Smoke came out of an adobe hut in the outskirts of Mexico City. The smell of burning wood mixed with the vapors of bubbling atole (corn gruel) announced the start of another day. Carolina helped her mother prepare breakfast for her siblings, who were getting up from their petates (straw mats). As soon as the black beans finished boiling, the family sat around a small kitchen table. Carolina’s mother served them corn gruel along with some beans, salsa, and corn tortillas. If Carolina’s mother had earned good money for her washing, she would buy cow’s milk, but still she would only serve her family a dash of milk in their coffee or corn gruel. Carolina, like most peasants and working-class children, would rarely have a glass of milk at home. In the 1940s and 1950s, most Mexicans had maize, beans, chilies, oats, and herbal tea or coffee for breakfast. Cow’s milk was always mixed with other hot drinks and rarely consumed on a daily basis. Only better-off families or cattle farmers had milk every day.

This article explores milk drinking in mid-twentieth-century rural and urban Mexico from two perspectives: state discourse and policies, and everyday practice. Drawing from archives, censuses, contemporary medical journals, newspapers, cookbooks, women’s magazines, and oral history interviews, this work reveals the strategies and ideology of postrevolutionary middle-class reformers and working-class clients, particularly women. This research focuses on the capital city, or Federal District, in both its urban downtown and rural outskirts. It also refers to Guanajuato, the capital city of the same state, located 220 miles northwest of Mexico City.
Class and race are key elements in this analysis, because most doctors and nutritionists were part of the middle class, a sector that gained power after the Mexican revolution (1910–1921). 1 In the 1930s and 1940s, reformers worked to implement a radical program of wealth distribution through social and welfare policies aimed at the improvement of health standards and eventually the generation of economic development. Meanwhile, welfare clients were poor peasants and workers, most with relatively dark skin and often of indigenous descent. Reformers considered them to be “ignorant and backward. Based on this belief, experts claimed the right to reeducate the peasants (and workers) into changing their living, dietary, and hygienic habits.” 2

Gender is also an important category throughout this article, as women were the target of state nutrition programs. Women, in their role of mothers, were in charge of maintaining family life and raising healthy, disciplined, and hard-working citizens. Women, however, worked also on behalf of the state as social workers, visiting nurses, and teachers in charge of implementing nutrition policies. Women’s memories of milk drinking are discussed in order to compare ideal practices with daily life and to show how the symbolic value of cow’s milk as a beverage associated with modernization was interpreted across class and between rural and urban areas.

Cow’s milk gained preeminence in Mexican discourse in the early twentieth century, when the newly created science of nutrition identified the white liquid as an important source of animal protein and vitamins. Cow’s milk was considered essential for human development and a feature of “civilized nations,” in other words, Europe and the United States. In accordance with this idea, in the 1940s and 1950s, the Mexican state sought to increase milk consumption by importing powdered milk, reconstituting it, and distributing it through subsidized state shops and the school breakfast program. These policies demonstrate that Mexican nutritionists and state officials reproduced the idea of milk’s superiority, denying or questioning, at best, the nutritional value of nondairy diets.

The virtues of cow’s milk were extolled by industry both in Mexico and the United States, the country that provided most of Mexico’s powdered milk. International organizations such as UNICEF (United Nations Children’s Fund) and FAO (Food and Agriculture Association of the United Nations) also encouraged milk drinking, particularly among children. Mexican scholars have studied the milk industry and social policies in terms of state intervention and nation-state formation, but little has been said about daily consumption of cow’s milk. 3 By looking at nutrition ideas, welfare policy, and milk-drinking practices, this article seeks, on the one hand, to stress the role of middle-class policy makers and doctors who argued that milk was essential to the development of a modern nation. On the other hand, women’s memories reveal the difficulties of implementing middle-class ideals in working-class households, and the various reasons that they chose to drink or not to drink milk in everyday life.
Transforming Daily Practices

In the first half of the twentieth century, Mexican welfare advocates, influenced by eugenics, believed that social improvement was the result of education and environment rather than genetic inheritance and race. Thus, “backward” populations were able to uplift themselves through learning the “right way of living.” The science of nutrition linked eugenics with food, explaining that a healthy diet not only would help prevent disease but would also increase productivity and improve the race. Educators, social workers, nurses, cookbooks, and women’s magazines informed women, who were responsible for feeding the family, about accepted nutritional practices. Nevertheless, few women, as this article argues, counted calories or planned menus based on the nutritional content of foodstuffs. Measuring the value of food engendered the conviction that food was uniform, comparable across times and nations, thus removing all the cultural and historical values from eating practices. Moreover, to transform daily habits, people had to see the logic of the changes within their own lives and have the necessary material conditions, which explains why peasant women without access to affordable milk did not buy it although teachers or visiting nurses encouraged them to do so.

The Mexican revolution did not bring a radical change in food discourse, as eugenicists and policy makers continued to believe that a “proper diet,” which included more animal protein, could enhance Mexicans’ health, increase their productivity, and teach them civilized (Western) manners. The radical change, however, was the interest of middle-class experts in providing the working class with the “material and intellectual resources . . . to bring the Mexican state closer to the social promises of 1917.” Thus, between the 1930s and 1960s, postrevolutionary governments embarked on a project to generate development and social improvement. Amid favorable economic conditions generated by the Second World War, the state launched the Import Substitution Industrialization policy to encourage the growth of industry, which also benefited from a pact among the state, employers, and trade unions to keep wages low. In order to counteract low salaries, postrevolutionary governments created welfare programs and worked on extending education and health services to the whole country. Following state policy, welfare advocates claimed that working-class families did not require an increase in their salaries to improve their standard of living. The solution was in home economics, welfare programs, and food subsidies.

Improving the living conditions of the working class involved not only promoting balanced diets or sanitized kitchens but also instilling middle-class moral values into workers. A trained homemaker, according to various instructional books, could stretch family income, cook nutritious meals for her family, and keep her house nice and tidy. Embracing modern housewifery strengthened and reproduced patriarchy, as women remained solely responsible for running the household, feeding the family, and looking after children. Although the professionalization of
traditional female activities opened a path to the professions for lower-middle- and middle-class women who became teachers, nurses, or social workers, welfare programs also reproduced social structures and traditional gender roles in the interest of maintaining social order. The postrevolutionary state tried to occupy the father's place at home, thus becoming a paterfamilias ruling the nation's public and private spheres.

Welfare programs allowed policy makers to influence family life from the kitchen to the bedroom. Food in Mexico, as Jeffrey Pilcher shows, is a central arena for politics and nation-state formation. Food policy implied not only providing enough food at low prices but also promoting specific foodstuffs. In the 1940s and 1950s, nutrition research and welfare programs were mainly in charge of the Secretaría de Salubridad y Asistencia (Ministry of Public Health and Assistance; SSA) and the Instituto Nacional de Nutriología (Institute of National Nutrition; INN).

The SSA was created in 1943 by President Manuel Ávila Camacho to coordinate national public assistance efforts. The same year, the INN was established in Mexico City’s General Hospital following the initiative of Dr. José Quintín Olascoaga. Among the main objectives of this institute were to investigate the diet, nutrition, eating practices, and the economic situation of the Mexican population in order to inform policy makers; to fight “malnutrition, ignorance, and misery through vocational and popular education”; and to promote an “economic, hygienic, and ‘rational’ diet based on the eating habits and taste of Mexicans.” In sum, the INN sought to ameliorate the living standard of the population by improving their diet and hence their health and productivity. Due to budgetary restrictions, the INN, along with other state agencies, initiated most food welfare programs in the capital city with the goal of later expanding them to the rest of the country.

Mexico City offered a good starting point for welfare programs, becoming the country’s social laboratory, as it had not only the necessary infrastructure but also vast disparities of wealth. After the revolution, industrialization fostered urbanization and migration, particularly to the capital city. The population of Mexico City jumped from 1,757,530 inhabitants in 1940 to 3,050,442 in 1950. Even though Mexico City was mainly urban, in 1950 rural inhabitants living in the outskirts of the city represented 5.4 percent of its total population. Despite the growth of internal migration to urban areas, in 1950 most Mexicans still lived in towns, villages, or hamlets of fewer than twenty-five hundred inhabitants. Such rural areas represented 57.4 percent of the country’s population. Most migrants to the capital city were peasants who lived in crowded tenements in the downtown or around industrial zones. Upon arriving in the city, most newcomers were lucky to find work as menial laborers in factories, street peddlers, or domestic servants.

The transformation of peasants into workers was a challenge that reformers sought to address, in part through education and welfare. Doctors suggested that
the workers’ absenteeism was caused mainly by nutrition-related illnesses, the result of deficient meals and poor hygiene, identified with low-income households. Even workers with regular attendance, doctors argued, had low productivity because of their physical weakness. In fact, several diseases caused by poor nutrition, such as parasitosis, diarrhea, anemia, and pellagra, were among the main causes of death in the nation’s capital. Diarrhea and enteritis, for instance, caused 18.5 percent of the total deaths in 1950. As a result, doctors perceived nutrition and welfare as the starting point in the transformation of peasants into workers. State institutions had to “domesticate” rural migrants by teaching them how to live and organize their household, based on a middle-class model. Thus, changes in diet entailed the adoption of not only ingredients and cooking techniques but also manners and morals such as eating at a table and using cutlery. Increasing the intake of animal protein became a key goal for welfare advocates, for whom cow’s milk was the ideal source.

In the nineteenth century, cow’s milk turned into a symbol of modernity and health while its consumption as a fluid increased in the Western world, particularly in the United States. According to Melanie DuPuis, in this country milk came to be considered a “perfect food” with universal nutritional value and a central role in Western civilization. “The perfect whiteness of this food and the white body genetically capable of digesting it in large quantities become linked. By declaring milk perfect, white northern Europeans announced their own perfection,” leaving out the majority of the world and particularly those who were lactose intolerant. Most Black, Asian, and Native American populations do not have “the gene that allows the production of lactase — the enzyme that digests lactose sugar in milk — after childhood. . . . According to one estimate, two-thirds of the world’s population is lactase-deficient after the age of six.” To a great extent, lactose-tolerant groups came to rely on cow’s milk for survival; for example, Saharan nomads drank nothing but milk and blood for nine months. Northern Europeans likewise had less access to a variety of foods.

Fluid milk drinking was a minor aspect of most human diets until modern times. In the United States, the consumption of cow’s milk began in the mid-nineteenth century as a breast milk substitute. In the twentieth century, milk came to be seen as necessary for physical development and hence for the improvement of society. Milk was associated with modernization because of not only its nutritional content but also the knowledge and technology required for its industrialization. In other words, the growth of railway infrastructure and the discovery of refrigeration and pasteurization among other technologies contributed to its massive consumption. Mexico tried to follow the same path, but a lack of resources made this process slower and less uniform than in the United States. Thus, until the 1930s milk was scarce, expensive, and of poor quality, particularly in areas without close access to dairy farms.
The Privilege of Drinking Milk

A 1936 report published by the ministry of finance pointed out that three-quarters of Mexico City inhabitants did not drink milk at all. People did not buy milk because it was either not available or very expensive. Almost ten years later the situation had slightly changed. In 1945 a bottle of milk (1 liter or 2.11 pints) cost 47¢ at dairies, 54¢ at shops, and 56¢ delivered at home. Meanwhile, the minimum wage in that same year was $1.65 in rural areas and $1.90 in cities. Thus, if workers bought two bottles of milk per day to feed a family of four, they would have spent more than half of their salary on milk alone.

The campaign to spread the consumption of milk was championed by two of Mexico’s leading nutritionists, doctors Jesús Díaz Barriga Aguilar and José Quintín Olascoaga Moncada. The former, who had headed the Michoacán Health Department and served as rector of the Universidad Michoacana, worked closely with Governor Lázaro Cárdenas in creating and implementing “an innovative and socially oriented system of rural health” between 1928 and 1932. During Cárdenas’s presidency (1934 – 1940), Dr. Díaz worked as his adviser and as general secretary of the Departamento de Salubridad Pública (Department of Public Health; DSP), later serving as a Mexican delegate to the FAO. Dr. José Quintín Olascoaga, considered the pioneer of dietetics in Mexico, cofounded the INN and carried out the first food surveys “to have a clear idea about the characteristics of the diet of the current inhabitants of various areas across the country.”

In 1945 Dr. Díaz and Dr. Olascoaga pointed out that 82 percent of the population had limited economic resources, as they earned less than $600 pesos per month and spent more than half of their wage on food. This vast group of people, which included peasants, blue-collar workers, artisans, small merchants, and low-rank white-collar workers, drank very little milk. Most peasants and poor rural dwellers did not drink cow’s milk at all. This could seem like a paradox; however, raising cattle was a feature of specific geographic areas and limited to better-off ranchers. Moreover, lack of good roads, refrigerated train cars, and electricity played a key role in low milk consumption, because milk could not be transported or preserved efficiently.

Based on the 1950 and 1960 censuses, the income and expenditure survey published in 1963 shows that drinking fresh milk was more common in urban areas than in rural communities. Condensed and evaporated milk remained a commodity of middle- and upper-class households. Evaporated milk is fresh cow’s milk from which 60 percent of the water is removed before the milk is homogenized, fortified, canned, and sterilized. Condensed milk, a sweet, syrupy mixture of 55 – 60 percent whole milk and 40 – 45 percent sugar heated until 60 percent of the water evaporates, was frequently used as a dessert or as a sweetener added to coffee. In urban areas of the Bajío region, where Guanajuato state is located, only the middle class bought evaporated milk. Meanwhile, in Mexico City, the upper, middle,
lower-middle class used it. But the consumption of evaporated milk remained low compared to fresh cow’s milk, representing just 3.5 percent of the total expenditure on dairy products in Mexico City. Although urban areas had better access to fresh milk due to the presence of dairies and infrastructure to distribute and refrigerate milk, its consumption depended to a great extent on family income.

The life history of women interviewed for this project confirmed the low, and even nonexistent, consumption of cow’s milk among subsistence peasants and the urban poor. Carolina Basave spent her childhood living in rural Tlalpan. In the early 1930s, Carolina’s mother left her husband and moved to live with her sister in a village in the southern edge of Mexico City. Their economic situation was extremely difficult. Carolina’s mother worked as a washwoman, and their diet was based on what they sowed and gathered. Carolina recounted that milk was not served daily at their table, and when she drank milk it was only a dash added to other beverages.

Crispina Vargas also lived in the southern outskirts of Mexico City, in San Nicolas Totolapa. Her father was a bricklayer who abandoned her mother before she was born. Crispina’s mother worked as a live-in domestic servant, and Crispina and her brother grew up with their maternal grandparents. In 1940, Crispina’s mother married, so Crispina and her brother moved to Mexico City’s downtown to live with their mother and step-father. Crispina did not drink milk, only black coffee, while living in San Nicolas. She came to know milk in the early 1940s, when her mother bought it from a dairy located in the Juárez neighborhood, very close to downtown. After boiling it, they preserved it under the kitchen table, as they did not have a refrigerator. Milk, as well as other foodstuffs, had to be acquired on a daily basis to keep them fresh, particularly in households without a refrigerator, which in the 1940s and 1950s was the case for most working-class people.

For middle- and upper-class families, cow’s milk was a part of daily meals. Evelia Estrada, the only daughter in a prominent tailor’s household, recounted that when she went to high school in the early 1940s, she always had milk for breakfast. “My mother served me oatmeal prepared with milk, two eggs, fruit, fruit juice, and bread with butter. We were very well fed.” María Luisa Arteaga, who came from a better-off family in Mexico City, moved to Guanajuato and married a successful lawyer in 1936. Luisa stated, “We bought milk from a cousin of my husband. She sold good milk. We distrusted other dairies as milk could have made our children fall ill.”

Luisa had reasons to be afraid, as milk adulteration was frequent in the early forties. Throughout December 1941, Faustino Vidal, manager of Public Dining Hall No. 1, located in Mexico City’s downtown, reported that milk kept curdling due to its poor quality. On December 3, 1945, Dr. Samuel de la Peña, head of Control Sanitario de la Leche y sus Derivados (Sanitary Control of Milk and Dairy Products) under the SSA, stated that newspapers were reporting food poisoning cases caused by the deplorable sanitary conditions of dairies. Dr. de la Peña pointed out that a
city inspection discovered milk adulterated with sugar, water, and even some traces of caustic soda.\textsuperscript{39}

Therefore, the SSA called on its agencies to keep a close eye on dairies. This measure, along with other policies implemented by the INN, SSA, and other state agencies, aimed at improving the quality of milk and increasing its consumption. Policy makers and doctors gave enormous importance to the spread of milk drinking, because they believed that it would transform Mexico for the better. This discourse was part of a major trend, as DuPuis argues, that identified the Western diet not only with nutrition and health but also with modernity and progress. Therefore, even if other sources of protein existed in Mexico, such as beans and insects, cow’s milk was perceived as better than any other alternative identified with indigenous peoples’ culture.

The Milk Debate

In the 1940s, public health officials put the fight against malnutrition at the head of their agenda, considering it to be one of the main causes of poverty and death in Mexico. One hundred and twenty-five children out of one thousand died in their first year of life, and more than one-fourth of these deaths resulted from gastrointestinal diseases, while maternal and infant anemia were at the root of other fatal illnesses.\textsuperscript{40} Nutrition advocates claimed that foodstuffs of animal origin such as milk, eggs, meat, cheese, blood, and fish are absolutely essential in human diet. The power of a race depends on those foods. . . . All civilized cultures had consumed large quantities of animal protein. We will not be a superior nation while the diet of 15 million Mexicans remained based on proteins that are inadequate even for beasts. The only way to succeed as a nation is to generate a deep change in infant diets introducing animal protein at all costs.\textsuperscript{41}

A change in diet would benefit not only individuals but also the development of the nation, which would have well-nourished and productive citizens—workers who as a result will earn more money and improve their diet and standard of living.\textsuperscript{42} The introduction of powdered milk became one of the main projects designed to increase consumption of animal protein among children and the poor. Fresh milk production was low, and milk tended to be adulterated and was prohibitively expensive for the masses. On top of that, in response to an outbreak of hoof-and-mouth disease between 1946 and 1955, the government killed most of the cattle in the country. To make milk available at low prices, the Mexican government increased its imports of powdered milk, particularly from the United States.\textsuperscript{43}

In Mexico as well as in the United States, powdered milk was an alternative for mothers who could not breast-feed their offspring or those who did not have access to fresh milk.\textsuperscript{44} The benefits of powdered milk were its low price, conve-
nience, as it did not need refrigeration, and purity when mixed with safe drinking water. Since the 1930s, the Swiss-founded Nestlé imported powdered milk produced in the United States by Gail Borden. In the 1940s, Nestlé, Borden, Klim, and Valle Verde advertisements were regularly published in women's magazines (see fig. 1).

Such advertising faced an uphill battle, for most women did not consider powdered milk to be an acceptable substitute for mother’s milk. There were also dissenting voices among doctors regarding the superiority of reconstituted milk over fresh milk. The only consensus was that it provided a temporary solution to shortages of fresh milk. On April 15, 1944, even before the outbreak of hoof-and-mouth disease, Dr. Demetrio Mayoral Pardo, head of Dirección General de Higiene de Alimentos y Control de Medicamentos (Department of Food Hygiene and Drug Control), wrote a memorandum stating that “all the efforts to facilitate the importation of powdered or evaporated milk are welcomed, at least during this emergency period.” Dr. Mayoral stressed that powdered and evaporated milk should not substitute fresh milk, as it lost vitamins and underwent chemical changes during its evaporation process. He further argued that these changes were not completely harmless, as several authors had stated that there was a potential danger in the regular consumption of canned food. Dr. Mayoral thought that people would not accept powdered or evaporated milk because they would not like its taste. Nevertheless, he agreed on the urgent need to distribute milk among children, the ill, and the elderly.

In 1944, during a period of intense wartime food shortages, the government announced plans to import milk from Argentina and the United States. On December 12, 1944, the day in which most Mexicans were paying homage to our Lady of Guadalupe, newspapers reported contracts for the importation of 1,000 cans of evaporated milk for Mexico City alone and more than 5 million cans of powdered milk for the entire country. Reporters stated that “experts assure that evaporated milk has a high nutritional value. Moreover, it has been used by the United Nations and its army with excellent results.” The papers also gave instructions on how to reconstitute powdered milk and concluded by saying: “This governmental effort has the noble goal of giving access to this nutritious foodstuff to our humble families by allowing them to buy a liter of milk for 25¢ to 30¢, even cheaper than fresh milk.” Eight months later, on August 5, 1945, the official newspaper, El Nacional, affirmed that “reconstituted milk was proved to be of a better quality and more nutritious than fresh milk.” El Universal also published positive articles, one emphasizing that “powdered milk did not lose its vitamins during its evaporation process and that reconstituted milk would taste like fresh milk that had just come out from the milking sheds.” Reconstituted milk produced at industrial plants had a higher quality than the average milk sold in poor urban areas, which was diluted and even adulterated or contaminated. Middle- and upper-class urban households, however, demanded access to good-quality fresh milk.

Major newspapers praised powdered milk and voiced little criticism of SSA
El alimento más completo

LECHE

VALLE VERDE

Los más conocidos expertos en dietética del mundo entero están de acuerdo en afirmar que la leche es el alimento más completo que existe, sobre todo para los niños cuyo organismo está en crecimiento.

La leche Valle Verde es la leche más pura que usted puede obtener en el mercado porque de las vacas Holstein de pura raza que la producen, y que veterinarios afamados conservan en perfecto estado de salud, a las latas en que se envasa hecha polvo, pasa por todos los procesos de producción y elaboración sin que la toquen manos humanas. Como se prepara con toda su crema conserva su valor alimenticio intuyo y aún éste se acrecienta con Viosterol (Vitamina D-2).

Déla a sus niños y ayúdéllos a crecer sanos y robustos.

LECHE VALLE VERDE

La Leche en Polvo que sabe a Leche Natural.

México, D. F. CENTRO MERCANTIL DE, MONTSREY, S. A. Monterrey

Figure 1. Advertisement for Leche Valle Verde. “The most wholesome foodstuff, Valle Verde (Green Valley) milk. It is the purest milk available because it is produced by purebred Holstein cows supervised by famous veterinarians that keep them in perfect health. The powdered milk that tastes like fresh milk.” Virginia Yturbi de Limantour, “La vida social en México” (“Social Life in Mexico”), Enciclopedia del Hogar (Encyclopaedia of the Home) 8 (Mexico: Excélsior, 1947)
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initiatives, because the international consensus favored milk as the best source of protein. Milk consumption became part of a hegemonic discourse legitimized by international and national experts who argued that milk was a gateway to modernization. After the outbreak of hoof-and-mouth disease, Mexico increased its imports of powdered, condensed, and evaporated milk from nearly 5 million kilograms in 1946 to more than 13 million a year later. By 1958 the amount of imported powdered milk surpassed 22 million kilograms.

As UNICEF and FAO supported the consumption of reconstituted milk in Mexico, and even provided this product, they were very interested in dispelling reformers’ doubts about the superiority of reconstituted milk. In a 1949 pamphlet, the FAO stated that “powdered and evaporated milk are an excellent substitute for fresh milk, as it is easy to prepare, store, and transport.” By 1950, however, some Mexican doctors were not fully convinced. In 1950 Dr. Díaz Barriga advised El Universal readers that “it is better to buy fresh cow’s milk and boil it, but if it is not possible you can buy semi-skimmed powdered milk, which is half the price of fresh milk, costing 40¢ or 50¢ per liter.” Dr. Díaz even suggested that women should ask schoolteachers to convince local merchants to sell powdered milk. In another newspaper article, Dr. Díaz proposed a “patriotic” plan to establish a skimming industry in the states where cow’s milk was plentiful, so skimmed milk could be sold cheaper to the middle and working class while cream and butter could be sold to the upper sectors of society. The development of a national dairy industry, however, still represented a great challenge.

Creating a Milk-Drinking Habit

On March 14, 1945, Nestlé inaugurated a plant in Lagos de Moreno, Jalisco, to produce condensed and evaporated milk. La Prensa claimed that Nestlé was helping to solve the infant malnutrition problem by creating a reliable product that doctors and patients could trust. On November 4, 1946, a group of Mexican businessmen created Lechería Nacional SA (National Dairy), launching Sello Azúl (Blue Seal) milk, produced by rehydrating powdered milk imported from the United States and mixing it with Mexican coconut or cotton oil (see fig. 2). After hoof-and-mouth disease erupted, the federal government increased incentives, such as tax-exempt status, to those businessmen investing in recombination plants. Lechería Nacional was the first of such plants producing milk and agreeing to sell it at a price set by the government. By 1951, half of the milk sold in Mexico City was reconstituted milk produced by Lechería Nacional. This milk cost 66¢ while fresh milk sold for $1.10 or $1.30 per liter.

The creation of Lechería Nacional did not solve Mexico’s milk problems, partly because production was still not enough and distribution was limited, owing to poor infrastructure. The lack of electricity, and therefore refrigerators to preserve reconstituted milk in trucks, trains, shops, or distribution centers also reduced
Figure 2. Advertisement for Sello Azul (Blue Seal) milk. “Reconstituted milk Sello Azul is full milk in every drop.” Produced by Lechería Nacional. Yturbi de Limantour, “La vida social en México” (“Social Life in Mexico”)
access to this foodstuff. The scarcity of milk gave “rise to the selling of unpasteur-
ized and unsanitary milk under the official prices.” In 1949, it was reported that the
clandestine stables had come to account for one-fifth of the milk sold in Mexico City,
much of which sold for 15 percent under the price of milk in supermarkets.61 Those
who bought this unsanitary milk would have been mainly the urban poor, who as a
result were more vulnerable to gastrointestinal diseases.

To provide the working classes with good quality milk, better control prices,
and eliminate the need for clandestine sale, the government sought to increase
domestic production. In 1953 a new recombination plant opened in Tlalnepantla, a
northern suburb of Mexico City, producing 25,000 liters per day based on 6 million
kilograms of semiskimmed powdered milk imported per year.62 That same year, the
government made plans for a drying plant in Jiquilpan, Michoacán, to reduce milk
imports. With machinery donated by UNICEF and technical advice from FAO, it
was designed to produce six thousand liters per hour. However, the lack of quality
and poor production of Mexican milk, along with inadequate transportation infra-
structure, transformed this project into a white elephant.63 Even after the Jiquilpan
plant opened in 1958, the government continued to import most of the powdered
milk sold to the poor sectors of the population.

In his book Feeding Mexico, Enrique Ochoa has documented the rise of an
elaborate food welfare, regulation, and production bureaucracy. Established by the
Cárdenas administration in 1937 with price controls over the wheat market, the
state food agency gradually expanded to deal with food shortages by fighting ille-
gal practices among merchants, purchase grains in the country and abroad, and
improve the organization of food markets. By the mid-1940s, the agency, now called
the Compañía Exportadora e Importadora Sociedad Anónima (National Exports
and Imports Society; CEIMSA), also ran a national chain of subsidized retail shops.
These outlets, along with a fleet of trucks that served as mobile shops, sold imported
and reconstituted milk in working-class neighborhoods.64

Yet with his focus on the politics of production and distribution, Ochoa gives
less attention to the gendering of food consumption. Crispina and Carolina recall
feeding their children on CEIMSA’s milk. Although both women drank very little
milk in their childhood, they increased their milk consumption when they migrated
to Mexico City’s downtown. Carolina began buying reconstituted milk in the late
1950s, and later fed her children on it. According to Carolina, CEIMSA did not sell
cow’s milk, but a potato starch drink. She remembered that after boiling, CEIMSA’s
milk left a layer inside pots that was very difficult to clean. However, she considered
that CEIMSA’s reconstituted milk was nutritious, as their children grew up healthy.
Moreover, because one child was lactose intolerant, CEIMSA’s milk, in her view,
was the best option for her baby.

When Crispina became a mother, in 1953, she served her family CEIMSA’s
milk for breakfast. Sometimes she mixed it with corn gruel or coffee to make it last,
but milk was already part of her family diet. Crispina’s husband had a stable job as a gardener in an upper-class neighborhood and she did some paid work at home as a washerwoman and embroiderer. As a result, the couple could afford milk, a privilege that Crispina did not enjoy in her early childhood. In the sixties, CEIMSA sold powdered milk, so Crispina had to add water at home. Crispina remembered that all her family liked this milk, as she taught them to eat all that she served them.

Concepción Aguilar grew up in semirural San Ángel, in southern Mexico City. When Concepción was a child she drank DRYCO powdered milk, which was imported from the United States.65 “It came in a blue can and was the only powdered milk available.” Her father, who worked for the railway customs office, brought powdered milk back from his job. His working at the freight-train office facilitated his access to U.S. products they otherwise could not afford. Concepción’s mother also bought milk from the milkman, and later on she bought subsidized milk from their local health center. “This milk had a good taste and a lot of cream,” Concepción said.

Some women suspected that CEIMSA’s milk was not fresh because it had a different taste and texture, and a few, like Carolina, even thought that it was not cow’s milk. Other women, like Concepción, found powdered milk appealing because of its novelty. Working-class women, however, became accustomed to reconstituted milk because the difficult economic situation did not leave them with many options. Women’s accounts reveal that by the 1950s those who did not drink milk in childhood had already assimilated the idea of milk’s superiority, particularly as a food for children. Both Carolina and Crispina migrated to urban Mexico City and improved their standard of living after marriage. Thus, for them social and physical mobility implied a change in eating practices, an improvement reflected in the diet of their children whom they tried to feed better than what they were fed while growing up in poor rural areas.

The milk problem, however, was not solved even after milk became available at a reduced price. The prevalence of lactose intolerance among indigenous peoples and their descendants was another difficulty, which at the time was not clearly understood.66 Dolores Hernández was born in 1941 in San Francisco Nuxaño, Oaxaca. She recounted that while growing up her family “did not drink cow’s milk, only corn gruel. There were neither cows nor goats to produce milk in my hamlet.”67 Dolores did not define herself as an indigenous woman, but she recalled that her parents talked among themselves in an indigenous language that she never learned. The use of any indigenous language was a symbol of social inferiority, which could account for her parents’ lack of interest in teaching their native tongue to their children. As a thirteen-year-old girl who migrated from indigenous Oaxaca to Mexico City, Dolores lost touch with indigenous culture. She drank milk for the first time while working as a live-in domestic servant in the capital city. However, she did not like it because it caused her diarrhea. Women from rural backgrounds who migrated...
to work as live-in domestic servants in middle- and upper-class households experienced a change in their diet. Although they did not eat the same meals as their employers, they encountered new foodstuffs and dishes. Like Dolores, Crispina had milk for the first time when she migrated to the downtown, where milk distribution was better. Moreover, Crispina's mother had worked as a domestic servant herself, which might have accounted for her familiarity with milk.

Milk drinking increased, but the level of consumption remained low, particularly among indigenous populations, poor peasants, and rural dwellers. Thus, in addition to selling reconstituted milk at low prices, food and welfare agencies promoted cow's milk through cookbooks, sanitary brigades, and the school breakfast program. CEIMSA distributed booklets with recipes informing women on how to cook with the foodstuffs they sold, in this case milk. In 1960 CEIMSA published 30 Recetas de platillos populares mexicanos (30 Popular Mexican Dishes). This work was a collection of cookbooks created by Josefina Velázquez de León, a famous cooking teacher and prolific cookbook writer. The front covers were designed by Alberto Beltrán, a popular engraver. In order to appeal to the popular sectors, Beltrán portrayed men eating while women wearing aprons served rice from big earthenware pots over a range fuelled by charcoal.

The booklet dedicated to milk included recipes such as zucchini flower and milk soup, chayotes (mirlitons) covered in white sauce, milkshake, flan, curd cheese bread, cajeta, and jericallas. CEIMSA presented popular recipes along with dishes found only in better-off households, such as European-style creamy soups and béchamel sauce, seeking to familiarize working-class women with middle-class culinary practices. The cookbook included the price per dish of serving five people, which was considered the average Mexican family size. Despite offering inexpensive recipes, a considerable amount of the population who in 1960 lived on the minimum wage of $9.41 per day still could not afford CEIMSA's “popular dishes.”

The creation of a cow's-milk drinking habit was not as straightforward as nutrition advocates expected, particularly among those populations who had never drunk cow's milk. In the 1950s, Helia Hernández worked as a visiting nurse in rural communities in Guanajuato. Helia was part of the sanitary brigades organized by the health department of Guanajuato and the SSA. The brigades gave information about nutrition, hygiene, and child care to the rural poor. Helia remembered that peasants in that region did not drink cow's milk, and goat's milk remained a rare foodstuff in their diet. “Sometimes we brought powdered milk to the communities, and when there was milk left over we took it back home. I did not like it but we had to drink it. I think that the milk came from the United States. People snubbed the milk but we tried to convince them to prepare corn gruel with it.”

Teachers serving milk at schools faced a similar situation. By 1953 powdered milk was part of most school breakfasts. In 1956 the Asociación Pro Nutrición Infantil (Children's Nutrition Association) along with the Instituto Nacional de Bien-
estar de la Infancia (National Institute of Infant Well-Being) distributed eight thousand breakfasts per day in poor neighborhoods of Mexico City. In the 1950s, each breakfast cost 20¢, although some children were exempted from payment. According to welfare advocates, the school breakfast program would generate a habit of milk drinking in children, who would then demand this foodstuff once they grew up. Moreover, “those who have drunk reconstituted milk in their childhood would be more productive in their adulthood, which would allow them to buy fresh milk. Thus, the introduction of powdered milk would benefit not only our population but also national milk producers.”

Children, however, did not always like milk, and many were lactose intolerant. In the 1950s, Esperanza Martínez was a teacher in Copilco and Chimalcoyoc, both semirural areas in the southern outskirts of Mexico City. She remembered serving milk to children who did not like it: “People were not used to drinking milk. Several children did not tolerate powdered milk. They felt sick, had stomachaches or diarrhea. A lot of kids did not drink milk at all; they only played with it or threw it away. Those breakfasts were really nutritious, even we teachers ate them. Children did eat the sandwich, boiled egg, cookie, and fruit that came with it, but not the milk. We were not used to having cold milk.”

Establishing a milk-drinking habit was not an easy task, particularly while welfare and nutrition programs were reaching a limited number of people. Drinking fresh milk remained a middle- and upper-class privilege until the 1950s. Although reconstituted milk became available, not everybody liked it. Some women still preferred to buy fresh milk from time to time when their budget allowed them to do so, while others did not drink milk at all. The working class was one of the major, early consumers of powdered milk through state programs. Cow’s milk, either fresh or reconstituted, came to symbolize social mobility. Patterns of consumption, however, varied more across class than geography. Poor families in both Mexico City and Guanajuato drank milk diluted with hot beverages, if at all. Middle- and upper-class families drank cow’s milk on a daily basis; and the better-off families even had refrigerators to drink it cold, setting themselves apart from the poor, who could only have it warm or hot.

**Conclusions**

For postrevolutionary radical reformers, health and welfare programs were a form of wealth distribution. Changing nutrition practices was a central element in the creation of a healthy and productive workforce, who would eventually improve their living standard after increasing their productivity. The rhetoric of the period portrayed cow’s milk as a perfect food, essential in childhood and necessary in the development of a modern nation. This idea originated in Europe and the United States, thus drinking milk was associated with civilization. Mexican doctors and nutritionists reproduced this discourse, revealing their disregard for traditional cooking and
eating practices. Although research by the INN on indigenous and peasant diets showed that these groups had a better protein intake than was previously thought, for middle-class reformers it was unthinkable to encourage the consumption of foodstuffs such as insects or wild greens. An article published at the INN newsletter stated that in distant or poor villages, wild fruits or animals were a valid option, but this position remained marginal within the INN and did not materialize in state programs. If Mexico wanted to be like Europe or the United States, they had to eat what “modern and civilized” nations ate.

Reformers argued that augmenting milk consumption would benefit the national industry; however, these benefits were limited and came at the expense of Mexican cattle ranchers. Most of the milk drank in Mexico was reconstituted by the state, a few private investors, and international corporations. Moreover, the bulk of the milk was not produced in Mexico. Evaporated, condensed, and powdered milk was imported mainly from the United States. Low production, lack of infrastructure, and the outbreak of hoof-and-mouth disease eliminated the possibility of self-sufficiency. Meanwhile, the United States had a surplus of this product at that time. Their increase in production was accompanied by the idea of milk superiority and the interchangeability of fresh milk and reconstituted milk as legitimized by FAO and UNICEF. Medical discourse in Mexico presented powdered milk as the safest option, particularly for the urban poor. Doctors and reformers saw in powdered milk a solution to protein deficiency among peasants and workers. However, it was milk’s symbolic meaning that prevailed over its nutritional value.

Although measuring the success of milk policies in the long run is beyond the scope of this work, the data analyzed reveals that increased consumption fell far short of the levels desired by state reformers. For poor women who migrated to urban Mexico City, milk became a new foodstuff in their diet, one that symbolized social improvement and modernization. Milk drinking was a habit associated with the middle- and upper-class families who, as the Lechería Nacional advertisement portrayed, had fair complexions and comprised a male breadwinner, an informed housewife, and well-groomed children. For those of indigenous descent, milk came to represent, metaphorically and literally, something that they could not digest. Ironically, in the struggle for nutritional modernity, sugar ultimately proved victorious, and nowadays in Mexico, soda, not milk, is the favored drink, particularly among indigenous children.

Women, both working and middle class, played a key role in the process of transforming eating habits. Female teachers, nurses, social workers, and cookbook writers worked along with male doctors, welfare advocates, and state officials to teach working-class women how to not only improve their material conditions but also to embrace an ethic of order, work, and discipline. By targeting working-class women, the state reinforced gender and class hierarchies. The middle classes stressed their privileged position by setting themselves as an example, while underscoring
the inferiority of the workforce who was expected to change their eating practices and perceptions despite lacking the economic means to do so. To a considerable degree, these international health discourses were internalized, at least by upwardly mobile women, and in doing so, they may have helped to sharpen racial distinctions between those who were lactose intolerant, and thus deemed indigenous, and the nation of milk-drinking mestizos. Patriarchy was modernized in the sense that traditional gender roles and class perceptions were reinforced while providing a sense of change and improvement. Women collaborated in the construction of a modern nation, but from home and particularly in the kitchen.

Notes
This article is based on my doctoral research supported by the National Council of Science and Technology from Mexico (CONACYT) and carried out at the University of Manchester. An earlier version of this work was presented at the Canadian Association for Latin American and Caribbean Studies Conference at the University of Calgary and the International Seminar on Practices, Objects, and Agents of Public Health in Twentieth-Century Latin America at the National Autonomous University of Mexico. The University of Lehigh granted me a postdoctoral fellowship that allowed me to start revising this article. Moravian College has been very supportive of my work, particularly Gordon Weil and my colleagues at the history department. I am grateful to Jeffrey M. Pilcher, Patience A. Schell, and Penny Tinkler for their suggestions and support. I would also like to acknowledge the insightful comments offered by the anonymous reviewers of this article.

1. The Mexican revolution exploded after Francisco I. Madero won the first democratic elections of the twentieth century. The revolution brought Porfirio Díaz’s dictatorship to an end, opening the path for middle-class reformers and victorious generals.
8. For a discussion on the state’s efforts to increase wheat consumption over maize and the implications of food in nation-state formation, see Jeffrey M. Pilcher, *¡Que vivan los tamales!* *Food and the Making of Mexican Identity* (Albuquerque: University of New Mexico Press, 1998).


17. Ibid.

18. Ibid.

19. Dirección General de Estadística (General Office of Statistics), *Séptimo censo general de población* (Seventh General Census).


22. Ibid., 28.

23. Antonio del Bajío, *Crisis alimentarias y subsistencias populares en México* (Food Crisis and Food Supplies in Mexico), vol. 2 (Mexico: Leche Industrializada CONASUPO SA de CV, 1990), 71.
24. Samuel de la Peña, memorandum regarding the provision of milk by the SSA, January 8, 1945, Archivo Histórico de la Secretaría de Salubridad y Asistencia (Historic Archive of the Ministry of Public Health and Assistance) (hereafter AHSSA), Secretaría de Salubridad y Asistencia (Ministry of Public Health and Assistance) (hereafter SSA), Subsecretaría de Salubridad y Asistencia (Underministry of Public Health and Assistance) (hereafter SubSyA), box 1, file 7.

25. Presidencia de la República (Presidency of Mexico), 50 años de Revolución Mexicana en cifras (50 Years of Mexican Revolution in Numbers) (Mexico: Presidencia de la República-NAFINSA, 1963), 112.

26. Mexico followed the United States in establishing a recommended ratio of half a liter a day per person. Ochoa, “Reappraising State Intervention,” 93. “By 1940, the average American was drinking over a pint of milk a day.” DuPuis, Nature’s Perfect Food, 6.


30. AHSSA, SSA, SubSyA, box 17, file 11.


32. La lechera (Milkmaid) condensed milk was Nestlé’s most popular product after Nescafé. It became the main ingredient of several desserts found in cookbooks, women’s magazines, and newspapers. “Canned Milk History: Evaporated and Sweetened Condensed Milk,” About.com, www.homecooking.about.com/od/milkproducts/a/cannilkhistory.htm (accessed April 15, 2010).

33. According to this survey, localities having between 2,501 and 10,000 inhabitants were described as urban in terms of population, but rural in regards to their consumption patterns, although their economy was not based on agriculture. Meanwhile, locations with more than 10,000 inhabitants were considered urban. Class in this survey is defined according to monthly income per household: less than $300, working class; between $301 and $1,500, lower-middle class; between $1,501 and $4,500, middle class; and more than $4,501, upper class. In 1963, 70 percent of families lived on less than $1,500 per month, representing the working and lower-middle classes. Banco de México (Central Bank of Mexico), Encuestas sobre ingresos y gastos familiares en México (Surveys on Family Income and Expenses in Mexico) (Mexico: Banco de México SA-Oficina de Estudios sobre Proyecciones Agrícolas, 1963), 12, 15, 505–6, 512, 580–81. In 1960 the minimum wage in rural areas was $8.17 per day while in urban areas it was $9.41. Presidencia de la República (Presidency of Mexico), 50 años de Revolución Mexicana (50 Years of Mexican Revolution), 112.

34. Carolina Basave Morales (b. 1930), interview by the author, Mexico City, August 31, 2005.

35. Crispina Vargas Romero (b. 1935), interview by the author, Mexico City, August 19, 2005.

36. Evelia Estrada de Trejo (b. 1925), interview by the author, Mexico City, September 1, 2005.
AHSSA, SSA, SubSyA, box 21, file 2.
42. Enrique Ochoa, Feeding Mexico: The Political Uses of Food Since 1910 (Wilmington, DE: Scholarly Resources, 2000), 146–47; Montemayor, Historia de la ganadería (History of Stockbreeding).
44. Among other brands of powdered and evaporated milk sold in Mexico in the early twentieth century were Dry Co, The Eagle, Carnation, Sheffield, Borden’s, Pet, Libby, and Nestlé. Nestlé: Reflejos de setenta años en México (Nestle: Reflections on Seventy Years in Mexico) (Mexico: Gil S.A., 2001).
45. El grave problema de la leche (The Serious Problem of Milk), April 15, 1944, AHSSA, SSA, SubSyA, box 1, file 7.
46. AHSSA, SSA, SubSyA, box 3, file 15.
47. Excélsior, December 12, 1944.
49. El Universal, October 9, 1945.
50. Ochoa, Feeding Mexico, 116–17, 147.
51. “‘Food and Agriculture Organization,” “Leches concentradas y leches deshidratadas” (“Evaporated and Powdered Milk”), in Mejor aprovechamiento de la leche (Better Use of Milk), August 1949, AHSSA, SSA, SubSyA, box 17, file 11; José Calvo de la Torre, et al., “Referencia especial a la nutrición popular” (“Specific References on the Diet of the Poor”) in Las condiciones fundamentales para el progreso de la república mexicana (Basic Conditions for the Progress of Mexico), AHSSA, SSA SubSyA, box 17, file 11; Programa sintético del Instituto de Nutriología de la SSA (Summarized Program of the INN of the SSA), 1952–53. AHSSA, SSA, SubSyA, box 23, file 3.
53. Ibid.
54. Ibid.
55. Ibid.
56. In 1936 Nestlé opened its first industrial plant in Ocotlán, Jalisco, launching La lechera

57. “Una nueva planta Nestlé fue inaugurada en Lagos, Jalisco” (“A New Nestlé Plant was Inaugurated in Lagos, Jalisco”), La Prensa, March 14, 1945.

58. AHSSA, SubSyA, SSA, box 29, file 7.

59. Ochoa, Feeding Mexico, 118.

60. AHSSA, SubSyA, SSA, box 29, file 7.

61. Ochoa, Feeding Mexico, 118.

62. Bajío, Crisis alimentarias (Food Crisis), 96–121.


64. Ochoa, Feeding Mexico, 48–51.


70. Cajeta is caramel made out of milk and sugar. Jericalla is a kind of crème caramel or crème brûlée. Josefina Velázquez de León, Platillos populares Mexicanos (Mexican Popular Dishes), 2nd ed. (Mexico: CONASUPO, 1971).

71. Presidencia de la República (Presidency of Mexico), 50 años de Revolución Mexicana (50 Years of Mexican Revolution), 112.


74. Bajío, Crisis alimentarias (Food Crises), 242. In 1921 the school breakfast program was launched in Mexico City. See Patience A. Schell, Church and State Education in Revolutionary Mexico City ( Tucson: University of Arizona Press, 2003).

75. By 1944 the SSA served six thousand breakfasts in Mexico City. See Programa sintético del Instituto de Nutriología (Summarized Program of the INN).

76. Las necesidades nutriológicas y sociales de leche de vaca (The Nutritional and Social Needs of Cow’s Milk), [1949?] AHSSA, SubSyA, SSA, box 29, file 7.

77. Esperanza Martínez Juárez (b. 1931), interview by the author, Mexico City, October 19, 2005.


79. In the last decade milk was still mainly imported from the United States. In 1995 the coefficient of dependency was 37 percent. María del Carmen del Valle Rivera and Adolfo Guadalupe Álvarez Macías, “La producción de leche en México en la encrucijada de la crisis y los acuerdos del TLCAN” (“Milk Production in Mexico Amid the Crisis and NAFTA”) (paper presented at LASA, Guadalajara, April 17–19, 1997).
