

Industrial *Tortillas* and Folkloric Pepsi: The Nutritional Consequences of Hybrid Cuisines in Mexico

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In January 1999, neoliberal President Ernesto Zedillo eliminated the long-standing subsidy on Mexico's daily staple, *corn tortillas*. It was intended as an efficiency measure to improve competitiveness in the global economy, but many saw the decree as an end to the welfare state that had assured political domination for the ruling party for most of the twentieth century. Nevertheless, as neighborhood *tortilla* factories throughout Mexico City began to close – unable to compete, without the subsidy, against the industrial conglomerate Maseca, a producer of dehydrated *tortilla* flour – Mexicans feared the end of another era: more than two thousand years of eating *tortillas* made from freshly ground corn.¹ This essay will examine the twentieth-century transformation of Mexican cuisine, both the mechanization of Native American *tortilla* making and the introduction of Western-style industrial processed foods. The modernization of food production has been instrumental in drawing *campesinos* into the market economy, but it has done so in a halting and incomplete fashion, creating culinary versions of what Nestor García Canclini termed “hybrid cultures.” While this half-baked globalization allowed people to retain elements of rural, often-indigenous identities by “entering and leaving modernity,” many paid a high nutritional price, suspended between traditional and modern diets, eating the worst of both worlds.²

The modernization of *tortilla* production held enormous promise at the dawn of the twentieth century, because Mexico's subsistence diet involved tremendous work for both male farmers and female cooks. Women labored for hours each morning over the pre-Hispanic *metate* (saddle quern) to feed their families *tortillas*. Despite this backbreaking daily chore, when mechanical mills capable of grinding the moist corn dough began arriving in rural communities in the 1920s and 1930s, women patronized the establishments only with great hesitancy. Their skepticism about the new technology reflected not a reflexive peasant conservatism but justified concerns

about the expense of using the mills and about their own identity within the family. The so-called Green Revolution of agricultural modernization was greeted with similar concern by *campesinos* following World War II because of the high cost of hybrid seeds and chemical fertilizers and pesticides, as well as the government's failure to supply adequate irrigation, silos, and transportation. Productivity surged in the 1960s, allowing the government to supply cheap food to urban consumers, thereby helping to hold down the pressure for higher industrial wages. As a result, already low rural incomes plummeted further, driving millions of people to the cities in search of work and adding to the pool of surplus labor. Food policy in Mexico, as in so many postcolonial nations, has therefore sacrificed the countryside in search of industrial development.³

The great challenge for Mexico and other emerging countries has been to realize the possibilities of nationalism and industrialization in a democratic manner that preserves the distinctiveness of local cultures. Few areas can claim greater urgency in this regard than food policy. The history of postcolonial Africa and India clearly demonstrates the need for democratic governance of food distribution. Despite a rapidly growing population, India has been spared from famine, not because of the agricultural gains of the so-called Green Revolution but rather through political mechanisms for assuring that the hungriest people get food. Starvation in Africa has meanwhile resulted largely from the actions of armed bands that confiscate and sell food aid shipments and locally grown crops, leaving people to die.⁴

Assuring the nutritional health of the poor is equally difficult without respect for local cooking traditions. Peasant cultures throughout the world have developed nutritionally balanced diets of complementary vegetable proteins, for example, rice and soybeans in Asia, or maize and beans in the Americas, to replace expensive animal proteins. Industrial processed foods such as powdered milk can supplement these diets in important ways, but the devaluation of traditional cooking through transnational advertising and misplaced ideals of modernity has primarily increased the consumption of junk foods based on fats and sugars. The gravest risks lie in the transition between traditional and industrial diets, as poor Mexicans substitute *alimentos pacotilla* (snack foods) for vegetable proteins, but cannot afford the meats that supply protein to the diets of the rich.⁵

The rising domination of the Maseca corporation over Mexican corn production illustrates an equally important point for cultural studies: the homogenizing effects of national food processing companies may pose as great a threat to local cultures as the more visible cultural imperialism represented by Ronald McDonald. With government assistance, Maseca executives are well on the way to achieving their dream of processing all of the maize in Mexico, removing the "imperfections" that many people believe give *tortillas* their character. Global corporations have meanwhile learned that to compete successfully in national markets they need to modify their products to suit native consumers. A Big Mac with fries may taste exactly the same in Mexico City, Beijing, or Oak Brook, but even McDonald's has adapted to local markets, either by serving salsa with the fries or by posing the eponymous clown as Buddha. No doubt the world will continue to grow more like the United States, as the Cassandras of cultural imperialism have warned, but the converse is equally true, as ever more people in the United States eat Maseca *tortillas*. The rise of a uniquely Mexican *tortilla* industry therefore merits careful analysis.

The modernization of food for incorporating subsistence process came at the beginning of the 20th century, a cottage industry and cooking *tortillas*. For hands of industrial conglomerates entailed a loss of taste: a virtually unrecognizable rural modernization and rural incomes, ultimately the name of the agrarian movement.

Native Americans of a basically vegetarian diet in Mesoamerica clearly justified such a diet. In the United States, 10 percent of the daily intake is the basis for a nutritionally balanced diet of beans, each of which supply a high-quality protein such as cattle, pigs, or chickens. It is estimated at as high a level as 10 percent, comparable with those of the Zapotecs in what is now the Huasteca (the land of dumplings wrapped in corn).

The labor-intensive cooking continued to dominate. The basic utensil was the *metate*, three stubby legs, used for grinding saucers, and fruits and cereals. In preparing *tortillas* to feed a family, a woman simmered the corn before dawn to grind it before each meal, she did them briefly over the coals. Native Americans as long-suffering as the *metate*. *Tortillas* could not keep more than a day.

Hard labor at the *metate* and the community. His using the field notes of an anthropologist in Tepoztlán, Morelos.

From the *Metate* to *Maseca*

The modernization of food production in Mexico has been one of the primary tools for incorporating subsistence peasants into the market economy. The first step in this process came at the beginning of the twentieth century with the development of corn mills to replace laborious hand grinding of corn dough on the *metate*. By midcentury, a cottage industry of *tortilla* factories had automated the skills of patting out and cooking *tortillas*. Fifty years later, corn processing had been centralized in the hands of industrial conglomerates producing dehydrated *tortilla* flour. Each change entailed a loss of taste and texture, to the point that the modern *tortilla* would be virtually unrecognizable to peasant women of a century before. Moreover, agricultural modernization and government policies favoring urban industry depressed rural incomes, ultimately forcing the peasants of Chiapas into rebellion under the name of the agrarian martyr Emiliano Zapata.

Native Americans often referred to themselves as the people of corn, and the basically vegetarian diet eaten by all but a small nobility in pre-Hispanic Mesoamerica clearly justified such identification. Even though maize provided as much as 80 percent of the daily intake, when combined with beans, chiles, and squash, it formed the basis for a nutritionally balanced diet. The complementarity between corn and beans, each of which supplied amino acids missing in the other, assured a regular supply of high-quality proteins in the absence of European domesticated animals such as cattle, pigs, or chickens. The Aztec empire, with a population that has been estimated at as high as 25 million people, comprised diverse regional cuisines comparable with those of China and India. For example, a wide variety of chile peppers imparted subtle flavors to the *moles* (chile pepper stews) of the Mixtecs and Zapotecs in what is now the southern state of Oaxaca, while along the Gulf Coast in the Huasteca (the land of plenty), Totonac Indians specialized in creating *tamales*, dumplings wrapped in cornhusks.⁶

The labor-intensive cooking techniques developed by pre-Hispanic campesinas continued to dominate Mexican kitchens at the start of the twentieth century. The basic utensil was the metate, a tablet of black volcanic rock, sloping forward on three stubby legs, used to grind corn for tortillas and tamales, chiles and seeds for sauces, and fruits and chocolate to drink. Women spent up to five hours each day preparing *tortillas* to feed their families. Work began the night before, when the woman simmered the corn in a solution of mineral lime to make *nixtamal*. She arose before dawn to grind the corn into a moist dough called *masa*, and immediately before each meal, she deftly patted the dough into flat, round *tortillas* and cooked them briefly over the *comal*, an earthenware griddle. Elite stereotypes of Native Americans as long-suffering wretches owed much to the image of women kneeling at the *metate*. *Tortillas* could not be saved for the following day, or even the next meal, because they became hard and inedible in a few hours. The dough likewise would not keep more than a day before it began to ferment.⁷

Hard labor at the *metate* at least gave women status and identity within the family and the community. Historian Wendy Waters has examined these social implications using the field notes of anthropological studies conducted from the 1920s to the 1940s in Tepoztlán, Morelos. *Tortilla* making was so essential to domestic life that no

woman in the village became eligible for marriage until she had demonstrated this skill. Men complimented women by praising their *tortillas*, and some even claimed to be able to identify the unique taste and texture of corn ground on their wives' *metate*. Women expressed affection through their role of feeding the family, offering favorite children extra helpings of beans or reserving for them the best *tortillas*. As a result, children were sensitive to the size of their portions and to the order in which they were fed. Food served to communicate anger as well as love; a wife could burn her husband's *tortillas* if she suspected him of infidelity.⁸ The symbolic connections between cook and food, already present in the daily preparation of *tortillas*, beans, and chile peppers, grew exponentially during festive meals, when women spent whole days and nights bent over their *metates* preparing *moles* and *tamales*. They undertook such arduous work to help assure the stability of the entire community – indeed, memories of *mole* continue to draw modern migrant workers home each year to participate – and women gained respect and authority as a result.⁹

Thus, although water-powered grain mills had come into use in Europe before the birth of Christ, most *campesinas* still prepared corn by hand in the early twentieth century, leading one Mexican politician to exclaim that “we still live in the Stone Age!”¹⁰ Technologically, the need to precook the corn with mineral lime and grind the dough while still wet made stone mills impractical for producing *nixtamal*. The late-nineteenth-century development of portable steel mills powered by electricity made it possible to grind *masa* sufficiently fine to make an acceptable *tortilla*, although it was still coarser and less tasty than corn prepared on a *metate*. By 1900, more than fifty of these mills operated in Mexico City alone, and they gained rapid acceptance among urban women. Women still cooked their own corn each evening, then carried it to the neighborhood mill in the morning to be ground for a few centavos. The adoption of machinery also made it culturally acceptable for men to take over the management of *tortillerías*, once an exclusively female occupation.¹¹

Commercial *nixtamal* mills took decades to spread through the countryside because of both the relatively high monetary cost in a largely subsistence economy and the challenge they posed to women's established domestic roles. Technical flaws in the early mills allowed women to demonstrate their superiority over machines and assert their place within the family. Because villages lacked electricity, early models operated on gas engines, which caused the *tortillas* to come out tasting of high-octane fuel. Even when gas generators were separated from electric motors, the corn acquired a metallic taste and rough texture. Women could avoid these unpleasant side effects by briefly regrinding the *masa* on the *metate*, yet many refused to patronize the mills, indicating deeper social concerns about grinding corn. Gossip in the village of Tepoztlán questioned the femininity of anyone who carried her corn to a commercial mill. Many women feared that neglecting the *metate* would lead to a dangerous swelling of the joints called “laziness of the knees.”¹²

While the arrival of a *nixtamal* mill often worried village women, it absolutely infuriated men. Many forbade their wives and daughters from patronizing the new establishments, fearing a direct challenge to their patriarchal authority. Without the discipline of the *metate*, some believed women would become lazy and promiscuous.

As one old-timer from the Yucatán explained, the mill “starts early and so women go out before dawn to grind their own corn the way they used to at home. They meet boys in the dark and that's why illegitimacy is caused by the *nixtamal*.” To prevent

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such danger, the men of one agricultural cooperative that received a mill locked it away from their wives. In another case, a group of women who attempted to organize for their right to a mill were physically assaulted by disgruntled men.¹³

Some of the first rural women to patronize the new mills were those who had fled the countryside during the decade of revolutionary fighting (1910-20) and discovered the convenience of machine-ground corn in cities or towns. Financial considerations also helped determine who took their corn to the mill. Relatively poor women whose families held little land, contrary perhaps to expectations, often had the greatest incentive to pay for machine-ground corn. Although this service required a few centavos, it freed women from several hours of daily work. They could use that time to engage in artisanal crafts or to become petty merchants, traveling to nearby towns to buy cheaper products, and thus earn enough money to offset the cost of milling. The acceptance of the mill as a natural tool therefore helped draw subsistence farmers into the money economy. Wealthier families who could easily afford the added expense of milling were often the last ones to give up the *metate*. Some considered home-ground corn a status marker, a way of asserting that they lived better than their neighbors because they ate better *tortillas*. Of course, they could also pay poorer women to do the actual grinding.¹⁴

Political as well as economic issues influenced the reception of mechanical mills in rural Mexico. Established *caciques* (political bosses) often enriched themselves by asserting monopolistic control over *nixtamal* mills, while aspiring populist leaders used them as a form of patronage to organize supporters. President Lázaro Cárdenas (1934-40) used grants of *nixtamal* mills to encourage membership in the official party and to discourage rival church organizations. Women learned to phrase their requests for cooperative mills within the dominant developmentalist discourse; for example, the women of Rancho Las Canoas, on the shores of Lake Pátzcuaro, Michoacán, formed a Women's Anticlerical and Anti-Alcohol League to petition the president for a corn mill and in this way to liberate them from the "bitter, black stone with three feet called the *metate*."¹⁵

Tortilla production was mechanized further in the postwar era with the development of an integrated factory comprising a *nixtamal* mill that ground the corn, a rotating press to form it into the proper shape, and an "endless *comal*" conveyer belt to cook it. Mexican inventors had first attempted to duplicate the subtle skills of the *tortillera* in the late nineteenth century, but it was not until the 1950s that they resolved all the technical problems to mass-produce an adequate *tortilla*. By the 1970s, these small-scale factories, capable of producing a few thousand *tortillas* per hour, operated conveniently in urban barrios and rural communities throughout the republic. *Tortilla* aficionados clearly recognized the difference between hand-patted and factory-pressed *tortillas*. Relatively wealthy peasant women, who could afford to devote themselves exclusively to domestic work, rejected machine-made *tortillas* as "raw" because they stuck together. While ordinary *campesinas* began to purchase *tortillas* for everyday consumption and used the time saved to earn outside income, the *metate* and *comal* came out for festive occasions, when only a philistine would eat *tortillas* that "tasted like electricity" because they had not been cooked over a wood-burning fire.¹⁶

The arrival of *nixtamal* mills in the countryside transformed the lives of Mexican women, freeing them from hard labor at the *metate* while drawing them into the

money economy and often into political organization as well. The male activity of growing maize underwent equally dramatic changes as the government shifted its goals from an agrarian revolution to the Green Revolution, emphasizing large-scale commercial agriculture to support urban industrialization. Land reform had culminated under President Cárdenas, who distributed nearly fifty million acres to *campesinos* in the form of communally owned *ejidos*. Nevertheless, the very magnitude of the reforms, together with financial crises and a fierce conservative reaction, prevented Cárdenas from providing the infrastructure of machinery, irrigation, and credit necessary to make even the most favorable of *ejido* grants into viable commercial operations, and this neglect only grew worse under subsequent administrations. In 1943, a team of agronomists sponsored by the Rockefeller Foundation arrived to supplement Mexican programs aimed at increasing farm productivity, which had been ongoing since the 1920s. Within two decades, the use of hybrid seeds, fertilizers, and pesticides had doubled the production of Mexican corn and quadrupled that of wheat, but the profits accrued primarily to affluent commercial farmers who had the resources to benefit from the technological improvements.¹⁷

Historian Enrique Ochoa has shown how the Mexican State Food Agency, founded in 1937 by Cárdenas to help small farmers compete in the marketplace, was diverted to support the goal of industrialization. Political crises, particularly urban inflation and food shortages, invariably disrupted rural development plans, as bureaucrats purchased staple crops from a few commercial growers in the Pacific Northwest and imports from the United States rather than from large numbers of small *ejidos* in central and southern Mexico. The construction of grain storage facilities around urban centers and in ports on the Gulf of Mexico perpetuated this bias in the 1950s. The agency provided cheap food to the cities in order to win populist political support while at the same time containing union demands for higher wages, thereby indirectly subsidizing private industry. For example, the agency supplied low-cost corn to the politically powerful *nixtamal* millers in Mexico City, who then sold *tortillas* to the public at fixed prices, gaining substantial profits for themselves in the process. By the 1960s, decades of official neglect led impoverished farmers to begin taking up arms and demanding a return to agrarian reform. The government responded by repressing the rebels and then extending the welfare programs to supply industrial processed food to the countryside as well. This expansion into food processing by provision of the new rural stores prompted cries of socialist intervention by business leaders, who nevertheless continued to profit from agency supplies of subsidized raw materials for their own factories.¹⁸

The creation of a dehydrated *tortilla* flour industry illustrates this mutually beneficial relationship between state-owned and private enterprises. In 1949, the federal government established the first *masa harina* or *nixtamal* flour mill, called Maiz Industrializado, SA (Minsa) in Tlalnepantla, Mexico, the site of giant corn silos for the Mexico City market. That same year, Roberto González opened a rival facility in Cerralvo, Nuevo León, under the trade name Molinos Azteca, SA (Maseca). The two firms collaborated on research and development for more than a decade before arriving at a suitable formulation that could be turned into *tortilla masa* with just the addition of water. By the mid-1970s, *tortilla* flour production surpassed 500,000 tons, 5 percent of all the corn consumed in Mexico, with the majority of the market going to the private firm, Maseca, in part because the

powerful corn miller Minsa.¹⁹

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powerful corn millers used political channels to slow the growth of the state corporation, Minsa.¹⁹

Government officials justified support for the industry by pointing to economies of scale, since cornmeal could be produced, transported, and stored more cheaply than whole corn. Centralized production also limited the risk of irregularities within neighborhood *tortilla* factories in addition to offering nutritional benefits. For the nominal cost of \$10 a ton, Maseca could enrich its *masa harina* with enough protein and vitamins to satisfy minimum daily requirements, but the company has nevertheless resisted implementing the strategy. Although vitamin and protein enrichment would make little difference in taste beyond the already significant change from freshly ground to dehydrated corn, the politically powerful company feared that any additives would undermine its market share.²⁰

By the end of the millennium, the dismantling of the State Food Agency by neoliberal governments left the *masa harina* industry poised to dominate Mexican corn markets. President Carlos Salinas de Gortari (1988–94) first cut the subsidy to corn millers in an attempt to target welfare assistance. In its place he established a program giving poor people *tortilla* vouchers called *tortivales*, which were quickly dubbed *tortivotos* by political opponents who accused the government of using food to buy votes. The president also privatized the state firm, Minsa, selling it to a rival consortium of Maseca. Finally, in January 1999, his successor, Ernesto Zedillo (1994–2000), eliminated the *tortilla* subsidy completely along with price controls. The nutritional consequences of this policy remain to be seen, although standards of living for poor Mexicans have already slipped dramatically in the past two decades.²¹ Nevertheless, the demise of family-owned *tortilla* factories has already become clear. Alma Guillermoprieto graphically explained that “when the privatization program of Mexico’s notorious former President Carlos Salinas delivered the future of the *tortilla* into their hands... [the *tortilla* magnates] served up to the Mexican people the rounds of grilled cardboard that at present constitute the nation’s basic foodstuff.”²² Many would apply that same description to the processed foods offered by multinational corporations, and while the reception of those foods has followed a unique trajectory, the effects on Mexican nutrition have been equally grim.

The Other Pepsi Generation

The Tzotzil Indians of San Juan Chamula may never appear on television commercials in the United States, but they nevertheless form part of the Pepsi Generation. While Mexicans usually celebrate religious festivals with beer or tequila, in this highland Chiapas community toasts are invariably made with Pepsi-Cola. The Tzotzil devotion to soft drinks illustrates the ubiquitous presence of industrial processed food in even the most remote indigenous regions – and the fact that the *cacique* controls the Pepsi distributorship. The arrival of Pepsi and other junk foods has brought tremendous changes in food consumption, with serious nutritional consequences for the lower classes, yet cultural imperialism has not overwhelmed traditional Mexican cooking. At worst, a form of hybridization has taken place as Mexicans have incorporated foreign foods into established eating patterns. Balanced

against this have been the efforts of middle-class cooks to create a unified cuisine as part of a self-conscious nationalist program.

The vision of a billion Chinese just waiting to buy Big Macs, Coca-Cola, and other consumer goods formed a crucial element of Western propaganda during the Cold War. This image was as simplistic as it was ethnocentric, and yet it provides a useful corrective to the likewise oversimplified view of neocolonial agribusiness producing luxury goods in the former colonies for sale in the affluent markets of the old colonial powers.²³ The capitalist dream that the fall of Communism would make all the world into a giant McDonaldland overlooked the global ecosystem's inability to sustain the livestock needed to serve billions of hamburgers daily. Moreover, rural incomes in China, as elsewhere in the developing world, were insufficient to purchase even fries and a shake. Nevertheless, multinational food corporations developed long-range plans to transform those rural masses into loyal customers as incomes gradually rose. Businesses built their rural marketing infrastructure from the ground up, starting with low-cost, easily transportable items such as bulk vegetable oils and dehydrated baby formula, in order to reach the eventual goal of a McDonald's drive-through window.

Meanwhile, the urban middle classes in these developing countries provided an immediate market for the whole range of industrial foods, from breakfast cereals to fast-food chains. One of the images used most frequently to prove the West had won the Cold War was the opening of McDonald's restaurants in Moscow and Beijing. It seemed irrelevant that Chinese customers did not particularly like the hamburgers and were more interested in the restaurants as a medium for experiencing life in the United States.²⁴ Fast foods and soft drinks likewise became fashionable among India's urban elite as economic "liberalization" in the 1990s led the country to abandon its gastronomic nonalignment.²⁵ Food-processing businesses producing refrigerated meats, canned vegetables, and bottled drinks emerged in Mexico during the industrial boom of the 1890s, yet their expansion was also limited to small urban markets. By the 1940s, the first Mexican supermarket chains, SUMESA and Aurrera, had opened in upper-middle-class neighborhoods, selling Aunt Jemima pancake mix and the Mexican version of Wonder Bread, known by the brand name Bimbo. Housewives not only began replacing crusty *bolillos* (rolls) fresh from neighborhood bakeries with chewy, plastic-wrapped *pan de caja* (bread from a box), they also conducted bizarre experiments using mass-produced ingredients to create such hybrid dishes as shrimp and cornflakes, calf brains with crackers, macaroni and milk soup, and pork loin in Pepsi-Cola.²⁶

These examples may well illustrate a dark side of mass production, but they do not portend the annihilation of Mexican gastronomy. Cultural differences make it risky to generalize between the Mexican middle classes and their counterparts in the United States. Simple household appliances demonstrate subtle but important distinctions. For example, Mexicans used their newly purchased refrigerators to store soft drinks and beer instead of a week's worth of groceries. And while the most valuable appliances north of the border may have been electric toasters and cake mixers, Mexicans preferred the electric blender, the juice press, and the pressure cooker. The blender's facility in grinding chile sauces relegated the *metate* to the status of a kitchen curiosity, and the juicer turned Mexico's ubiquitous oranges into daily glasses of fresh juice. The pressure cooker solved the age-old problem of boiling water at high altitudes in central

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Mexico. Beans can now be prepared in less than an hour, saving on fuel costs as well as time, and the toughest beef can be made edible in minutes.

Perhaps the limitations of culinary technology could be used to demonstrate the relative "underdevelopment" of Mexican kitchens: housewives continued to shop for groceries every day and spurned such conveniences as canned beans and frozen orange juice concentrate. Yet the Mexican woman's skepticism of the doctrine that time is money may reflect a more realistic view of the limitations of household technology. Ruth Schwartz Cowan observed that mechanizing housework in the United States had the ironic effect of creating "more work for mother." Time saved by laundry machines, for example, was spent in the automobile working as the family chauffeur. Mexican women at least had the satisfaction of feeding their families fresh food.²⁷

Moreover, many foreign manufacturers won customers in the 1940s and 1950s by demonstrating the utility of their products for making national dishes. Glasbake Cookware ran a series of newspaper advertisements featuring recipes for Mexican regional dishes such as *mole michoacano*. Appliance makers depicted giant *cazuelas* simmering on top of their modern stoves, and an advertisement for pressure cookers made the justifiable claim that "Mexican cooking enters a new epoch with the *Olla presto*." Even Coca-Cola appealed to Mexican customers with nostalgic scenes of picnics at Chapultepec Park.²⁸

Mexicans also appropriated elements of foreign culture to their own purposes. Domestic soft-drink manufacturers such as Mundet competed with Coke and Pepsi by introducing lines of soda flavors adapted to Mexican tastes for orange, mango, and apple cider. Local chip makers such as Sabritas and Bali contracted with the North American food technologists who had manufactured MSG in the 1950s to transform wheat pellets into artificial *chicharrones* (fried pork skins).²⁹ The habit of eating eggs for breakfast, when transferred from the United States to Mexico, stimulated creative experimentation rather than slavish imitation. In searching for national counterparts to eggs benedict, Mexican chefs served *huevos rancheros* (ranch-style eggs) fried with tomato-and-chile sauce, *huevos albañiles* (bricklayers' eggs) scrambled with a similar sauce, and *huevos motuleños* (from Motul, Yucatán) fried with beans, ham, and peas. Soon, no hotel with pretensions to luxury could neglect having its own "traditional" egg dish on the breakfast menu.

The modern desire to preserve traditional Mexican cooking, or to create new traditions when appropriate ones could not be found, also inspired a flurry of folkloric studies in the countryside. Josefina Velázquez de León brought together the country's diverse regional cuisines for the first time in a single work, *Platillos regionales de la República mexicana* (*Regional Dishes of the Mexican Republic*, Mexico City: Ediciones J. Velázquez de León, 1946; Mexico City: Editorial Promama, 1965). Virginia Rodríguez Rivera published another classic volume, *La cocina en el México antiguo y moderno* (*Cooking in Ancient and Modern Mexico*, Mexico City: Editorial Aomamma, 1965), featuring nineteenth-century dishes with recipes drawn from oral history interviews. Mexican women thus displayed a mania for preserving their culinary past even as it began to slip away. When electric blenders finally began to replace the grinding stone, a society columnist warned women to save their *metates*, "because this Mexican cooking utensil has still not been supplanted by any modern appliance."³⁰

Nevertheless, they had mixed success in preserving traditional cooking. Attempts to construct a national cuisine reduced complex regional cooking styles to a few stereotyped dishes, which often misrepresented the foods eaten in those areas. Even an author as sensitive as Josefina Velázquez de León adapted traditional village recipes to the needs of urban cooks. For the *zacahuil*, the giant Huastecan pit-barbecued corn cake, wrapped in banana leaves and capable of feeding an entire community, she instructed readers to use a scanty three kilograms of maize and to bake it in the oven. Arjun Appadurai has described a similar process of imagining culinary communities in postcolonial India, as middle-class cookbook authors presented their regional foods to readers across the subcontinent, but he noted also that "one of the results of the exchange of culinary images is the elimination of the most exotic, peculiar, distinctive, or domestic nuances in a particular specialized cuisine."³¹

Just as middle-class cooks struggled to adapt traditional Mexican foods to new urban lifestyles, multinational corporations attempted to transform eating habits in the countryside. Creating an infrastructure of rural marketing networks for processed foods required significant investments. Pre-Hispanic merchants had carried on an extensive trade in nonperishable, relatively high-value goods such as cacao and dried chiles, supplemented in the colonial period by coffee, sugar, and spices, but it was more difficult to transport Pepsi by mule. Fortunately for businessmen, revolutionary governments of the 1920s and 1930s placed a high priority on road-building to unify the country and its markets. Soft-drink and beer distributors were among the first entrepreneurs to take advantage of these highways to send glass bottles from regional plants to consumers and then to return the empties safely for refilling – an essential step to keep prices affordable. Both Coke and beer arrived in the village of Tepoztlán within six years after the opening of a road from the state capital in 1936. The appearance of Pepsi in the 1940s and the growth of national breweries helped foster competition in local markets.³²

Food distributorships therefore developed in a hybrid fashion, combining modern and traditional marketing methods. Even today, supermarket chains remain concentrated in upper-middle-class neighborhoods, while manufactured foods reach the rest of the population through small-scale grocers, often in municipal markets, and ambulant vendors. These merchants depended on corporate distributors for credit as well as business supplies such as display cases and refrigerators.³³ One shopkeeper considered the Coke deliveryman so important to his livelihood that he invited the driver to his daughter's fifteenth birthday party. The costs of establishing and maintaining these delivery routes encouraged the centralization of Mexican food processing within large industrial groups. The largest Coke franchise in the world, for example, Fomento Económico Mexicano SA, also included Cervecería Cuauhtémoc within the Monterrey-based Garza Sada conglomerate. Pepsico, meanwhile, diversified into the complementary snack-food industry, merging with Prito-Lay in the United States, then acquiring Mexican chip makers Sabritas and Bali.³⁴ As in the case of *tortilla* flour, the government encouraged the growth of these companies through ostensibly competitive state food corporations. Rural stores established in the 1960s and 1970s by the State Food Agency stocked products such as animal crackers and soft drinks, either produced by state factories or purchased from private groups, thereby helping to incorporate rural consumers into larger national markets.³⁵

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Mexican politicians have meanwhile foregone many potential health benefits that their economic ventures might have achieved. They conceded to food manufacturers the educational power of the mass media, allowing massive advertising campaigns for soft drinks and snack candies, with "small print" advice to eat fresh fruits and vegetables included as the only concession to public health.³⁶ Programs to supplement processed foods, including *tortilla* flour, have been initiated periodically but never carried through. Perhaps the most nutritionally irresponsible example of state assistance to private enterprise lay in the subsidies on flour and sugar given to snack-food producers, which made this business, in the words of one health official, a "negociazo" (scam).³⁷

Even with government assistance, transnational advertising campaigns had a difficult time instilling North American and western European values in the Mexican countryside. The example of Pepsi in San Juan Chamula illustrates the ways that modernizing societies adapt consumer products to fit their cultures. Rather than drinking Pepsi as a daily snack in imitation of the middle classes in either Mexico or the United States, the Chamulans incorporated the soft drink into the community ritual life, for example, giving cases of Pepsi as dowries for brides. Religious leaders celebrated church services with Pepsi instead of wine, telling parishioners that carbonation drives off evil spirits and cleanses the soul. The natives even hung Pepsi posters in their homes beside the family crucifix, for as one person explained to an anthropologist: "When men burp, their hearts open."³⁸

The resilience of local customs has not offset the nutritional damage of the transition from traditional to industrial diets. Studies by the National Nutrition Institute and by numerous anthropologists from the 1960s to the 1990s have documented a fundamental trend toward the replacement of corn and beans by sugar and fats. Well-to-do Yucatecan peasants and working-class Mexico City residents both derive an average of 20 percent of their calories from processed foods, including soft drinks, beer, chips, and candy. The rural poor, unable to afford such snacks except on special occasions, dump heaped spoonfuls of sugar into weak coffee. So pervasive has sucrose become that one study recommended vitamin-enriched sugar as the most efficient means of improving rural nutrition.³⁹ The convenience of processed foods often came at the expense of nutrition, as when cooks used dried consommé instead of tomatoes and onions, in effect replacing vegetables with salt. Poverty further distorted the diets of *campesinos* subsisting on the fringes of the market economy. The rising price of beans forced many poor families to buy cheaper wheat pasta, with grave dietary consequences. While corn and beans together provide high-quality protein, corn and spaghetti do not.⁴⁰

The food processing industry has waged a century-long campaign to remove consumers from the source of their nourishment, to make packaged foods seem natural and living plants and animals unwholesome. For example, transnational executives hoping to establish modern chicken packing plants in Mexico expressed the long-term goal of persuading consumers that poultry tastes best when purchased from a plastic bag in the refrigerated section.⁴¹ The combination of manufactured foods and traditional cooking styles has had mixed results, introducing valuable new sources of protein to poor consumers, but also destabilizing their nutritional intake. It remains to be seen how successful the chicken packers will be in convincing Mexicans that "parts are parts."

Conclusion

This essay has attempted to untangle the complex negotiations of identity and markets among traditional peasant cooks, progressive urban gourmets, food processing corporations, and an unfortunately far from impartial state. Connections between food consumption and elite identity can be seen in the current fad for the so-called *nueva cocina mexicana*. Chefs have turned to Native American plants and animals in order to claim an equal standing with the great cuisines of Europe and Asia, while preparing these ingredients with the difficult techniques of European *haute cuisine* to maintain their cultural distinction from the popular masses. Thus Arnulfo Luengas, chef of the Banco Nacional de Mexico's executive dining room, created avocado mousse with shrimp, Beef Wellington with chiles, and chicken supremes with *cuilacoche*.¹² Some might question the *mexicanidad* of such dishes, but the prominent cookbook author Alicia Gironella De'Angeli insisted that this was "the same food we serve at home. It is one of two tendencies in Mexican cooking. The other is the popular Mexican food, the kind with the grease and cheese and everything fried. It is the traditional food that we are reinterpreting." She asserted that the new dishes actually are derived from pre-Hispanic origins. "We did not have the lard and the grease that most people think of as Mexican in our roots. The Spaniards brought the pigs."¹³ In this way, she appropriated Aztec authenticity for elite cuisine and associated lower-class foods with the villainous conquistadors.

The popular sectors would not allow her to have such international sophistication and eat it too with a nationalist flourish. They formulated their own diverse ideas of what constituted authentic Mexican food. Maize of course constituted the quintessential cuisine of rural Mexico. During a drought in the Huasteca, when corn shipments arrived from the United States to relieve local shortages, *campesinos* claimed that even the pigs turned up their snouts at the imported grain.¹⁴ Meanwhile, authenticity meant something entirely different to cooks patting out *tortillas* by hand in restaurants on scenic Janitzio Island, Lake Pátzcuaro, where they started with Maseca brand *masa harina* then reground it on the *metate* for the tourists' benefit.

The government has likewise had its say in defining Mexican cuisine through an often-contradictory set of food policies. The National Nutrition Institute developed programs to improve the health of rural and urban poor through educational campaigns about the best ways to use both traditional staples and vitamin and protein supplements. The state food agencies also provided infrastructure to assist small farmers in selling corn to lucrative urban markets, thus preserving their livelihoods. Far more of the government's resources went to promoting domestic manufacturers, even to the point of subsidizing the junk-food industry. These businesses have in turn adopted the mantle of authenticity, even when they represented foreign owners. Advertising billboards informed Mexicans that "*tortillas* taste good, and better with Maseca." Transnational corporations meanwhile adapted their products to Mexican tastes in order to face off local competitors. Bags of Sabritas *chicharrones* (pork rinds) shared counter space with Fritos potato chips, while Munder *cidral* (carbonated apple cider) sat in the refrigerator with Pepsi-Cola. This goes to show that Macario, the Tzotzil Faust, does not need a North American Mephistopheles to sell his soul.

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The nutritional consequences of this partial transition from peasant to industrial diets were profound regardless of their source. Adolfo Chávez, director of the Community Nutrition Division of the National Nutrition Institute, has described an epidemiological trap in which Mexicans have fallen victim to the dietary diseases of the rich world without escaping the nutritional deficiencies of the poor world. Serum cholesterol levels among residents of the wealthy, meat-consuming areas of northern Mexico average higher than those in the United States. Heart disease has become a serious problem throughout Mexico, and ranks as the leading cause of death even among indigenous peasants in Yucatán and other southern states. Excessive sugar consumption has meanwhile created an epidemic of diabetes, the fourth leading cause of death nationwide. Hypoglycemia, hypertension, arteriosclerosis, and various forms of cancer have likewise grown more common. These diseases seemed all the more tragic given the continuing prevalence of serious malnutrition in Mexico. Adults often suffered from both obesity and anemia at the same time, and the nutritional consequences for infants were even worse. The economic downturn of the 1980s led to a rise in mortality from nutritional deficiencies from 1 percent to 5.2 percent among infants and from 1.5 percent to 9.1 percent among preschool-age children.⁴⁵

The hunger of Mexico's poor also portends an ominous future for the national cuisine, which has always derived inspiration from *campesino* kitchens, regardless of the pretensions of European-trained chefs. The heart of this cuisine, *tortillas* made of freshly ground corn, has become particularly vulnerable to industrialization. Economist Felipe Torres Torres explained that "the business of the *tortilla* has expanded under the articulation of an economic model, and not of the historic preferences of consumers, who deep down maintain a vigilant rejection of the new product, although... [neoliberal political economy has] not permitted them any alternative; in such a case, it is possible that future generations will definitively abandon the consumption of maize before the low quality of a food that is especially sensitive to the criteria of modernity."⁴⁶ Of course, gourmet boutiques will always exist, recreating a folkloric past through the performances of women, perhaps with indigenous features or costumes, making *tortillas* of organically grown and freshly ground corn for affluent consumers. Indeed, one of the modern world's great ironies is that only the wealthy can afford to eat like peasants.

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