testing the milk they collected every couple of weeks. "If more than 100,000 germs are found, the donor becomes subject to surveillance and a social worker visit. A milk containing 1,000,000 germs for every centimeter square will be rejected; an investigation is launched if the results are unfavorable, the donor is crossed off the Lactarium." (translated by author)).

180. Though this can vary depending on the country or the milk bank. HMBANA banks now delay bacteriological testing until after the processing is over. In France, a first bacteriological test takes place before the milk from different donors is pooled and a second after pooling and pasteurization. See Ministère de la santé, de la jeunesse et des sports, *Décision du 3 décembre 2007 définissant les règles de bonnes pratiques prévues à l'alinéa 3 de l'article L.2323-1 du Code de la santé publique*, [Decision of December 3, 2007 Defining the Best Practice Rules Called for by Article L.2323-1 of the Code of Public Health] ch. VI, JOURNAL OFFICIEL DE LA RÉPUBLIQUE FRANÇAISE [J.O.] [OFFICIAL GAZETTE OF FRANCE], Jan. 5, 2008, p. 328.



bovine-based fortifiers and nutrients such as proteins, fat, carbohydrates, minerals, and vitamins.<sup>181</sup>

The parallel with dairy processing is explicitly invoked by for-profit milk banks operating for the benefit of the California company Prolacta Bioscience, created in 1999, the first to market human milk-based nutritional products for premature infants. Prolacta prides itself on pasteurizing the human milk used in its products “following guidance set by the FDA’s Pasteurized Milk Ordinance.”<sup>182</sup> Another human milk business emulating the dairy industry, Medolac, is an Oregon-based company created in 2009 by Prolacta’s founder.<sup>183</sup> Running a network of for-profit milk banks, it recently launched a new product resembling the UHT cartons of cow’s milk popular in France and many other parts of the world. Medolac sells vacuum-sealed human milk rendered sterile through heat processing. The packages can be shipped and stored at room temperature, creating a vision of supermarkets in a not-so-distant future shelving human and animal milk cartons side-by-side.

Despite different regulatory frameworks in place in the United States and in France, milk banking follows in the footsteps of animal milk when it comes to quality assurance. However, unlike animal milk, which is mass produced and widely available at a relatively low cost, both countries’ milk banks fail to meet the growing demand for human milk. Shortages leave some families with the only option of resorting to informal milk exchanges or wet nurses, which are the focus of the next subsection.

## 2. Informal Milk Exchanges

The Internet, by connecting donors directly with recipients, has fueled a growing practice sometimes referred to as “peer-to-peer milk sharing.”<sup>184</sup> As the legal scholar Linda Fentiman has documented, “[m]any women donate or sell their extra breast milk to family, friends, or total strangers. These transactions are facilitated through websites as varied as craigslist, MilkShare, or ‘lactivist’ blogs.”<sup>185</sup> She also reports that wet-nursing has begun to experience a revival.<sup>186</sup>

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181. See Willemijn E. Corpeleijn et al., *Human Milk Banking—Facts and Issues to Resolve*, 2 NUTRIENTS 762, 763 (2010) (arguing that this processing “partly inactivates the biological substances responsible for the beneficial effects, thereby diminishing the nutritional and protective value of human milk”).

182. See PROLACTA, <http://www.prolacta.com/quality> (last visited June 21, 2017).

183. See Elena Taggart Medo, *Increasing the Global Supply and Affordability of Donor Milk*, 8 BREASTFEEDING MED. 438 (2013) (where the Prolacta and Medolac founder advocates in favor of her for-profit milk banking business model).

184. Like much of the “sharing economy,” milk *sharing* is somewhat of a misnomer, given that a substantial portion of the exchanges involve payments. See *infra* notes 213–19 and accompanying text.

185. See Fentiman, *supra* note 146, at 66.

186. *Id.*

## a. Peer-to-Peer

Two types of online platforms facilitate peer-to-peer milk exchanges. The first, such as the Facebook-based “Human Milk for Human Babies” or the “Eats on Feets” networks, aim at connecting local parents to share milk through face-to-face interactions free of charge. The second are a variety of websites such as OnlyTheBreast.com or MilkShare, which promote donations, but also support the buying and selling of human milk or the hiring of wet nurses through a classified ad system. These Web-based fora are far from marginal. Sarah Keim, a pediatrics researcher, who has written about the contamination of milk sold online, found at least 13,000 “unique postings” on various websites requesting or offering human milk for sale when she was preparing her 2013 study.<sup>187</sup> While peer-to-peer milk exchanges remain unregulated in the United States, they are positively illegal in France.

The French ban stems from the general exclusion on buying and selling bodily parts, human milk being assimilated to a body part.<sup>188</sup> Even donations can be construed as illegal since French law provides that the donation of a bodily part must remain anonymous.<sup>189</sup> A donor may not know the identity of the recipient, and vice versa. Peer-to-peer milk sharing, which rests on direct communication between donors and recipients, violates this anonymity mandate. In addition, peer-to-peer milk sharing has been proscribed on health and safety grounds.<sup>190</sup> In 1987, then-Surgeon General Jean-François

187. Sarah A. Keim et al., *Microbial Contamination of Human Milk Purchased Via the Internet*, 132 PEDIATRICS (2013), <http://pediatrics.aappublications.org/content/early/2013/10/16/peds.2013-1687>.

188. See CODE CIVIL [C. CIV.] [CIVIL CODE] art. 16-1 (“Everyone has the right to respect for his body. The human body is inviolable. The human body, its elements and its products may not form the subject of a patrimonial right.” (translation at <https://www.legifrance.gouv.fr/Traductions/en-English/Legifrance-translations>)); C. CIV. art. 16-2 (“The court may prescribe any measures appropriate to preventing or putting an end to an unlawful invasion of the human body or to unlawful dealings relating to bodily elements or products.” (translated by author)). See also CODE DE LA SANTÉ PUBLIQUE [C. SANTÉ PUBL.] [CODE OF PUBLIC HEALTH] art. L.1211–4 (providing that “no payment, whatever its form, can be made to those who donate bodily parts or body products” (translated by author)). The Civil Code also provides that any contract pertaining to the human body and its products is void. See C. CIV. art. 16-7. Sales of bodily parts are subject to criminal penalties. See CODE PÉNAL [C. PEN.] [PENAL CODE] art. 511–4 (“Procuring from another person bodily tissues, cells, or body products in return for payment, whatever its form, is punishable by five years’ imprisonment and a fine of €75,000. The same penalties apply to those acting as intermediaries to facilitate the procuring of bodily tissues, cells, or human products in return for payment, whatever its form, or supplying tissues, cells, or products belonging to another person’s body for payment.” (translated by author)).

189. See C. SANTÉ PUBL. art. L.1211–6 (“Neither the donor may know the identity of the recipient, nor the recipient the identity of the donor. No information which could be used to identify the donor or the recipient can be disclosed. Exception to this anonymity principle will only be made in case of therapeutic necessity” (translated by author)).

190. See Circulaire DGS/2A/2B no. 223 du 20 mars 1987 relative à l’interdiction des dons directs de lait maternel [Circular DGS/2A/2B No. 223 of March 20, 1987 Concerning the Prohibition on Direct Donations of Maternal Milk] BULLETIN OFFICIEL DU MINISTÈRE CHARGÉ DE LA SANTÉ [OFFICIAL BULLETIN OF THE HEALTH MINISTRY], p. 71.

Girard condemned the practice of some lactariums to facilitate “direct milk donations,” that is, the feeding of a child through the donation of another woman’s milk without any prior milk testing or processing.<sup>191</sup> He declared, “[T]he milk collected and distributed in these conditions being often contaminated by bacteria and given the possible risks of virus contamination via maternal milk, especially by the HIV virus, I ask that you no longer allow direct milk donations.”<sup>192</sup> Even milk donations from “a mother to her own child”<sup>193</sup>—when the child is hospitalized—are subject to health and safety regulations and mandatory screening, testing, and pasteurization.<sup>194</sup>

On both sides of the Atlantic, the risk that infectious diseases could be transmitted through unpasteurized human milk, that a liquid purported to be human milk might in fact be something else, or that milk be contaminated with high levels of bacteria and toxic residue, has led doctors and public health officials to recommend against peer-to-peer milk sharing.<sup>195</sup> Here again the parallels with animal milk are hard to miss. Viruses, foreign substances, bacteria, and toxins may vitiate both types of milk. In the late nineteenth century, raw cow’s milk was implicated in outbreaks of scarlet fever, diphtheria, typhoid, and tuberculosis.<sup>196</sup> Modern raw human milk can be contaminated by viruses such as Hepatitis B, Hepatitis C, HIV, and the human T-lymphotropic virus (HTLV), and transmit them to infants.<sup>197</sup> Nineteenth-century middlemen were sometimes accused of diluting cow’s milk with water or other liquids to increase their profits. Similarly, a team of researchers recently reported that of 102 human milk samples bought online, at least 10% had been diluted with cow’s milk, which may be dangerous to infants with allergies.<sup>198</sup> Harmful

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191. *Id.*

192. *Id.* (translated by author).

193. See Circulaire DGS/SP 2 no. 96–698 du 13 novembre 1996 relative au don de lait personnalisé d’une mère à son enfant hospitalisé [Circular DGS/SP 2 No. 96–698 of November 13, 1996 Pertaining to the Personalized Donation of Milk from a Mother to Her Hospitalized Child], reprinted in FRANÇOIS DENIS, LES BACTÉRIES, CHAMPIGNONS ET PARASITES TRANSMISSIBLES DE LA MÈRE À L’ENFANT 467 (2002).

194. *Id.* See also Arnold & Courden, *supra* note 147, at 196.

195. See, e.g., American Academy of Pediatrics, *Breastfeeding and the Use of Human Milk*, 115 PEDIATRICS 496 (2005); AFSSAPS, *L’Afssaps met en garde sur les risques liés à l’échange de lait maternel*, 24 J. DE PÉDIATRIE ET DE PUÉRICULTURE 259 (2011) (press release in which the Association warned against the dangers of using “The Human Milk for Human Babies” global network because of the lack of microbiological and serological testing of the donors and their milk).

196. See, e.g., Peter J. Atkins, “White Poison”? *The Social Consequences of Milk Consumption, 1850–1930*, 5 SOC. HIST. MED. 207 (1992) (presenting the extent of the poor quality of the animal milk supply in 1850–1930, including its role in spreading a variety of diseases).

197. See Gopi Menon & Thomas C. Williams, Review, *Human Milk for Preterm Infants: Why, What, When and How?*, 98 ARCHIVES DISEASE CHILDHOOD: FETAL & NEONATAL EDUC. F559 (2013).

198. Sarah A. Keim et al., *Cow’s Milk Contamination of Human Milk Purchased via the Internet*, 135 PEDIATRICS e1157 (May 2015), <http://fn.bmj.com/content/98/6/F559>. But see Aunchalee E.L. Palmquist & Kirsten Doehler, *Human Milk Sharing Practices in the U.S.*, 12 MATERNAL & CHILD NUTRITION 278, 285 (2016) (noting that the Keim study was limited to milk offered for sale and cannot be generalized to “commerce-free milk sharing practices in which social relationships are familiar, localized”).

bacteria resulting from improper collection, transportation, or storage can also colonize milk. Much like salmonella, *E. coli*, or listeria poisoning prompted the widespread pasteurization of animal milk, comparable hazards have called into scrutiny the way in which human milk is collected and distributed peer-to-peer.<sup>199</sup> Lastly, animal milk is not the only type of milk laden with pesticide residues and pollutants. Toxic substances such as polychlorinated biphenyls, dioxins, and heavy metals have also been found in human milk.<sup>200</sup>

In light of these risks, the French and American food and drug safety agencies have voiced concerns over informal human milk markets.<sup>201</sup> The American Academy of Pediatrics recommends against the sharing of human milk.<sup>202</sup> A few states have issued warnings against the practice. A New Jersey bill, introduced on January 17, 2013, sought to establish a “public awareness campaign to advise pregnant women, new parents, and women who are breast feeding their children about the dangers of casual milk sharing.”<sup>203</sup> Even probreastfeeding organizations such as the Leche League and nonprofit milk banks joined the chorus, condemning peer-to-peer milk sharing.<sup>204</sup> Considering the potential health risks and the near-universal condemnation by the medical establishment, why do some parents

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199. See Keim et al., *supra* note 187 (finding that 75% of raw human milk samples bought online were contaminated with bacteria, including bacteria which can cause infections, compared to 35% of raw milk samples from a milk bank).

200. See generally MAIA BOSWELL-PENC, *TAINTED MILK: BREASTMILK, FEMINISMS, AND THE POLITICS OF ENVIRONMENTAL DEGRADATION* (2006) (presenting the growing evidence that human milk like the rest of people's bodies, is contaminated with multiple synthetic chemicals). See also Walter J. Rogan, *Pollutants in Breast Milk*, 150 ARCHIVES PEDIATRIC & ADOLESCENT MED. 981, 981 (1996) (writing that “breastmilk, if regulated like infant formula, would commonly violate Food and Drug Administration action levels of poisonous or deleterious substances in food and could not be sold”); PENNY VAN ESTERIK, *RISKS, RIGHTS AND REGULATION: COMMUNICATING ABOUT RISKS AND INFANT FEEDING* (2003) (decrying the fact that women rather than the chemical industries are blamed for contamination).

201. The FDA has issued a warning regarding the risks of obtaining human milk from sources such as the Internet. See Food and Drug Administration (FDA), *Use of Donor Milk* (2010), <http://www.fda.gov/scienceresearch/specialtopics/pediatrictherapeuticsresearch/ucm235203.htm>. See also Susan Landers, *Warn Mothers Against Buying, Donating Breast Milk Via Internet*, 35 AAP NEWS 18 (Dec. 1, 2014), <http://www.aappublications.org/content/35/12/18.3> (commenting on the FDA warning). On France, see AFSSAPS, *supra* note 195.

202. Allison Bond, *Got Breast Milk? Buying Human Milk Online from Strangers or even Sharing Among Friends Puts Babies at Risk of Disease*, 29 AAP NEWS 24 (Aug. 29, 2008), <http://www.aappublications.org/content/29/9/24.1>.

203. NJ Leg. 3702, 215th Sess., § 2 (N.J. 2013). In 2010, a Tennessee state bill, which would have made it a misdemeanor to sell human milk informally, failed to make it past committee review. H.R. 3704, 106th Leg. (Tenn. 2010).

204. See e.g., Lois D.W. Arnold, *Becoming a Donor to a Human Milk Bank*, 36 LEAVEN 19 (Apr.–May 2000) (Arnold, a founding member and former Executive Director of the Human Milk Banking Association of North America, expresses her opposition to milk sharing). See also Karleen D. Gribble, *Biomedical Ethics and Peer-to-Peer Milk Sharing*, 3 CLINICAL LACTATION 108, 108 (2012) (pointing out that La Leche League International “emphasized the risks of peer-to-peer milk sharing and prohibited its volunteers from mentioning peer milk sharing to mothers”).

still turn to informal markets in human milk? At least four considerations may come into play.

First, in certain types of situations it may be the easiest, or the only, way for families to obtain human milk.<sup>205</sup> French milk banks cater only to premature and sick infants, and American banks prioritize them, leaving parents of otherwise healthy babies with the choice of either formula or human milk procured via peer-to-peer exchanges.<sup>206</sup> Second, while human milk is delivered to infants free of charge by French milk banks, in the United States, cost is an important factor, given that it is rarely covered by insurance.<sup>207</sup> Milk found online is typically cheaper than that procured through HMBANA milk banks, which officially do not sell it, but charge a “processing fee.” Banked milk can cost up to \$5 per ounce<sup>208</sup> while the average price for milk sold online is between \$1.50–\$2.50, when it is not given for free.<sup>209</sup> Costs quickly add up. The average consumption of milk throughout the first six months of a baby’s life ranges from twenty-one to thirty-one ounces a day.<sup>210</sup> Feeding an infant exclusively banked milk could set families back as much as \$126 to \$186 per day.

A third reason to turn to informal milk markets, reminiscent of the animal milk nutritionist movement,<sup>211</sup> lies in the belief in the superiority of raw, unprocessed human milk. Some families prefer raw milk obtained directly from donors to heavily processed banked milk. Their rationale is that raw milk contains unique nutritional and immunological properties that are destroyed by pasteurization.<sup>212</sup>

Lastly, some parents turn to peer-to-peer outlets out of a desire to participate in a community of like-minded families.<sup>213</sup> In that sense,

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205. See Palmquist & Doehler, *supra* note 198, at 279.

206. On hospitals’ prioritization policies, see Mary Rose Tully, *Recipient Prioritization and Use of Human Milk in the Hospital Setting*, 18 J. HUM. LACTATION 393 (2002).

207. As of 2017 only six states allow Medicaid access for human milk and only in certain limited conditions. See Anna Berry, *Liquid Gold: 6 States Allow Medicaid Access for Breast Milk*, NON PROFIT Q. (Apr. 27, 2017), <https://nonprofitquarterly.org/2017/04/27/liquid-gold-6-states-allow-medicaid-access-breast-milk/>.

208. See Pauline Sakamoto, Naomi Bar-Yam & Maryanne Tigchelaar Perrin, *Research-Based Insights into Increasing the Global Supply and Affordability of Donor Milk*, 9 BREASTFEEDING MED. 166 (2014).

209. See Judy Dutton, *Liquid Gold: The Booming Market for Human Breast Milk*, WIRED (May 17, 2011), [https://www.wired.com/2011/05/ff\\_milk/](https://www.wired.com/2011/05/ff_milk/); Eric Spitznagel, *Germs, Male Customers, and the Online Breast Milk Market*, BLOOMBERG BUSINESSWEEK, Oct. 22, 2013.

210. See, e.g., Lennart Köhler et al., *Food Intake and Growth of Infants Between Six and Twenty-Six Weeks of Age on Breast Milk, Cow’s Milk Formula or Soy Formula*, 73 ACTA PEDIATR. SCAND. 40 (1984) (comparing normal infants’ average consumption of human milk to bottle-fed infants’).

211. See *supra* note 38 and accompanying text.

212. See Corpeleijn et al., *supra* note 181.

213. See Aunchalee Palmquist, *Demedicalizing Breastmilk: The Discourses, Practices, and Identities of Informal Milk Sharing*, in ETHNOGRAPHIES OF BREASTFEEDING: CULTURAL CONTEXTS AND CONFRONTATIONS 23 (Tanya Cassidy & Abdullahi El-Tom eds., 2015) (describing the positive effect milk sharing has on parents’ lives as an emergent form of identity).

milk sharing provides another illustration of the “sharing economy” boom, with participation in collective consumption motivated by such factors as sustainability, enjoyment of the activity, and affinity with the other parties involved.<sup>214</sup> But much like other peer-to-peer exchanges of goods and services, an important portion of milk sharing is not about “sharing” at all. The label “milk sharing” is also used to designate traditional sales transactions relying on technology platforms to connect suppliers and consumers. Some participants are interested in building social relationships, but others are simply seeking lower costs and convenience. Peer-to-peer milk markets may be choice-enhancing and community-building for some people, but they also hold the potential for exploitation, exclusion, and health hazards for others. Notably, these markets are fairly homogenous in terms of demographics. For the most part it is white, middle-class, and college-educated women who exchange milk with one another,<sup>215</sup> raising the risk of discrimination in access.<sup>216</sup> Additionally, if informal milk markets provide free or cost-effective access to a valued resource, they also pose hard questions about the lack of labor protections for milk providers,<sup>217</sup> and safety guarantees for consumers,<sup>218</sup> not to mention the loss of tax revenue for local and national governments.

#### b. The Return of the Wet Nurse

During the same time as milk sharing boomed thanks to the Internet revolution, the old practice of wet-nursing began to

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214. See generally Jenny Kassan & Janelle Orsi, *The Legal Landscape of the Sharing Economy*, 27 J. ENVTL. L. & LITIG. 1 (2012) (describing the new sharing economy as a right to access something deriving from a variety of new relationships).

215. See Palmquist & Doehler, *supra* note 198, at 279. This classed and raced dimension of milk sharing may be reflective of the race and class disparities in breastfeeding rates. See *supra* note 77.

216. See, e.g., Benjamin G. Edelman, Michael Luca & Dan Svirskey, *Racial Discrimination in the Sharing Economy: Evidence from a Field Experiment*, 9 AM. ECON. J. APPLIED ECON. 1 (2017) (investigating the possibility of racial discrimination against people who advertise properties on Airbnb and finding that black hosts charged less for rentals than nonblack hosts). Milk banks have a history of segregating milk by race and of declining milk from certain donors based on race. See SWANSON, *supra* note 124, at 65. Race was also used as a criterion to evaluate the quality of wet nurses' milk in twentieth-century America. See GOLDEN, *supra* note 86, at 191–92. It would not be surprising if similar forms of discrimination were reproduced in peer-to-peer milk markets.

217. The labor status of milk providers operating outside of the milk banking system is ambiguous, as they could be deemed either producers or laborers. If lactation is conceptualized as a form of labor, it is probably a temporary form of work analogous to day labor, given the relatively short duration of lactation. One difficulty for milk providers is that many have other jobs and are isolated from one another, much like domestic workers such as nannies or cleaners, or like independent contractors such as taxi drivers, all facing hurdles to engage in collective bargaining to negotiate higher prices. If lactation is conceptualized as resulting in a product, milk providers are akin to small-batch producers who could form trade associations similar to dairy farmers' to negotiate on their behalf with wholesalers and retailers.

218. See *supra* notes 196–200 and accompanying text.

reappear, both as a paid profession and as an informal breast sharing arrangement known as “cross-nursing.”<sup>219</sup> Wet-nursing refers to the complete nursing of another person’s baby, often for pay. Cross-nursing is a situation in which people breastfeed both their own child as well as someone else’s child, as part of a paid or unpaid childcare arrangement.

Paradoxically for a country that used to have a Code of Wet Nurses, the legal status of wet-nursing is uncertain in France, following the 1977 abrogation of wet-nursing regulation.<sup>220</sup> Wet-nursing can be construed as illegal under the same principles that prohibit the sale of human milk, that is, as violating the rule according to which the body and bodily products are not for sale.<sup>221</sup> Unpaid wet- or cross-nursing would also fall under the anonymity requirement, according to which the donation of bodily products must be unidentified, with neither the donor nor the recipient knowing the identity of the other.<sup>222</sup> But there may be arguments for finding that wet-nursing is in fact permitted under French law, especially if it is defined as a childcare arrangement rather than the sale or donation of a bodily product.<sup>223</sup> In August of 2013 the issue came to the forefront when a website specialized in all things for rent, “e-loue.com,” posted an ad from a woman purporting to “rent” her breasts for €20 per hour or €100 per day.<sup>224</sup> It is still unclear whether the offer was serious or a prank, but it prompted widespread controversy over the return of wet-nursing.<sup>225</sup>

No law on the books covers wet-nursing in the United States, but the practice seems to have regained popularity among a minority of middle- and upper-class families.<sup>226</sup> The Los Angeles agency Certified Household Staffing provides its wealthy clients with staff such as

219. For an early assessment of that reappearance, see Judith Z. Krantz & Nancy S. Kupper, *Cross-Nursing: Wet-Nursing in a Contemporary Context*, 67 *PEDIATRICS* 715 (1981).

220. See *supra* note 120.

221. CODE CIVIL [C. CIV.] [CIVIL CODE] arts. 16-1ff.

222. See *supra* note 189.

223. See CODE DE LA SANTÉ PUBLIQUE [C. SANTÉ PUBL.] [CODE OF PUBLIC HEALTH] arts. L.1211-1–1211-9 (prohibiting the sale or direct donation of “products of the human body” (*produits du corps humain*)). But these provisions can be read to apply to bodily products that are *separated* from the donor’s body. On that interpretation, wet-nursing, whereby milk is ingested directly by a baby, without ever acquiring an independent existence from the wet nurse’s body, would fall outside of the purview of the law. See also MARTINE HERZOG-EVANS, *ALLAITEMENT MATERNEL ET DROIT* 104–08 (2007) (analyzing the various French legal provisions which could be applied to wet-nursing).

224. See Ruben Curiel, *Louer ses seins pour allaiter, le nouveau coup de com’ de e-loue.com*, LE FIGARO (Aug. 2, 2013), <http://www.lefigaro.fr/societes/2013/08/02/20005-20130802ARTFIG00297-elle-loue-ses-seins-pour-allaiter-les-enfants-des-couples-homosexuels.php>.

225. See, e.g., Marie-Ange Baudin, *Légaliser la location de ses seins pour allaiter?*, JURIGUIDE (Aug. 3, 2013), <http://www.juriguide.com/sante/03082013,legaliser-la-location-de-ses-seins-pour-allaiter-912.html>.

226. Jeannine Lee-St. John, *Outsourcing Breast Milk*, TIME MAG., Apr. 19, 2007 (describing the revival of wet nurses in the United States).

bodyguards, valets, housekeepers, and nannies.<sup>227</sup> It also claims to have up to one hundred wet nurses on its books, all of whom are recruited via the agency's website.<sup>228</sup> The milk-sharing website, OnlyTheBreast.com, hosts wet-nursing classified ads. A recent example read:

I am a Surrogate who is due to deliver any time in the next 2–3 weeks. I am an over producer and will not have a child to feed so I am looking for a local family who is in need and would like to provide their baby with liquid gold. I am looking to nurse a baby during work hours (M–F) and can provide pumped milk for over nights and weekends. Occasional weekend feeds can be arranged :)<sup>229</sup>

She announced that she charged \$25.00, but it was not clear from the ad whether the fee was hourly or feeding-based.

In both countries, wet-nursing is met with reprobation among medical professionals and public health officials similar to that directed at peer-to-peer milk exchanges. La Leche League and HMBANA advise against cross-nursing and wet-nursing mainly because of the risks of disease transmission.<sup>230</sup> These organizations have also developed critiques framed as defending wet nurses and the well-being of their children, much like the 1874 French loi Roussel, mentioned earlier.<sup>231</sup> Wet-nursing should be discouraged, La Leche League maintains, because it may diminish a woman's milk supply, causing her baby to receive insufficient quantities of milk, and because it has a negative psychological impact on women and children.<sup>232</sup> However, so far no evidence-based studies substantiate these claims.

### C. Summary

To conclude, despite the different regulatory approaches to human milk banking, sharing, and wet-nursing in France and the

227. See Diana Appleyard, *The Return of the Wet-Nurse*, DAILY MAIL (Sept. 7, 2007), <http://www.dailymail.co.uk/femail/article-480407/The-return-wet-nurse.html>.

228. See CERTIFIED HOUSE STAFFING, <http://certifiedhouseholdstaffing.com> (last visited June 21, 2017).

229. Ad posted on OnlyTheBreast.com (Sept. 9, 2016), <http://www.onlythebreast.com/breast-milk-classifieds/show-ad/75498/wet-nurse-available/uplandclaremontlaverne/ca/us/wet-nurse-america/> (last visited June 21, 2017).

230. See, e.g., Mary E. Tagge, *Wet Nursing 2001: Old Practice, New Dilemmas?*, 17 J. HUM. LACTATION 140 (2001). See also Ronda Shaw, *Cross-Nursing, Ethics, and Giving Breast Milk in the Contemporary Context*, 30 WOMEN'S STUD. INT'L F. 439, 441 (2007) (describing being "struck by the perception that cross-nursing is a controversial activity").

231. See *supra* notes 115–17 and accompanying text.

232. See La Leche League Board of Directors, *Milk Donation Policy* (Mar. 2015), <http://www.llli.org/llleaderweb/lv/lvjulaug95p53.html> (citing an article published in a journal of Christian ministry, whose author argues that "[c]ross nursing can also affect the baby psychologically. A difference in the let down, either in the timing or in the forcefulness, can confuse and frustrate an infant." See Judy Minami, *Wet Nursing and Cross Nursing*, 31 LEAVEN 53 (1995)).



United States, informal milk sharing practices are medically and socially disapproved on both side of the Atlantic. As the next Part argues, this condemnation is not only motivated by health and safety rationales, but also by economic, moral, and science-based considerations reminiscent of animal milk regulation.

### III. FOOD SAFETY OR FEMALE BODY REGULATION?

Milk regulation seems to have come full circle. Animal milk became the subject of legislation in the first place because safer milk was needed to feed infants who were not breastfed. Present-day calls to outlaw, or at least monitor, human milk exchanges are ostensibly motivated by the same goal: ensuring that infants receive safe milk, be it human or not. As historian Linda Gordon has argued, "one of the most transcultural markers of what historians call modernity has been an ethical, or at least discursive, prioritizing of children's welfare."<sup>233</sup> The rhetoric of infant food safety, however, deflects the attention from a number of considerations at stake that have little to do with the prevention of milk-borne diseases and bacteria. These considerations are strikingly similar to those that prompted animal milk reform in the nineteenth century: economics, sexual control, and scientism. In either France and the United States, the question arises whether milk is a commodity being regulated or whether it is the female body (animal or human), as the site of gestation, generation, and lactation, that is the real center of attention.

#### A. Economics

The first similarity between animal and human milk regulation resides in the fact that in the United States, as in France, legal interventions in the production, sale, and distribution of milk are animated by an economic as well as a health objective. The law is invoked to structure labor relations and the scale of economic exchanges. Ecofeminists have shown that women's work and lives, like those of animals, have been exploited by male-dominated economic systems.<sup>234</sup> From this perspective, the parallels between human and nonhuman females may have less to do with biology than with their position in society and the kind of work they do. Lactating humans resemble lactating animals as both have been historically undervalued and deprived of the recognition they deserve for their work, which has largely remained invisible. Like farm animal labor, historically, much of women's work has been embodied, repetitive, and spatially

233. Linda Gordon, *The Perils of Innocence, or What's Wrong with Putting Children First*, 1 J. HIST. CHILDHOOD & YOUTH 331, 331 (2008).

234. See, e.g., Mary Mellor, *Ecofeminist Political Economy*, 1 INT'L. J. GREEN ECON. 139 (2006) (making a connection between the externalization and exploitation of women and that of nature).

limited—housework, childcare (including breastfeeding), caring for the old, the sick, animals, and sexual nurturing. The oppression of cows is comparable, yet much crueler. Farm animals raised for milk are intensively confined, always on call to endlessly recycle the same tasks, continuously impregnated and milked,<sup>235</sup> only to be slaughtered once they become infertile or substandard milk producers.

### 1. Lactation Work

Qua lactation workers, women and cows are subject to economic regulation, but very few, if any, labor protections. Though we do not usually think of animals as “working,”<sup>236</sup> the role of animals raised for their milk has been conceptualized as a form of labor—albeit an unpaid and involuntary one.<sup>237</sup> Women can to some extent choose to participate in their own commodification as milk producers, but animals are not cognitively able to give consent. Their various forms of resistance to being milked suggests that they are not willing participants. Cows produce milk while respecting (or resisting) rules such as not lying down, not blocking other cows, or not refusing to go into the milking robot.<sup>238</sup> Like other farm animals, they are “workers operating in the shadows, an ultraflexible underproletariat, exploitable and destructible at will.”<sup>239</sup> Humans have long put them to work as a part of subsistence economy as well as to make profits. Ranking among the largest milk producers in the world, France and the United States share a similar history of dairy modernization which took place in the 1950s and 1960s. To maximize production and secure an inexpensive milk supply, both nations turned to more or less government-sponsored technological innovations, larger herds, and the consolidation of farmland. The evolution of dairying has tracked the evolution of other “productive” industries. Similar to other industries, modern farming is based on the principle of division of labor. Animals and farmers are increasingly specialized—hence the existence of differentiated “dairy farms” and “dairy cattle,” which was still unthinkable a century ago.<sup>240</sup>

235. See Lewis Holloway, *Subjecting Cows to Robots: Farming Technologies and the Making of Animal Subjects*, 25 ENV. & PLANNING D: SOC'Y & SPACE 25, 1041 (2007) (critiquing the idea that cows gain individual freedom with robotic milking technologies).

236. See Jocelyn Porcher & Tiphaine Schmitt, *Dairy Cows: Workers in the Shadows?*, 20 SOC'Y & ANIMALS 39 (2012) (arguing that farm animals have become anonymous “workers”).

237. See, e.g., DAVID D. FAVRE & MURRAY LORING, *ANIMAL LAW* 2 (1983) (arguing that the present legal position of farm animals is similar that of human slaves in early nineteenth-century America).

238. Porcher & Schmitt, *supra* note 236, at 46.

239. *Id.* at 42.

240. See Barbara Orland, *Turbow-Cows: Producing a Competitive Animal in the Nineteenth and Early Twentieth Centuries*, in *INDUSTRIALIZING ORGANISMS: INTRODUCING EVOLUTIONARY HISTORY* 167, 172 (Susan R. Schrepfer & Philip Scranton eds., 2004) (showing that “the notion of a milk-producing cow as a natural entity” only became a real possibility in the nineteenth century with new feeding techniques and when dairy farming was transplanted from meadows to grain production areas).

Feminist scholars have argued that breastfeeding women are workers too, regardless of whether they nurse their own children or provide milk for others.<sup>241</sup> Breastfeeding does not even approximate the misery farm animals must endure; it can be a source of great joy and pride (and infertile or post-menopause women are not sent to the slaughterhouse like their animal counterparts).<sup>242</sup> Yet, breastfeeding can be hard, time-consuming work. Not only does the act of nursing, or pumping, take time in and of itself, but it also requires an entire setup—finding a suitable location, assembling, disassembling, and cleaning the pump and the milk containers. Depending on each woman's experience, this is time that is not spent doing other things, such as sleeping, resting, socializing, engaging in other forms of work such as childcare, housework, or paid work outside the home. Breastfeeding is also a taxing physical activity affecting a woman's body, which depends upon adequate nutrition, rest, and social support to be successful.<sup>243</sup>

It is in France, where breastfeeding rates were (and remain) lower than in the United States,<sup>244</sup> that lawmakers have flirted with the idea of nursing as a form of labor. In 1913, a time of great natalist anxieties, the French government took a series of measures in the hope of reversing the perilously low birth rate, including amending the Labor Code so as to improve the conditions of working women. Employers were required to provide them with an opportunity to nurse their children or to express their milk at work for up to a year following birth.<sup>245</sup> In the United States, it

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241. See, e.g., FIONA DYKES, *BREASTFEEDING IN HOSPITAL: MOTHERS, MIDWIVES AND THE PRODUCTION LINE* (2006) (arguing that in our culture, breastfeeding is a demanding form of labor rather than a relational experience).

242. I am grateful to Saskia Stucki for underlying this fundamental difference.

243. Not to mention that breastfeeding can cause ailments of its own, such as fatigue, breast and nipple pain, mastitis, and breast abscesses. See, e.g., Janice M. Riordan & Francine H. Nichols, *A Descriptive Study of Lactation Mastitis in Long-Term Breastfeeding Women*, 6 J. HUM. LACTATION 53 (1990) (surveying women about their experience with mastitis and analyzing contributing factors such as fatigue, plugged duct, breast trauma, and engorgement). But breastfeeding also promotes women's health, from short-term benefits such as releasing the hormone oxytocin—which produces contractions in the uterus preventing postpartum hemorrhage—and amenorrhea—which decreases the risk of iron-deficiency anemia—to long-term benefits such as improved metabolism, reduced risk of various cancers, and detoxification. See Fiona Giles, *The Well-Tempered Breast: Fostering Fluidity in Breastly Meaning and Function*, 34 WOMEN'S STUD. 301, 310–11 (2005) (pointing out that lactation is the most efficient way for women to rid their bodies of accumulated toxins). Farm animals forced to lactate nearly continuously and abundantly for most of their adult lifetime do not reap similar benefits. Repeat pregnancies and intensive milking increases the risk to experience retained placenta, ovarian cysts, mastitis, distended udders, bone fragilization, nutritional deficiencies, and premature death. See P.T. Thomsen & H. Houe, *Dairy Cow Mortality: A Review*, 28 VETERINARY Q. 122, 123 (2006) (reporting that 45% of dairy cow deaths occurred within one month of calving).

244. See Benoît Salanave et al., *Durée de l'allaitement maternel en France (Épifane 2012–2013)*, 27 BULL. ÉPIDÉMIOLOGIQUE HEBDOMADAIRE 440 (Oct. 7, 2014).

245. See CODE DU TRAVAIL [C. TRAV.] [LABOR CODE] art. 224-2-3-4 (lactation “breaks” can add up to one hour per day). These measures sound relatively generous, especially for the time, but they are so often misapplied or violated, e.g., by the failure to provide adequate lactation rooms, that they have become textbook examples in French legal education of unenforced, obsolete laws.

was not until the 2010 healthcare overhaul prompted by President Obama's reform that the federal government legislated a similar provision.<sup>246</sup> Key to our discussion, however, is whether this guaranteed lactation time is compensated. In the United States, the employer is not required to compensate employees.<sup>247</sup> The time spent pumping is not considered work, as the statutory language—"break time for nursing mothers"—emphasizes.<sup>248</sup> The French Labor Code is silent on the question of remuneration. This lacuna was interpreted against compensating women.<sup>249</sup> However, the legislative history reveals that the 1913 drafters originally included in the statute the following sentence: "It is prohibited to deduct in any way the hour destined to breastfeeding from the daily pay."<sup>250</sup> This stipulation was dropped from the final version without explanation, but it is not hard to fathom that compensating workers for traditionally unpaid and unrecognized women's work may have seemed too radical of an idea.

## 2. Economies of Scale

Rather than targeting the well-being of the lactating mammal (of whichever species) and its attendant labor conditions, American and French regulation focuses on rationalizing the economic structure of the exchange under the guise of ensuring a safe product for human consumers. More specifically, ideas concerning the size of the markets and the scale of the exchanges motivate some of the actors engaged in milk production and regulation.<sup>251</sup> It is when milk—animal or human—is no longer a "production for use," reserved for family or local consumption, but enters the market economy, becoming a "production for exchange," that it falls under the purview of the law,

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246. See Fair Labor Standards Act, 29 U.S.C. 201 § 7(r) (1938) (as amended by the Affordable Care Act, Pub. L. No. 111-148, 124 Stat. 119 (2010)) (requiring employers to provide "break time" for employees to express milk for their child). Note that twenty-seven states, the District of Columbia, and Puerto Rico have laws related to breastfeeding in the workplace (Arkansas, California, Colorado, Connecticut, Delaware, Georgia, Hawaii, Illinois, Indiana, Louisiana, Maine, Minnesota, Mississippi, Montana, New Mexico, New York, North Dakota, Oklahoma, Oregon, Rhode Island, Tennessee, Texas, Utah, Vermont, Virginia, Washington, and Wyoming).

247. *Id.* § 7(r)(2).

248. *Id.* § 7(r) (emphasis added).

249. See *Débats Parlementaires, Assemblée Nationale* 1196, *JOURNAL OFFICIEL DE LA RÉPUBLIQUE FRANÇAISE* [J.O.] [OFFICIAL GAZETTE OF FRANCE] Apr. 12, 1993, no. 14 (interpretation of the Code by then-Minister of Labor François Rochebloine in response to the written question of a house representative).

250. See *Proposition de loi relative à la protection de l'allaitement maternel adoptée par la Chambre des députés dans sa séance du 12 juin 1913* [House Bill Pertaining to the Protection of Maternal Breastfeeding, June 12, 1913] (translated by author).

251. See generally Amy J. Cohen, *The Law and Political Economy of Contemporary Food: Some Reflections on the Local and the Small*, 78 *LAW & CONTEMP. PROBS.* 101, 134 (2015) (exploring how ideas of size and scale function as categories of legal analysis).

buttressed by psychology that values the *object* of production.<sup>252</sup> In other words, lawmakers become interested in regulating milk, inasmuch as it becomes profitable, and in perpetuating the invisibility of women and animals' work.

State control over dairy farming and production has become the norm in the United States and in France in part because there are structural limits to scaling up the production of raw milk. Large-scale operations, which dominate the field today, cannot safely produce and distribute raw milk on a massive scale.<sup>253</sup> Raw milk is most sanitary when handled on an artisanal-scale, i.e., by small-scale farms and farmstead operations where milk is sourced from a single herd or flock, subject to frequent testing, and travels relatively short distances before reaching the consumer. Concerns over raw-milk cheese surfaced in the United States only after World War II, when cheese began to be mass-produced. Cheesemongers were collecting milk from multiple dairies, increasing the potential for contamination. Arguably, the federal government did not institute its first pasteurization requirement in 1949 out of a concern for raw milk's safety per se.<sup>254</sup> Rather, with milk from so many dairies being combined in centralized facilities, it became more administrable and cost-effective to mandate pasteurization than to inspect each contributing dairy.

Similarly, breastfeeding would seem destined, nearly by definition, to remain a small-scale operation: one (or two) person(s)—typically a woman<sup>255</sup>—nursing her child (sometime several children). Yet, for the first time in human history, human milk is collected, pooled, processed, and distributed on a massive scale, much like any other type of modern mass-produced food product.<sup>256</sup> Herding women for their milk is not unheard of—past examples include, most notably, the enslaved black women of the eighteenth and nineteenth centuries in the United States and in the French colonies as well as the peasant/working class women in mainland France.<sup>257</sup> These exploitative practices could be making a comeback. For instance, the for-profit company Medolac, which markets sterile human milk, has aimed its milk-donor recruitment campaign at low-income

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252. See generally NANCY C.M. HARTSOCK, *MONEY, SEX AND POWER: TOWARD A FEMINIST HISTORICAL MATERIALISM* (1983) (discussing the relegation of women and their productions to the private sphere).

253. See Heather Paxson, *Post-Pasteurian Cultures: The Microbiopolitics of Raw-Milk Cheese in the United States*, 23 *CULTURAL ANTHROPOLOGY* 15, 32 (2008) (tying the safety of raw-milk cheese to economies of scale and agropolitics).

254. 21 C.F.R. § 133 (1949) (establishing standards of identity for cheese that prevent the manufacture for sale in interstate commerce of any cheese made from raw milk unless said cheese has been aged for at least sixty days at temperatures of at least thirty-five degrees Fahrenheit).

255. See generally Cohen, *supra* note 9 (discussing the gender coding of breastfeeding).

256. See SWANSON, *supra* note 124.

257. See references cited *supra* notes 88 and 104.

African-American women in Detroit, promising them a lure of economic empowerment.<sup>258</sup> Medolac's partner, the Mothers Milk Cooperative, pays donors \$1 per ounce of expressed milk, which is processed into a product sold to hospitals "for about \$7 [an ounce]—a 600 percent markup."<sup>259</sup>

The change in size of the market for human milk may explain why pasteurization and other forms of processing are increasingly in demand—not only for health and safety reasons, but because they facilitate commercialization and profits on an unprecedented scale. In the late nineteenth century, it was not until local authorities had acquired a sense of cow's milk value and volume of sale that the campaign for milk reform began. A century later, it is when human milk has gained the potential to compete in the infant food market that legislation is being called for. But the problem, as the anthropologist Heather Paxson has noted in the context of animal milk, is that raw milk "cannot be successfully absorbed by industry giants."<sup>260</sup> It may be that raw milk—animal and human—is the target of recurring attacks partly because it is resistant to large-scale economic profit.<sup>261</sup> To be profitable, markets in human milk would need to be structured along the lines of the food business, which implies, on the one hand, the use of pasteurization and other forms of processing well-known in the dairy industry, and, on the other hand, a loss of economic autonomy on the part of milk providers. With peer-to-peer milk sharing, by and large women control the terms of the exchange, which can range from a gift to a lucrative sale. By contrast, not-for-profit milk banks do not compensate for donations, perpetuating the social imagery of women's altruism<sup>262</sup> and the assumption that earning money through the use of one's body is bad.<sup>263</sup> American for-profit

258. See Kimberly Seals Allers, *Inviting African-American Mothers to Sell Their Breast Milk, and Profiting*, N.Y. TIMES (Dec. 3, 2014), <https://parenting.blogs.nytimes.com/2014/12/03/inviting-african-american-mothers-to-sell-their-breast-milk-and-profiting>.

259. See Allers, *supra* note 258.

260. See Paxson, *supra* note 253, at 32.

261. Just as there were large revenues to be made from a nationalized market for "certified" animal milk (i.e., raw milk produced under the strict sanitary control of physicians and public health professionals) in the nineteenth century (provided women could be persuaded to switch from breastfeeding to bottle-feeding), there are huge profits to be made from processed human milk sold commercially. See Julie Smith, *Lost Milk? Counting the Economic Value of Breast Milk in Gross Domestic Product*, 29 J. HUM. LACTATION 537, 541 (2013) (pointing out that "[h]uman milk-based commercial infant feeding products in the United States are sold at US\$1183 per liter or more," which is more than ten times her estimated average for milk sold by nonprofit milk banks and internet trading sites, about U.S.\$99 per liter (based on a \$3/ounce average price, which is I should note is a low average)).

262. See Julie Nelson & Paula England, *Feminist Philosophies of Love and Work*, 17 HYPATIA 1, 1 (2002) (critiquing the conventional view that women are characterized by love and altruism while men belong to the realm of "self-interested rationality, work, and market exchange").

263. See RENE ALMELING, *SEX CELLS: THE MEDICAL MARKET FOR EGGS AND SPERM* 6 (2011) (discussing, in the context of the market for sperm and eggs, the long held idea that bodily commodification is harmful, both for society and the individual).

banks typically pay less than what donors could earn through informal channels: \$1 per ounce versus an average of \$1.50–\$2.50 per ounce for milk sold online,<sup>264</sup> raising the question of female workers' exploitation. The concern, therefore, is that legal and market interventions in the human milk economy could restrict providers' choices and opportunities, undermining one of the few markets characterized by female autonomy.

Both in the United States and France, the valued market economy has captured regulators' attention and contributed to the invisibility of animals and women's working conditions. Another transatlantic theme is the desire for increased control over female sexuality implicit in societal attitudes and regulatory efforts surrounding milk.

## B. Sex

Ideas about gender and sexuality feature prominently in the construction of the human in relation to the animal. The encounter between gender and animal studies found in the work of Carol Adams and other ecofeminists exposes how much of the subordination and oppression of animals and women has been facilitated and legitimated by the discursive and material linking of these two groups.<sup>265</sup> Lactating animals are particularly illustrative of this dynamic, being feminized and sexualized through gendered processes involving human control over their fertility, sexuality, and reproduction.<sup>266</sup>

### 1. Regulating Sexual Behavior

Milk regulation is a form of sex regulation. Milk is typically the direct, biological consequence of sexuality and pregnancy.<sup>267</sup> Animal and human female bodies are the loci where life is generated and sustained as the result of sex.<sup>268</sup> This association with sex endures

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264. See *supra* note 209 and accompanying text.

265. See ADAMS & DONOVAN, *supra* note 24. See also ADAMS, *supra* note 25.

266. See, e.g., Erika Cudworth, "Most Farmers Prefer Blondes": *The Dynamics of Anthroparchy in Animals' Becoming Meat*, 6 J. CRITICAL ANIMAL STUD. 32 (2008) (critiquing the political economy of meat production and showing how animals are feminized within the industry). But see Kathryn Gillespie, *Sexualized Violence and the Gendered Commodification of the Animal Body in Pacific Northwest U.S. Dairy Production*, 21 GENDER, PLACE & CULTURE 1321, 1323 (2014) (showing that male bovines too are commodified violently based on their reproductive capacities as well as discursively blamed for the violence occurring against female bovines).

267. Lactation has long been induced in the absence of pregnancy and childbirth through a combination of nipple stimulation and herbal remedies. See, e.g., FILDES, *supra* note 81, at 266. Today, lactation can be triggered with hormone therapy. See *supra* note 76.

268. Since the invention of assisted reproductive technologies, sex and reproduction can now be decoupled.

even when milk becomes an edible commodity dissociated from the female body that produced it. This connection has not escaped cheese scholars. For instance, in his book on the history of camembert, Pierre Boisard provocatively argues that there is a similarity between banning sex and raw-milk cheese, especially the soft, luscious, and smelly type of cheese exemplified by camembert. He concludes: "Now that it has been banished from the bedroom, the moral order is trying to get us at the dining table."<sup>269</sup> Comparably, in the United States, Heather Paxson suggests that the "microbiopolitical regime of the FDA, working to protect the health of an eating population, is guided by a science-based governmentality similar in some ways to the biopolitics of, say, safe-sex campaigns."<sup>270</sup>

Regulating sexual behavior is at the center of modern French and American animal husbandry. Selective breeding for desired traits and forced reproduction to increase the marketability of animal bodies means that animals have little control over their reproductive life.<sup>271</sup> Relying on invasive technologies, the control of female fertility has become pervasive for food production and as an experimentation ground for human reproductive technologies.<sup>272</sup> Artificial insemination and embryo transfers are routine in the meat and dairy industries.<sup>273</sup> There is a direct link between this gendered commodification and milk products' ubiquity in the French and American diets. The availability of milk and dairy products all year round is a recent phenomenon—the result of human intervention in the sexual behavior of animals. Before cows became forcibly impregnated workers, milking typically ran from early May to late September.<sup>274</sup> During the colder months, farmers would discontinue milking so that cows could recover from their pregnancy.<sup>275</sup> These days, to maintain uninterrupted milk production, cows are forced to go through an endless cycle of pregnancy and

269. See PIERRE BOISARD, *CAMEMBERT: A NATIONAL MYTH* 220 (2003).

270. See Paxson, *supra* note 253, at 35.

271. See, e.g., Greta Gaard, *Reproductive Technology, or Reproductive Justice? An Ecofeminist, Environmental Justice Perspective on the Rhetoric of Choice*, 15 *ETHICS & ENVIRON.* 103, 121–26 (2010) (discussing the connections between the sexual enslavement of farm animals and the politics of women's reproductive self-determination). See also DORLIN, *supra* note 104, at 175–85 (reporting the emergence of a eugenics movement in eighteenth-century France, which advocated for the transfer of animal selection and breeding techniques to humans, including the forced recruitment of foreign and slave wet nurses for European babies).

272. The first reported artificial insemination was performed on a dog in 1784, becoming widespread in animal breeding during the early twentieth century, and later accompanied by (or replaced with) in vitro fertilization. See Robert H. Foote, *The History of Artificial Insemination: Selected Notes and Notable*, 80 *J. ANIMAL SCI.* 1, 2 (2010). Farm animals were used as experimental ground for human-assisted reproductive technologies, which have seen a boom since the 1970s.

273. See Gillespie, *supra* note 266, at 1331 (describing the gendered commodification and sexualized violence which is routine in the bovine industry based on a U.S. case study).

274. See VALENZE, *supra* note 1, at 35.

275. *Id.*



birth, only to have their calves immediately taken from them.<sup>276</sup> They are deprived of the opportunity to nurse their own—calves are typically confined and fed buckets of milk or milk substitutes during their first weeks, before quickly transitioning to an iron-deficient plant-based diet.<sup>277</sup> Female calves grow to join the cow-herd, and males are turned into meat as veal calves or raised in fattening units to become beef.

With human females, sex oppression is neither as explicit, nor nearly as violent, but nonetheless present. Breastfeeding and infant feeding intersect with sexuality in many ways. Not only is lactation (usually) the result of sex and pregnancy, but it also affects a woman's ability to get pregnant again, given its suppressive effects on fertility. Thus, historically, breastfeeding has been promoted or discouraged in France and the United States depending on whether or not women were under pressure to have sex and to produce more offspring.<sup>278</sup> At times when infant mortality was high and there was societal pressure to have numerous children, in particular sons, women were pressed to wean their babies early or to use wet nurses. These social and cultural norms, particularly prevalent in upper-class French families, conspired to put certain women, like present-day farm animals, in a state of quasi-continuous pregnancy, all the while exploiting the reproductive labor of other women—wet nurses—to feed their babies.<sup>279</sup> Analogous to cows, wet nurses were doubly abused, as sexual chattel and nursing mothers. Having been made pregnant, they were forced to leave behind their own children to feed those of their employers or masters. As a nineteenth-century French doctor summed up, a “wet nurse must only be considered a dairy cow. As soon as she loses this quality she must immediately be dismissed.”<sup>280</sup>

## 2. Normalizing Milk

Due to its association with sexuality, there is a long history of suspicion surrounding human milk. In both France and the United States, women used to be advised to abstain from sex while breastfeeding on the premise that sexual excitement could be detrimental

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276. See Sherry F. Colb, “*Never Having Loved at All*”: An Overlooked Interest that Grounds the Abortion Right, 48 CONN. L. REV. 933 (2016) (comparing cows’ forced pregnancies and separation from their calves to one of the interests protected by the right to abortion—women’s interest in avoiding the trauma of giving birth to a baby only to be separated from that baby).

277. For a glimpse of the abuse to which calves are subjected, see, e.g., David J. Wolfson, *Beyond the Law: Agribusiness and the Systemic Abuse of Animals Raised for Food or Food Production*, 2 ANIMAL L. 123, 134 (1996).

278. See JEAN LOUIS FLANDRIN, *FAMILIES IN FORMER TIMES* 206 (1979). See also *supra* notes 91–92 and accompanying text.

279. See Paola Tabet, *Imposed Reproduction: Maimed Sexuality*, 7 FEMINIST ISSUES 3 (1987).

280. Quoted in Knibiehler, *supra* note 94, at 110 (translated by author).

to their milk's quality and harm their babies.<sup>281</sup> As the breastfeeding scholar Rhonda Shaw puts it, "[s]ince breastmilk flows from female apertures and body parts identified as sexual, conflation of the lactating breast with the sexual or erotic breast often produces psycho-social anxiety."<sup>282</sup> The act of breastfeeding intimately connects women's bodies to the bodies of infants.<sup>283</sup> It may be a very sensuous experience, with some mothers becoming aroused.<sup>284</sup> A normal physiological response to lactation hormones, this excitement may cause embarrassment, potentially leading to public shaming and even criminalization. Historian Lauri Umansky thus recounts the *Karen Carter* case, a single mother living in Syracuse, New York, who was charged in the early 1990s with sexual abuse for admitting to her local crisis center that she felt aroused when breastfeeding.<sup>285</sup>

Sociologist Cindy Stearns takes the *Karen Carter* case to reveal the extent to which "the construction of the good maternal body as being at all costs not sexual is taken very seriously by both the culture and the law."<sup>286</sup> In French and American societies, while the health benefits of breastfeeding for both mothers and children are constantly reaffirmed, there is still a pervasive unease with both milk as a female bodily fluid and with breasts as a sexual appendage.<sup>287</sup> As a result, "the major concern of women is that their breastfeeding is perceived as maternal and not sexual behaviour."<sup>288</sup> This anxiety is most discernible in relation to the cultural organization of space, as illustrated by the recurring controversies over the appropriateness of women breastfeeding or expressing their milk in public.<sup>289</sup>

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281. See, e.g., DORLIN, *supra* note 104, at 159 (recounting that seventeenth- and eighteenth-century French doctors feared that sexual intercourse would divert the blood from the milk to the breastfeeding woman's genitals, thus diminishing lactation. If the nursing woman conceived, the medical literature admonished that lactation could cease completely or spoil the milk). See also Jean-Louis Flandrin, *L'attitude à l'égard du petit enfant et les conduites sexuelles dans la civilisation occidentale: Structures anciennes et évolution*, 1973 ANNALES DE DÉMOGRAPHIE HISTORIQUE 143, 183 (1973).

282. Rhonda Shaw, *Perspectives on Ethics and Human Milk Banking*, in GIVING BREASTMILK: BODY ETHICS AND CONTEMPORARY BREASTFEEDING PRACTICE 83, 84 (Rhonda Shaw & Alison Bartlett eds., 2010).

283. See Penny Van Esterik, *Contemporary Trends in Infant Feeding Research*, 31 ANN. REV. ANTHROPOLOGY 257, 261–62 (2002) (pointing out that women used to be advised to abstain from sex while breastfeeding).

284. See, e.g., Viola Polomeno, *Sex and Breastfeeding: An Educational Perspective*, 8 J. PERINATAL EDUC. 30 (1999).

285. See Lauri Umansky, *Breastfeeding in the 1990s: The Karen Carter Case and the Politics of Maternal Sexuality*, in BAD MOTHERS: THE POLITICS OF BLAME IN TWENTIETH-CENTURY AMERICA 299 (Molly Ladd-Taylor & Lauri Umansky eds., 1998).

286. Cindy A. Stearns, *Breastfeeding and the Good Maternal Body*, 13 GENDER & SOC'Y 308, 309 (1999).

287. See, e.g., Ros Bramwell, *Blood and Milk: Construction of Female Bodily Fluids in Western Society*, 34 WOMEN & HEALTH 85, 90–92 (2001).

288. See Stearns, *supra* note 286, at 321.

289. The vast majority of American states have laws explicitly allowing women to breastfeed in public, but working women are still under-protected at work. See Arthur D. Rutkowski & Barbara Lang Rutkowski, *Review of State Laws on*

Law and social norms have produced gendered geographies. “Public” spaces, including the workplace, which are coded as productive and collective, typically deny the physical needs of the female body. By contrast, the “private” space of the home, cast as reproductive and individual, is women’s territory. Despite gaining greater acceptance, women who breastfeed in public may still feel, quite literally, out of place. Public pumping remains entirely taboo, as it is an activity expected to be hidden.<sup>290</sup> It transgresses two sets of cultural boundaries: the sexual versus the maternal body and the human versus the animal, given the pumps’ resemblance to milking machines.<sup>291</sup>

Milk sharing raises the specter of a commingling of sexuality and infant feeding. To the extent that this worry is still alive in France and the United States, it is addressed by the normalization and anonymization function performed by milk banks. The dairy industry’s recourse to pasteurization and homogenization has succeeded in disciplining animal milk, achieving uniform, bland-tasting, and close to odorless dairy products. When buying cartons of milk pooled from a multitude of animals held in distant farms, little reminds consumers of the connection between the white liquid and reproductive labor, except perhaps the common representation of cows with swollen udders. Comparably, milk banks have introduced a depersonalized and discarnate method to collect, process, and distribute human milk. Banking does not involve body-to-body contact, which makes human milk palatable to those who support breastfeeding in theory, but may be bothered in practice by its carnality. Moreover, procuring milk from a bank requires neither face-to-face nor mediated contact between the donor and the recipient. Because the milk is typically pooled from multiple donors, such contact would

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*Breastfeeding in the Workplace*, 22 EMP. L. UPDATE 3 (2008); Heather M. Kolinsky, *Respecting Working Mothers with Infant Children: The Need for Increased Federal Intervention to Develop, Protect, and Support a Breastfeeding Culture in the United States*, 17 DUKE J. GENDER L. & POL’Y 333, 334 (2010). In France, no laws on the books specifically protect women who breastfeed in a public space, but as discussed above, labor laws mandate employers provide mothers with breaks to pump (or nurse) as well as adequate lactation rooms. See generally HERZOG-EVANS, *supra* note 223 (reviewing French laws on all aspects of breastfeeding). Despite this favorable environment, in practice breastfeeding parents may still experience rebuke when nursing in public or pumping at work. See, e.g., Candace Mulready-Ward & Martine Hackett, *Perception and Attitudes: Breastfeeding in Public in New York City*, 30 J. HUM. LACTATION 195 (2014) (conducting a survey of supposedly liberal NYC residents and finding that 50.4% of respondents were not supportive of public breastfeeding).

290. See Maia Boswell-Penc & Kate Boyer, *Expressing Anxiety? Breast Pump Usage in American Wage Workplaces*, 14 GENDER, PLACE & CULTURE J. FEMINIST GEOGRAPHY 551, 555 (2007).

291. This resemblance is not fortuitous, as the two machines were invented contemporaneously in the United States. See generally Megan Garber, *A Brief History of Breast Pumps*, THE ATLANTIC (Oct. 21, 2013), <https://www.theatlantic.com/technology/archive/2013/10/a-brief-history-of-breast-pumps/280728/> (connecting the history of the milking machine to that of the breast pump).

not be feasible even if desired.<sup>292</sup> The product itself has become incorporeal, regaining the pure status culturally associated with its whiteness.<sup>293</sup>

In sum, current calls to regulate the informal sale and donation of human milk can be interpreted as an effort to regiment a feminine practice that is considered all the more dangerous that it remains associated with sex wherever it is not mediated by medical professionals and scientists. The next subsection focuses on the role of scientific ideologies in milk regulation.

### C. Science

Science is ambivalent on the subject of milk. On the one hand, scientists and medical professionals celebrate human milk as the ideal nutrition for infants, especially when ingested raw.<sup>294</sup> In recent years, raw animal milk has also received positive attention in the scientific literature, with new studies showing the benefits of its consumption by humans.<sup>295</sup> A scientific rationale is also brandished to support the prohibition of (or at least the restriction on) the sale of raw animal milk and human milk sharing.<sup>296</sup> Even in cheese-loving France, raw milk, be it animal or human, appears antithetical to

292. And is positively prohibited by French law. *See supra* note 189 and accompanying text.

293. *See generally* Cohen, *supra* note 42, at 144–49 (arguing that in the United States, milk has been presented as indicative of all that is good, pure, clean, and wholesome, and used to promote white superiority and domination). *See also* DuPuis, *supra* note 1, at 11 (linking the “perfect whiteness of this food and the white body genetically capable of digesting it”).

294. *See generally* Olivia Ballard & Ardythe L. Morrow, *Human Milk Composition: Nutrients and Bioactive Factors*, 60 *PEDIATRIC CLINICS N. AM.* 49 (2013). *See also* Susan Landers & Ben T. Hartmann, *Donor Human Milk Banking and the Emergence of Milk Sharing*, 60 *PEDIATRIC CLINICS N. AM.* 247, 249, 250 (2013) (noting that “[n]eonatologists do not uniformly understand that mother’s own milk is frequently colonized with bacteria,” and pointing out that pasteurization, processing, and frozen storage of human milk reduces a number of beneficial properties such as certain proteins, growth factors, antioxidants, or enzymes).

295. *See generally* Lisa Quigley et al., *The Complex Microbiota of Raw Milk*, 37 *FEMS MICROBIOLOGY REV.* 664, 665 (2013) (reviewing what is known about the microorganisms present in raw milk from cows, sheep, goats, and humans, including claims that raw milk may contribute to health). On cow’s milk specifically, see Wendie L. Caeyts et al., *Raw or Heated Cow Milk Consumption: Review of Risks and Benefits*, 31 *FOOD CONTROL* 251 (2013) (advocating for milk pasteurization but acknowledging that it creates differences in milk proteins and destroys antimicrobial systems and probiotics). At the same time, other studies suggest that whether raw or pasteurized, animal milk’s health benefits for humans are not only overrated, but also misguided, as there is a link between dairy consumption and a number of serious medical conditions. *See* Andrea Freeman, *The Unbearable Whiteness of Milk: Food Oppression and the USDA*, 3 *U.C. IRVINE L. REV.* 1251, 1258–60 (2013) (summarizing the scientific and medical arguments against animal milk consumption).

296. On the dangers of raw animal milk, see, e.g., Stephen P. Oliver et al., *Food Safety Hazards Associated with Consumption of Raw Milk*, 6 *FOODBORNE PATHOGENS & DISEASE* 793 (2009) (arguing against raw milk consumption on account of its contamination by a variety of pathogens associated with human illness and disease). On the dangers of raw human milk procured online, see Keim et al., *supra* note 187.

modernity, progress, hygiene, and science, symbolized by pasteurization and formula.<sup>297</sup> A common thread in popular and scientific discourse is that animals and women's bodies are risky environments, sources of problems and impurities. Human milk, like other human secretions such as menstrual blood, sweat, semen, feces, saliva, or snot, is often viewed as a more or less disgusting and embarrassing waste product.<sup>298</sup> As psychologists Paul Rozin and April Fallon have shown, our disgust for these materials may be due to their connection to animals.<sup>299</sup> They remind us of our animalness despite all our efforts to distance ourselves from beasts.<sup>300</sup> Science is therefore called to the rescue to de-animalize milk, transfiguring it into a clean, delectable potion.

### 1. Humanizing Animal Milk

The application of scientific knowledge to dairy farming practices was decisive in creating a massive demand and supply of animal milk. At the end of the nineteenth century, scientists, public health officials, and specialized dairy farmers—predominantly male—took over dairying, which until then had typically been the domain of untrained female farmers.<sup>301</sup> New norms of dairy management and sanitation were imposed under the banner of science and progress. Through the conjoined sciences of breeding, animal nutrition, bacteriology, and later, reproductive technologies and population genetics, the productivity of cows was maximized, and their milk's composition, standardized. Dairy*men* engineered "turbow cows."<sup>302</sup> Local cattle used to vary in size, shape, weight, and color, while modern cows are uniform, specialized animals selected for their capacity to yield high volumes of milk of certain compositional qualities, usually measured by fat and protein content. Modern cows and the milk they produce are techno-scientific objects, literally conceived and treated as "milk machines."<sup>303</sup>

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297. See, e.g., JEAN-MARIE BOURRE, *LE LAIT: VRAIS ET FAUX DANGERS* (2010).

298. See Bramwell, *supra* note 287, at 92.

299. Paul Rozin & April E. Fallon, *A Perspective on Disgust*, 94 *PSYCHIATRY REV.* 23, 28 (1987).

300. *Id.*

301. See Cohen, *supra* note 42, at 150–57 (arguing that the elevation of milk to a protected legal and cultural status in the United States during the first half of the twentieth century functioned as a form of exclusion of women from a fluid which had traditionally belonged to the feminine domain). See also Daniel Block, *Saving Milk Through Masculinity: Public Health Officers and Pure Milk, 1880–1930*, 13 *FOOD & FOODWAYS: EXPLORATIONS HIST. & CULTURE HUM. NOURISHMENT* 115 (2005) (arguing that the promotion of milk by public health departments and officials during the period 1880–1930 in the United States resulted in giving control over milk, a substance associated with women and child-rearing, to male professionals).

302. See Orland, *supra* note 240, at 167 (tracing back the technical manipulation of the dairy cow's biological productivity to nineteenth-century Germany and Switzerland).

303. See *id.*

This male-dominated enterprise was animated in part by the quest for “humanized milk,” that is, animal milk modified to make it closer in composition to human milk. Attempts to duplicate human milk have a long history, but they became particularly salient in the nineteenth century with developments in the chemical analysis of milk and in nutritional and biochemical theory.<sup>304</sup> In both France and the United States, reducing interspecies differences in the nature of milk appeared key to ensuring safer and more adapted infant foods. In the late 1890s, French physician Léon Dufour, finding cow’s milk too heavy for babies, proposed to “maternize” it through the addition of water, cream, lactose, sodium chloride, as well as pasteurization.<sup>305</sup>

Humanizing milk remained an artisanal and small-scale initiative in France, involving simple dilutions and enrichments. In England<sup>306</sup> and the United States, however, it soon turned large scale, necessitating more complex milk modification and equipment.<sup>307</sup> Starting in the 1880s, a few American doctors jumped on the bandwagon.<sup>308</sup> Boston-based pediatrician Thomas Rotch tinkered with the percentages of fat, sugar, and protein in cow’s milk to make it closer in composition to his conception of what human milk was. His approach was premised on the idea that different mammals’ milk was composed of the same ingredients but in different percentages. Rotch recommended milk modification tailored to the specific situation of each infant, based on variables such as age, weight, height, and health. The “percentage” method became so widely popular from the 1890s to the 1910s that it was known as the “American” method.<sup>309</sup> As historian Jacqueline Wolf recounts,

Rotch and his adherents employed an endless array of mathematical formulas—which is where the word “formula” in relation to infant feeding originated—to indicate how much the percentage of each significant ingredient in cows’

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304. T.B. Mephram *“Humanizing” Milk: The Formulation of Artificial Feeds for Infants (1850–1910)*, 37 MED. HIST. 225, 226 (1993).

305. See Sautereau, *supra* note 105, at 221. See also Sautereau & Le Luyer, *supra* note 59, at 288 (noting that Dufour used a machine called “humanizer” to concoct the potion).

306. The notion of “humanized milk” was found early on in the English literature on milk depots. See, e.g., McCleary, *supra* note 132, at 336 (describing the alteration the Battersea milk depot subjected its milk).

307. See Lawrence T. Weaver, “Growing Babies”: *Defining the Milk Requirements of Infants 1890–1910*, 23 SOC. HIST. MED. 320 (2010) (distinguishing the French, American, and German approaches to defining a scientific basis for infant feeding at the turn of the century).

308. JACQUELINE H. WOLF, DON’T KILL YOUR BABY: PUBLIC HEALTH AND THE DECLINE OF BREASTFEEDING IN THE NINETEENTH AND TWENTIETH CENTURIES 80 (2001) (discussing the work of Dr. Arthur Meigs, who authored in 1885 the then-popular book, *Milk Analysis and Infant Feeding: A Practical Treatise on the Examination of Human and Cows’ Milk, Cream, Condensed Milk, Etc., and Directions As to the Diet of Young Infants*).

309. WOLF, *supra* note 308, at 83.

milk needed to be weakened or strengthened given the condition of a particular baby.<sup>310</sup>

But Rotch's system proved so complicated to execute that it eventually lost favor among the American public and medical profession.

This was not the end of the humanized milk fantasy, however. Not only can milk composition be altered *ex post* by various forms of processing, but also *ex ante* through livestock management techniques as well as by exploiting naturally occurring genetic variation among cattle through selection and crossbreeding.<sup>311</sup> In the past half century, the rapid development of genetic engineering by the direct manipulation of DNA has given rise to a generation of transgenic cloned animals for agricultural and biomedical use. Sociologist Sarah Franklin has argued that experiments in transgenic sheep aimed at producing animals with maximal lactation brought about "manimals"—animals carrying and expressing a human gene.<sup>312</sup> Genetic manipulation in animals can add, remove, increase, or decrease certain milk components based on their desirability for humans. Not only milk, but also lactating animals themselves are now "humanized" for the purpose of feeding humans. As two biotechnologists declared in 2004, by manipulating animals' genetics,

it could be possible to produce fat-reduced or even fat-free milk; . . . to create "hypoallergenic milk"; . . . to generate lactose-free milk . . . ; to produce "infant milk" in which human lactoferrin is abundantly available or to produce milk with a highly improved hygienic standard . . . .<sup>313</sup>

Viewed as both a food and a medical technology, humanized milk has reinforced the scientific and medical control over infant feeding.<sup>314</sup> The use of science and technology to transform milk is not limited to animal milk, however. Human milk too is treated as a pathological substance, requiring scientific processing and medical supervision.

## 2. Medicalizing Human Milk

Similar to animal milk, it is only by undergoing a "scientific" process (through its collection and processing by milk banks), that

310. *Id.* at 82.

311. See Costas N. Karatzas & Jeffrey D. Turner, *Toward Altering Milk Composition by Genetic Manipulation: Current Status and Challenges*, 80 J. DAIRY SCI. 2225 (1997).

312. SARAH FRANKLIN, DOLLY MIXTURES: THE REMAKING OF GENEALOGY 36 (2007) (describing the injection of certain genes into sheep embryos so that the sheep would produce large quantities of milk with desirable human enzymes, which could be used to make pharmaceutical products for rare genetic diseases, such as cystic fibrosis, and metabolic disorders, such as diabetes and hemophilia).

313. Wilfried A. Kues & Heiner Niemann, *The Contribution of Farm Animals to Human Health*, 22 TRENDS BIOTECHNOL. 286, 292 (2004).

314. See Mephram, *supra* note 304, at 245.

human milk is reborn as a legitimized, medicalized substance. In its natural, raw state, human milk exchanged peer-to-peer is presented as a dangerous, potentially deadly fluid.<sup>315</sup> Those in favor of milk sharing recognize that the risks of using donor milk are real, but they point out that the mainstream alternative offered by science and the industry—infant formula—is not risk free.<sup>316</sup> They also emphasize that steps can be taken to minimize the dangers of milk sharing, reclaiming science from the establishment.<sup>317</sup> Basic scientific knowledge becomes an ally in supporting lay screening behaviors, which mimic some of the dairy and milk banking routines. Bacterial contamination is addressed by improving milk collection, transportation, and storage techniques, for example, by sanitizing the pump and milk containers as well as keeping the milk at the right temperature until it reaches its recipient. Viral contamination is mitigated through the serological screening of milk providers. Families vary in their risk perceptions. Some trust the honor system, others conduct due diligence, such as meeting with the donor and her baby and observing their environment. Still others ask to see blood test results.<sup>318</sup> The most cautious use home pasteurization to kill or inactivate any remaining virus or bacterium. Toxic residues cannot be eliminated *ex post* by pasteurization, however. While some lifestyle changes may reduce milk toxicity over time, contamination results from lifelong exposure to a myriad pollutants.<sup>319</sup>

Are regulatory interventions needed to safeguard consumers from peer-to-peer milk sharing? Existing tort, contract, and criminal liability regimes already protect the public. In the United States, providers could be held accountable for donating or selling

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315. See *supra* notes 195–200 and accompanying text. See also Sarah Steele, Jeanine Martyn & Jens Foell, *Risks of the Unregulated Market in Human Breast Milk: Urgent Need for Regulation*, 350 BRIT. MED. J. (2015), <http://www.bmj.com/content/350/bmj.h1485> (editorial by British researchers warning of the dangers of buying human milk online).

316. See Gribble, *supra* note 204, at 110.

317. For a presentation of this perspective, see Karleen D. Gribble & Bernice L. Hausman, *Milk Sharing and Formula Feeding: Infant Feeding Risks in Comparative Perspective?*, 5 AUSTRALASIAN MED. J. 275 (2012). See also Palmquist & Doehler, *supra* note 198 (describing donor milk recipients' risk perceptions and screening practices in the United States).

318. The milk sharing website, Only the Breast, thus offers information about the types of blood tests to require from donors and how to pasteurize milk. See Breast Milk Donor Panel Description, ONLY THE BREAST, <http://www.onlythebreast.com/buy-sell-donate-breast-milk/breast-milk-donor-blood-test-order-form/breast-milk-donor-panel-description/> (last visited June 21, 2017).

319. Lifestyle changes include avoiding occupational exposure resulting from certain jobs (e.g., dry cleaning) and generally staying away from pesticides and flame-retardants, which may involve, in practice, embracing an organic diet and giving up a wide range of products, including computers, printers, coffee makers, roof insulation, and most furniture. The vast majority of women are economically and socially unable to take these steps. See BOSWELL-PENC, *supra* note 200, at 93–94, 148–49 (discussing the environmental racism and classism revealed by the issue of contaminated milk, with minority and low-income women's milk—such as Mohawk women or migrant workers—more contaminated than the general population).



contaminated or adulterated milk under tort doctrines such as fraudulent or negligent misrepresentation.<sup>320</sup> They could also be liable for breach of contract if the milk sold does not conform to the way in which it was represented.<sup>321</sup> Under federal and state laws, sellers could be found guilty of crimes. As Sarah Waldeck has shown, there is a trend “toward criminal accountability toward those who offer contaminated bodily products.”<sup>322</sup> Some of the criminal state laws on the books require the donor’s knowledge that she was infected, while others only require that she acted recklessly with respect to her infected status. In that sense, even though human milk remains legally undefined, human milk *transactions* are already highly regulated by existing legal frameworks.<sup>323</sup> In France, human milk donors could face similar forms of liability provided that actual harm to the milk recipient is proven.<sup>324</sup> So far, these various laws have not been enforced against milk providers, which could suggest that the danger posed by milk sharing is overblown or that the harms it causes go unnoticed.

Assuming that most of the risks associated with milk sharing can be alleviated and that legal remedies exist to protect consumers, why is the practice met with the scientific and medical establishment’s continuing reprobation? One possibility lies in French and American cultures’ unease with women exercising independent control over their bodies and their children’s feeding. Over the past couple of centuries, nearly all aspects of infant feeding have come under the command of science. Much like pregnancy and childbirth, infant feeding is viewed as a medical event. Discourses around infant feeding reflect and reproduce an ideology of “scientific motherhood” based on the belief that women require expert scientific and medical advice

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320. Assuming that human milk would be construed as a food, however, women who donate their milk might be insulated from liability under the Good Samaritan Food Act, 42 U.S.C. § 1791 (1996), which sets a floor of “gross negligence” or intentional misconduct for persons who donate grocery products.

321. See Stephanie Dawson David, *Legal Commentary on the Internet Sale of Human Milk*, 126 PUB. HEALTH REP. 165 (2011).

322. See Waldeck, *supra* note 165, at 378.

323. In that sense the split between the French and the American human milk legal regimes is yet another illustration of the two countries’ divergent approaches to consumer protection, with the United States traditionally opting for a private tort liability-based policing of markets, while France, in a civil law vein, relies on public administrative systems driven by governmental agencies to set standards and enforce them. See Philip Chen O’Neill, *Appendix B: A Review of Tort Liability’s Role in Food and Medical Product Regulation*, in COMMITTEE ON STRENGTHENING CORE ELEMENTS OF REGULATORY SYSTEMS IN DEVELOPING COUNTRIES ET AL., *ENSURING SAFE FOODS AND MEDICAL PRODUCTS THROUGH STRONGER REGULATORY SYSTEMS ABROAD* (J.E. Riviere & G.J. Buckley eds., 2012), <http://www.ncbi.nlm.nih.gov/books/NBK201154/>.

324. See, e.g., CODE PÉNAL [C. PÉN.] [PENAL CODE] art. 222-15 (making it a crime to administer harmful substances, which impair a person’s physical or psychological integrity). See also Cour d’appel [CA] [regional court of appeal] Rouen, Sept. 22, 1999, JCP 2000, IV, 2736 (Fr.); Cour d’appel [CA] [regional court of appeal] Colmar, Jan. 4, 2005, D. 2005, 1069, note Paulin (Fr.) (criminalizing the nondisclosure of HIV status when it led to the contamination of one’s sexual partner).

to raise their children in a healthy way.<sup>325</sup> Pediatricians have become self-professed experts, developing theories and counter-theories of proper feeding choices, and educating generations of parents in the latest science. In France, every newborn is issued a *carnet de santé* (health book) by the state. The *carnet de santé* serves to record medical details such as vaccinations, growth and weight charts, but also to prescribe the medically defined infant-feeding norms of the day—it contains a series of pages detailing, month-by-month what the infant should be fed.<sup>326</sup> American pediatricians lack a similar tool to communicate feeding precepts—another manifestation of American parents' greater autonomy compared to the French—but prenatal checkups, sick and well visits are often opportunities for infant feeding recommendations, especially for low-income women and their families.<sup>327</sup>

Given their claim to authority in infant feeding, physicians are unsettled by the parent-led milk sharing movement, which escapes their jurisdiction. Milk is a highly complex and unstable substance, notoriously difficult to control. Its aspect and composition change from woman to woman and day to day, based on a host of factors.<sup>328</sup> It is much easier, from a pediatrician's perspective, to work with a pooled, homogenized substance, which can be measured precisely in terms of nutrients and quantity, and administered according to a set plan. A fungible, sanitized product, banked milk retains an aura of scientificity as a form of medically approved, standardized substance, which milk circulating peer-to-peer lacks.<sup>329</sup> Milk banking and the commercial manufacturing of human milk products restores physician control over milk, from production to consumption: banked milk is collected, processed, and stored under medical supervision and must often be prescribed by a doctor. Current calls for human milk legislation, therefore, may be motivated by representations of the

325. See RIMA APPLE, *MOTHERS AND MEDICINE: A SOCIAL HISTORY OF INFANT FEEDING, 1890–1950* (1987) (describing the rise of “scientific motherhood” as the dominant view of good mothering in the nineteenth and twentieth centuries).

326. See Catherine Rollet, *Pour une histoire du carnet de santé de l'enfant: Une affaire publique ou privée?*, 3 *REVUE FRANÇAISE DES AFFAIRES SOCIALES* 129 (2005) (recounting the history of the *carnet de santé* since the mid-nineteenth century).

327. See Khiara M. Bridges, *Privacy Rights and Public Families*, 34 *HARV. J.L. & GENDER* 113, 116, 119 (2011) (arguing that reliance on the welfare state makes poor women and their families “public,” leading to “gross and substantial intrusion by the government into poor, pregnant women’s private lives”). In states such as New York, pregnant patients who rely upon Medicaid, specifically the Prenatal Care Assistance Program, must receive “basic nutrition education and counseling . . . regarding infant feeding choices.” N.Y. COMP. CODES R. & REGS. tit. 10, 85.40(f)(5)(iii) (2009).

328. See generally Olivia Ballard & Ardythe L. Morrow, *Human Milk Composition: Nutrients and Bioactive Factors*, 60 *PEDIATRIC CLINIC N. AM.* 49 (2013) (providing an overview of the composition of human milk and of the sources of its variation).

329. The ultimate transformation of human milk from a suspicious waste product into a scientifically prized superfood is epitomized in commercially available human milk-based fortifiers (such as Prolacta’s “ProLact +H2MF”) or sterile shelf stable milk that are sold at steep markups (such as Medolac’s).

female body which aim at preserving the scientific and medical professions' control over infant feeding.

### CONCLUSION

This Article offered two interrelated sets of comparisons, analogizing animal and human milk regulation, on the one hand, and the French and American approaches to regulating milk, on the other hand. Milk legislation involves a variety of issues, ranging from human–animal relations to matters of species, gender, race, social hierarchies, childrearing, hygiene, and food production and consumption. I have argued that despite their apparent novelty, the problems raised by human milk markets are not without precedent. They bear remarkable similarities to the issues at stake in animal milk regulation. Animal milk regulation has been drawn on to normalize or naturalize human milk regulation and vice versa. Through this argument, a series of comparative insights on French and American legal cultures were evinced.

The two countries diverge in predictable ways, most notably by their varying degree of state and social control, the French favoring more state intervention than Americans. Yet the Article suggested that some of our assumptions regarding the two cultures may be unfounded, producing a chiasitic pattern. American culture is often derided for its paranoia about germs—and the federal ban on raw milk has been analyzed as an upshot of this germaphobia.<sup>330</sup> There may be some truth to that narrative,<sup>331</sup> but apparently not when it comes to human milk. American women can trade their milk undisturbed by the law, while in more germ-friendly France, where raw animal milk is ubiquitous, the law prohibits women from donating their milk for free unless they turn to official milk banks.

Despite these expected and less expected cultural and legal differences, there are intriguing ways in which in both countries, the providers of milk—human lactating mothers and animal lactating mothers—have *both* been commodified and lumped together as devalued species, while the recipients of the milk—particularly children—are elevated into a framework of greater value, both socially and economically. If children's health and safety has been the central goal animating regulators in both countries, why do we not see the same substantive norms here and there? This Article's response has been that the objective of "putting children first,"<sup>332</sup> though real and well-meaning, functioned in part as a cover to regulate females of either species by enforcing economic, sexual, and pro-science agendas upon them, leading to different forms of legal interventions,

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330. See Paxson, *supra* note 253.

331. See NANCY TOMES, *THE GOSPEL OF GERMS: MEN, WOMEN, AND THE MICROBE IN AMERICAN LIFE* (1998) (exploring the origins of the American disease consciousness).

332. See Gordon, *supra* note 233, at 333.

depending on the local conceptions of normalcy and normativity in reproductive, parenting, and infant feeding practices. The resulting paradox is that the law of milk, intended to prioritize human children's welfare, may not (or no longer be) helpful to them, as it inhibits the wider and safer availability of human milk, all the while promoting the ubiquity and affordability of industrially and brutally produced animal milk.