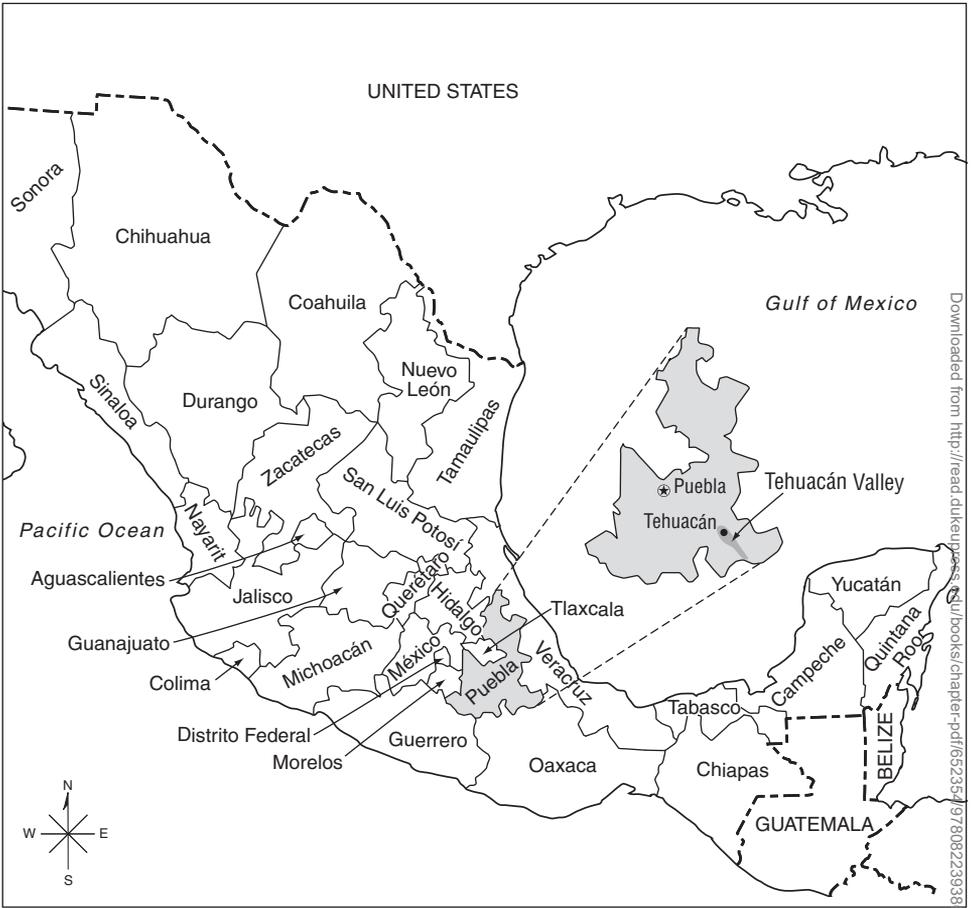


Introduction

THE STRUGGLE FOR MEXICAN MAIZE

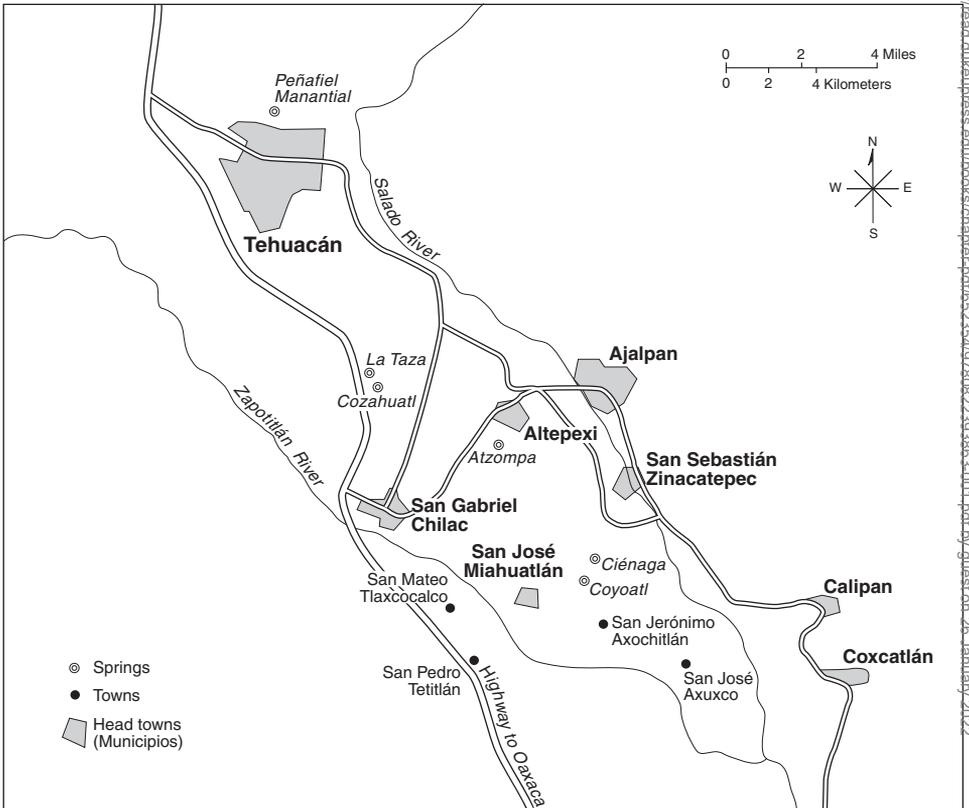
A longtime symbol of *lo mexicano*, or Mexicanness, maize has recently come to represent rural and even national culture threatened by neoliberal policies and corporate-led globalization in the debates about genetically modified (GM) corn.¹ Transgenes were found in local Mexican corn varieties in 2001, setting off highly charged debates about the extent to which GM corn poses a threat to native varieties in the crop's center of origin, domestication, and biodiversity. At the time the cultivation and scientific testing of GM corn were prohibited in Mexico, yet corn imports from the United States, where there is no required labeling or separation of transgenic corn, included genetically engineered varieties. Corn is imported as a grain to be used for animal feed, tortillas, and industrial processing, but it remains a seed and a living modified organism which can be planted and can reproduce in the environment. This dual nature of maize, as grain and seed, poses particular challenges for isolating or tracking GM corn in a country where native maize varieties are cultivated throughout the nation's territory. Beyond these regulatory issues, the GM corn controversy raises questions about the fate of the peasantry in an era of corporate agriculture and globalization.

In a globalized food system, foods not only travel enormous distances but have enormous regulatory, political, and cultural implications. The aim of this book is to provide readers with what one sociologist of GMOs has called a "political economy of meaning" of the corn debates, which asks under what conditions food innovations are accepted, ignored, or rejected (Murcott 2001). This book situates GM corn imports within the Mexican "neoliberal corn



LOCATION OF THE TEHUACÁN VALLEY IN PUEBLA STATE, MEXICO

TOWNS OF THE SOUTHERN TEHUACÁN VALLEY



regime” (Fitting 2006a), policies which affected maize producers and consumers by bringing Mexico in line with the structural adjustment agendas of the World Bank and the International Monetary Fund. These policies advance conventional capital-intensive agriculture and the export of fruits and vegetables to Canada and the United States.² They promote trade liberalization, cuts to rural subsidies, and the involvement of agribusiness in various stages of production, and have deepened the country’s dependency on corn imports. Mexico now imports its most consumed and culturally important crop, maize, and its most significant export is labor. In this sense neoliberal policies have sought to transform peasants into new rural subjects, into either agricultural entrepreneurs who produce for export or an inexpensive labor force. To what extent the policies have been successful in effecting this transformation is one of the questions taken up by this book.

The neoliberal corn regime also reproduces and extends older constructions of rural Mexico as a site of intervention for development. Maize agriculture, rural development, and food security are reduced to questions of profit and market efficiency. Although small-scale maize agriculturalists often have in mind reasons other than profit, or in addition to profit, when they grow maize, these reasons are devalued or dismissed. Indeed, as critics of development schemes have found elsewhere, a key component of state policy is the production of technical expertise which dismisses or excludes other types of knowledge—in this case, that of small rural producers themselves (Scott 1998; Mitchell 2002).

One of the benefits of situating the GM maize controversy within the neoliberal corn regime is that it draws our attention to how participants in the debate legitimize or challenge neoliberal policies. But when I began interviewing participants in the fall of 2000, I wondered about maize producers themselves: What did they think? How were they affected? The study of the corn debates, like the politics of food and agriculture more generally, needs to go beyond a focus on questions of regulation, policy, and state institutions to consider political practices more broadly (Lien 2004). With these concerns in mind, I carried out fieldwork on the livelihood strategies of smallholder maize producers and residents in the Tehuacán Valley of Puebla state. These producers constitute an important layer of meaning in the recent GM corn debates, not just because their practices and voices are the subject of debate but because they are

actors who react to and engage rural policy and state bureaucrats and experts. The valley is also one of the sites where evidence of transgenes was later found in native cornfields.³

While the Tehuacán Valley differs from communities politically active on the issue of GM corn, such as its neighbors in the highlands of Oaxaca, like much of rural Mexico the valley is struggling with neoliberal policies and crisis. The valley represents a common and significant disjuncture in the maize debates: what is under debate in the Mexican Senate, in national newspapers, at academic conferences, and at urban rallies may not be a topic of conversation or debate in the countryside, and when it is, the debate is often framed in distinctive ways. The information and debate about GM corn is unevenly communicated, shared, and received. As GM corn and the controversy surrounding it move from one social context to the next, they are translated and understood in different ways.

This book examines the livelihood struggles of maize producers in relation to the questions and issues raised by the GM corn debates. The future of in situ maize conservation depends on the regulation of GM imports, but perhaps more importantly on the livelihood practices of rural Mexicans. Maize biological diversity is affected by the social relations of production and reproduction among growers. It is a dynamic process in which native maize varieties (*criollos*) are maintained and developed through exchanges between cultivators and between cornfields. As the Mexican critics of transgenic maize and their allies in the transnational food sovereignty movement have pointed out, if the small-scale producers who select and plant regionally varied types of maize abandon agriculture in large numbers, the in situ genetic variety and abundance of the crop will be displaced. I do not mean to imply that change in rural livelihoods necessarily has negative social or ecological consequences. Rather, one of my main arguments is that although small-scale agricultural producers are always faced with a degree of uncertainty, under the neoliberal corn regime the struggle to maintain or improve their livelihoods has intensified. Moreover, I believe that those *campesinos* who want to remain on the land should have the ability to do so. The anthropologist Armando Bartra (2008) refers to this as the right not to migrate, “the right to stay home.”

This introduction briefly summarizes the effects of the neoliberal corn regime on the southern Tehuacán Valley, and then outlines a second argument of this book: that the debates over GM corn—how

the issues are framed, what is said and not said, and by whom—have significant political consequences. Some debate participants would benefit from listening to the perspectives of small-scale maize farmers on the difficulties that they and their communities face. This introduction also provides some background on economic crisis and structural adjustment policies in Mexico, discusses my methods and theoretical approach, and takes up key concepts such as peasants, food regimes, neoliberalism, and globalization.

OVERVIEW OF THE BOOK

Part I of this book, “Debates,” examines how questions of culture, risk, and expertise are framed in the controversy surrounding transgenic maize. Based on interviews with participants in the GM corn debates, attendance at coalition forums and press conferences, and the reading of media reports, chapter 1 examines how the official government position relies on scientific experts to evaluate the risks associated with gene flow among maize varieties, while the anti-GM corn coalition calls for including Mexican campesinos, consumers, and concerned citizens in the risk assessment process. Chapter 2 focuses on how particular assumptions about rural culture in early agrarian policy and debate are used to contest or defend more recent neoliberal policies. The anti-GM coalition challenges the official perspective by drawing on the Mexican and transnational food and peasant rights movements, which highlight the goal of food sovereignty.

Part II of the book, “Livelihoods,” considers the practices and perspectives of southern valley maize producers, migrants, and maquiladora workers. It begins by taking readers into the Tehuacán Valley to consider how an indigenous peasantry was formed in interaction with the practices of the state and capital accumulation. Chapter 3 provides a snapshot of the valley town San José Miahuatlán at mid-twentieth century to illustrate the centrality of irrigation water in maize agriculture and community organization. It explores local disputes over water and ideas about indigenous ethnicity. Chapter 4 argues that households have dealt with economic and environmental crises by combining maize production with maquiladora work and migration to the United States, and that this in turn has led to the emergence of transnational peasant households and

households in transition. While migrant remittances help to support valley households, these funds and the experience of waged, off-farm employment are changing ideas about the generational and gendered labor of the household, including maize agriculture. Notably, as explored in chapter 5, migrants in their teens and twenties have little knowledge of agriculture, or experience or interest in agricultural production. This last chapter also takes a closer look at local narratives about corn agriculture and the reasons why a campesino identity resonates with older residents.

RESEARCH IN THE CRADLE OF CORN

Located in the southeastern end of Puebla, the Tehuacán Valley descends from north to southeast, continuing toward Teotitlán, Oaxaca. The Sierra Zongólica mountain range, which forms part of the Sierra Madre, borders the valley at its northern and eastern sides. The valley is also bordered by the Sierra de Zapotitlán and the Sierra de Mazateca at its southern and western sides. In 1998 the Tehuacán-Cuicatlán Biosphere in southeastern Puebla and northeastern Oaxaca was established, to help protect the biodiversity of cactus and other species in the region from the threats of deforestation, overgrazing, and illegal sales.

The valley is known as the “cradle of corn” because of Richard MacNeish’s important archaeological study of the 1960s, which uncovered maize cobs dating back to 5000 BCE (MacNeish 1972). Although the valley is considered one of several possible locations of original maize domestication, recent evidence suggests that other sites are more likely candidates (Matsuoka, Vigouroux, Goodman, Sanchez, Buckler, and Doebley 2002).

Prehistoric irrigation was central to this incipient agriculture (Woodbury and Neely 1972), and even today, an irrigation system of water springs, underground tunnels, and chain wells (*galérfas filtrantes*) remains essential to agricultural production in the valley. In the late 1920s water bottling plants were established in Tehuacán, and soon after, the city attracted tourists to its spring waters, believed to have healing properties.

Today campesinos and indigenous peoples from the valley and surrounding sierras look to the growing city of Tehuacán for employment in spring water and soda bottling plants, the poultry in-

dusty, and apparel plants, or maquiladoras. The region was nicknamed the “capital of blue jeans” during a maquiladora boom in the 1990s. The area has a mixed heritage of Nahuatl, Popoloca, Mixteca, Chocho, and Mazateca peoples, although Nahuatl became the common language of the valley through Aztec domination shortly before the Spanish conquest (Aguirre Beltrán 1992 [1986]). Nahuatl is the most widely spoken indigenous language in Mexico.

Maize and beans are commonly cultivated crops in the valley, and commercial crops like garlic, tomatoes, sugarcane, fruits, and flowers are also grown. As in other areas of Mexico, rain-fed white corn—distinct from industrial, hybrid yellow corn—is largely grown for human consumption. Since the 1960s valley producers have also grown irrigated white maize for sale on the cob, called *elote*. Other significant activities in the region include goat herding, the production of construction materials (especially bricks and cinder blocks), and handicrafts like baskets and embroidered clothing for tourist markets outside the valley.

South of the city there are seven valley *municipios*, or counties, which cultivate commercial *elote*. San José Miahuatlán (pop. 13,500) is the southern *municipio* bordering Oaxaca, comprising the head town (*cabecera*) of the same name and four auxiliary towns: Axusco, San Jerónimo Axochitlán, San Pedro Tetitlán, and San Mateo Tlacoacalco. The population of the head town, where my research was focused, is around 8,760.⁴ While state authorities classify the county of San José as a “marginalized” indigenous area because it is one of the poorest areas of the valley (Embriz ed. 1993, 159–60), it is also considerably better off than the neighboring sierra in terms of services like potable water, electricity, and transportation.

In the 1980s the anthropologists Kjell Enge and Scott Whiteford found that agriculture was “the lifeblood of the Tehuacán Valley” (1989, 29). This holds true today, although livelihoods have further diversified and migration has accelerated. In San José cornfields (*milpas*) either follow the Mesoamerican tradition of intercropped maize, beans, and squash or are simply limited to corn. Landholdings tend to be small (up to five hectares) or less frequently of medium size (six to twelve hectares). These holdings are on communal, private, or *ejido* land, the last consisting of hillside terrains largely used for wood collection, goat grazing, and to a lesser extent rain-fed maize production. Rainfall in the valley is irregular, and

while the soil is fertile in many areas, calcium salts and carbonates are deposited in the soil by irrigation water. Over time this can lead to salinization and soil that becomes toxic to plants. Additionally, when the concentration of calcium salts is high, they form a hardpan beneath the surface (*caliche*), making drainage of the soil very difficult (Byers 1967; Enge and Whiteford 1989, 27–28).

Methodology

This book focuses on the debate over the GM corn scandal during a six-year period corresponding to the administration of President Fox (2000–2006). I interviewed various types of debate participants about regulation and the GM corn controversy—government officials, maize biologists, biotechnologists, and anti-GM corn activists in Mexico City, Tehuacán, and Chapingo—who were identified as experts in the media or by other participants. I wanted to understand how they discussed and framed the controversy and the problems facing the countryside. Social scientists are increasingly interested in the role of experts and expert knowledge in state practices and political rule. Modern states and public officials often rely on the “rule of experts” (Mitchell 2002), as expertise enables them to present their decisions in technical rather than political terms (Ferguson 1994). In Mexico the study of “experts” and those with influence includes looking at how anthropologists and social scientists portray the countryside; over the years anthropology has played an important role in shaping Mexican state policy and representing rural folk. This role is discussed in chapter 2. By critically engaging our own discipline, anthropologists can be more conscious of the ways we contribute to the construction of rural Mexico as a site for particular types of expert interventions.

The second method I undertook was ethnographic fieldwork, which I conducted among residents in the southern Tehuacán Valley town of San José Miahuatlán. I lived in the valley in 2001–2, with several extended visits over the next six years. When fieldwork began I asked residents what they thought about *maíz transgénico*, but found that the controversy had not reached the valley during my visits, despite the government study which found evidence of transgenes in its northern end. I carried out research with a couple of other questions in mind: Why was maize the crop of choice when local

agricultural production declined in the 1980s and into the 1990s—as residents and statistics suggested? And how were livelihoods affected by trade liberalization and recent state policies?

Fieldwork included seventy interviews and surveys with residents on their household composition, work or migrant history, and agricultural practices and corn varieties. Over a period of several months in 2002 I also accompanied a government extension worker from the regional office of the Ministry of Agriculture during his visits to producers in valley towns. Together we conducted surveys on the costs of corn production.

For anthropologists, fieldwork is based on participant observation, which is much more than conducting interviews or surveys; it is a process of building relationships with residents and communicating informally with people in everyday situations, such as when they are hanging out at the corner store, at a friend's home shelling corn, or in line at the mayor's office waiting for some subsidy. Of course anthropologists are not neutral or disinterested observers: they occupy particular social locations and take with them to the field questions that have been shaped by their academic training and life history. My social location as a university-educated North American gave me access to government offices and research sites that less privileged rural Mexicans do not have. Moreover, my account of the valley is not a complete picture of life in the region. Ethnographic fieldwork does not get us to the "truth" or total picture of a place, but it does provide a rich context for understanding interview or survey responses and does give us insight into ideas and practices that may not be captured in other ways.

When I first arrived in San José Miahuatlán I quickly found out that tensions existed between the local branch of the PRI (Partido de la Revolución Institucional or Institutional Revolutionary Party)⁵ and the other main political party in town, the PRD (Partido de la Revolución Democrática or Party of the Democratic Revolution),⁶ because of conflict over irrigation water during the 1980s. At the national level the PRI had been in power for seventy-one years. I made an effort to associate with families of different political affiliations and took special care to change the names of the interviewees in my notebooks and in publications, with a few exceptions.⁷ History weighs heavily in San José. Although many Mexican rural communities, including other valley towns, have experienced periods of violent conflict over scarce resources, in San José the conflict has

shaped the relations of community in particular and profound ways. There is a perception among valley residents and city dwellers that Sanjosepeños are naturally prone to violence.

San José has both similarities with other struggling rural towns and its own unique history. Like other rural areas of Mexico it has a history of postrevolutionary disputes over resources and now combines maize production with transnational labor migration. However, in the valley producers grow both rain-fed and irrigated corn, in contrast to peasant producers who depend on rainfall alone. Moreover, in a country so regionally varied by language, custom, and geography from one community to the next, the kind of maize produced and the labor strategies employed vary greatly, as can the specific reasons for conflict and labor migration, and their effects.

Valley Livelihoods: Maize, Migrants, and Maquiladoras

When I began fieldwork in the southern valley I found that many households cultivated corn for consumption and sale on the market; and that they were financed by off-farm income, including remittances from young migrants in the United States and employment in valley maquiladoras. Yet in post-NAFTA Mexico it is often less costly to buy industrially produced and imported corn than it is to grow the crop locally on a small scale.

Previously not a migrant-sending area, San José now sends the majority of its young male residents (aged fifteen to late thirties) to work across the border. At home maize is the preferred crop because it is the mainstay of the diet and has multiple, flexible uses: if there are no buyers or the price of maize is too low, the crop is dried and consumed as grain in the form of tortillas. When cash is needed in emergencies, the grain can be sold in small amounts at a loss. In the absence of a social safety net in rural Mexico, maize provides a kind of insurance, particularly for older residents and the unemployed. Maize is a form of security for those left behind, for those who cannot migrate or do not wish to. In other regions maize agriculture, cuisine, and seed can also have a strong spiritual component.

In the southern Tehuacán Valley residents are struggling with the effects of inflation, lack of regional employment, and neoliberal policies, as well as with declining levels of irrigation water. As a result, agriculture and the social relations of production are being remade in significant ways. The household strategy which combines

maize production with migration and maquiladora work has been accompanied by the monetization of available agricultural labor and a decline in sharecropping. Young men hired to work the milpa now prefer to be paid in wages rather than through sharecropping arrangements. (In the valley, work in the milpa is typically done by men, although women contribute to other aspects of maize agriculture.) More significant is the preference of young migrants for non-agricultural work. Members of this younger generation have little knowledge about corn agriculture and claim that they will not take up the crop as they age because “there is no money to be made in the cornfield.” A last trend is the declining use of the traditionally intercropped milpa (maize grown with beans and squash) and several varieties of local maize.

NARRATIVES ABOUT CORN CULTURE

The politics of food and agriculture involve struggles over who directs the focus of public debate and how the issues are framed. In Mexico official narratives articulated by the Ministry of Agriculture and in policy portray smallholder corn agriculture as inefficient because of its low yields and its use of “traditional” technology, such as criollo seed. Drawing upon interviews with Mexican scientists and activists engaged in the corn debates, this book demonstrates how the coalition In Defense of Maize, formed in 2002 by Mexican environmentalist, campesino, and indigenous rights groups in response to transgenic contamination, shifted the debate away from the official focus on inefficiency and the risks of gene flow toward wider concerns about the future of the Mexican countryside and culture. Critics of GM maize challenge the government and industry narratives which privilege scientific expertise in evaluating the risks of gene flow (see Heller 2002 on France). In doing so this “pro-maize”, anti-GM coalition contends that the appropriate experts for evaluating potential harm are not only biotechnologists and other scientists but corn producers and consumers. As with other GM controversies, the Mexican corn debates contest the boundaries of accepted expert knowledge and also implicate competing constructions of culture and nature. The anthropologists Chaia Heller and Arturo Escobar further suggest that in such controversies, “Biodiversity and transgenic agriculture constitute powerful networks

through which concepts, policies and ultimately cultures and ecologies are contested and negotiated” (2003, 169).

Participants in the GM corn debates articulate ideas about peasants, indigenous peoples, and development in relation to corn and culture. Arguments about culture are used to defend or reject recent state policies and trade liberalization. While the pro-maize coalition draws our attention to the policies which exacerbate the difficult conditions for small producers, in some cases they misrepresent changes taking place in the countryside. At times both the government and the pro-maize coalition portray maize agriculture as part of a millennial culture or tradition, distinct from the capitalist economy of modern Mexico—a form of what Michael Kearney (1996) and others have called “peasant essentialism.”⁸ The government narrative posits the production of corn as inefficient precisely because it is deemed a culture of subsistence untouched by the workings and values of capitalist markets. Critics counter that this is a positive alternative to capitalism and its processes of commodification. Both these narrative strategies rely on a conceptual binary between the “market” and the “local community” (Hayden 2003b) and between the modern and the traditional. They also overlook the fact that Mexico, and the rest of Mesoamerica, were an important pre-capitalist center of commodity production and exchange (Cook 2006). Thus an additional argument of this book is that conceiving of a millennial culture of corn obscures how maize-producing communities (or peasantries) are made and remade in interaction with larger forces and processes.

These narratives about the Mexican countryside are not simply words and ideas; they are an inherent part of social practice and have material effects in the world. There is power in the process of naming. The ways that policy makers and experts view and describe the countryside, its problems and remedies, make their way into policy and state practices, although these policies are implemented and received in uneven and unintended ways. Various social constructionist schools of thought rightly point out that we never arrive at the truth about the social world in a manner unmediated by language, discourse, or ideology; nevertheless, some representations are fairer or more rigorous than others. This book is of course my own account of how policies and narratives make their way to the countryside. It is my hope that this ethnography illustrates why we should not rely on official versions about the benefits of trade liber-

alization, conventional agriculture, measures to cut state services, or neoliberal solutions to rural poverty. Alternative accounts of these policies show that campesinos are not “inefficient” producers, isolated from the workings of the market, nor have they necessarily responded to neoliberal reform in the predicted manner. Valley migrants, campesinos, and maquiladora workers are social agents who engage and respond to state policies and globalization, but not under conditions of their own choosing.

Conceptualizing Culture

As both a crop and a food for humans, mainly in the form of tortillas, maize is a particularly powerful symbol of the nation in Mexico, with many often contradictory layers of meaning. Foods have strong emotive powers because they structure daily life, are part of the process of socialization, and are symbols and signs of other things. The act of eating involves consuming meaning and symbols as well as consuming foods (Douglas 1966; Mintz 1985). Foods play a role in demonstrating and delineating social distinctions such as social status, ethnic belonging or exclusion, and gender difference. In Mexico corn-based foods are inscribed with notions of culture, race, and gender, and so is maize agriculture. In chapter 2 we see how maize-based foods went from being a symbol of indigenous backwardness and isolation to a symbol of the mestizo nation in mid-twentieth-century Mexico, yet state policy continued to associate maize agriculture with economic backwardness and inefficiency. And while areas that rely most heavily on criollo varieties (rather than scientifically improved seed) do tend to be the poorest in Mexico, it is sometimes incorrectly suggested that small-scale maize production is responsible for rural poverty.

The recent GM corn debates have inherited and negotiated earlier ideas about peasant maize-based agriculture and rural culture: they are frequently portrayed as isolated, primordial, and driven by values of subsistence over profit. Such peasant essentialism distorts changes taking place in the countryside and the strategies of smallholder maize farmers and campesinos as they confront the neoliberal corn regime. This portrayal overlaps with a bounded and internally static concept of culture—what the anthropologist Eric Wolf (1982) famously referred to as the “billiard ball” view of cul-

ture. In recent years anthropology has criticized such bounded views of culture, though perhaps overemphasizing the delinking of culture from particular places through processes such as transnational migration (Escobar 2001). Although place is socially and historically constructed, “place-based practices and modes of consciousness [still matter] for the production of culture” (ibid. 147). Indeed the southern valley town of San José is very much a transnational community these days, as residents’ ideas and experiences of being Sanjosepeño are influenced by migration; however, this does not change the need to understand how their sense of community and identity are also place-based practices, shaped through the history of the valley.

In the hopes of going beyond the stereotypes about campesinos and maize-based rural culture, be they romantic or disparaging, this book draws on an anthropological tradition which foregrounds history and power and insists on considering both the structural features of capitalist globalization and their historical and geographic contingencies. This book does not treat peasant livelihoods and maize agriculture as a millennial tradition or a contained cultural logic or system, even though peasants’ agricultural knowledge about seed varieties and cultivation can be systematic (see chapter 5). Rather, this book approaches maize agriculture as “culture”: unevenly shared meanings and practices which are formed in engagement with wider economic and political structures and social class formation. Culture is understood in historical and dynamic terms; as meanings, practices, and relations which have a selective continuity with previous generations. In an anthropological sense, culture refers to a way of life including social conventions, institutions, and forms of production, but also to what Raymond Williams (1961) has called a “structure of feeling”: an ongoing, active process of cultural production in which aspects of lived experience are the raw material for alternative and perhaps even oppositional values.

In the southern Tehuacán Valley residents share some ideas and practices about maize agriculture, although they tend to differ by generation. These ideas and practices emerge in interaction with wider economic and political processes, and should not be viewed as previously contained or isolated entities (“cultures” or “natural economies”) that now, for the first time, confront change and the outside world, namely the global economy.

Corn in Context

In English “maize” and “corn” are generally used interchangeably. The word “corn” once referred to all cereals, with “Indian corn” referring specifically to maize (*zea mays*), the crop from the Americas. Eventually this name was shortened to just “corn” (Fussell 1992). In Mexico maize is cultivated in a variety of ways, from industrial production to subsistence farming, and in a vast array of environments. It is a central part of rural livelihood strategies. An estimated three million people work directly in corn production, upon which 12.5 million rural inhabitants depend. The crop occupies half of Mexico’s cultivated land (SAGARPA-SIAP 2004).

Maize is also the traditional staple of the Mexican diet, particularly in the form of tortillas. Corn-based food makes its way into Mexican diets in three main ways. First, the maize producers themselves consume maize in the form of tortillas, *atole* (a hot drink), tamales, and other foods made from white, blue, red, and yellow maize varieties. Traditionally, tortillas are made through the process of nixtamalization, or soaking the corn in water and mineral lime, (calcium carbonate), causing the skin of the kernel to peel off. This process also releases the vitamin niacin and the amino acid tryptophan in the corn. The corn is then ground and kneaded into dough (*masa*), patted out by hand or with a small press, and cooked on a *comal*. Maize growers often sell a small part of their harvest to local markets or distributors as grain or fresh corn to be eaten at home or prepared by street vendors as corn on the cob (*elote*). In Mexico every part of the corn plant is used by smallholder farmers: the husks are dried and used to wrap tamales, the shelled cobs are burned as fuel for fire, and the leftover stalks are given to animals as feed.

The second way Mexicans acquire tortillas is from corn mills and tortilla sellers. The mills (*nixtamaleros* or *molinos*) are paid to grind the nixtamal into tortilla dough, which is then made into tortillas at the store or at home. Traditionally tortilla stores and sellers (*tortillerías*) have relied on nixtamalized dough made from white maize. However, tortillas in urban Mexico are increasingly made from ready-mix corn flour that becomes dough when water is added. Although raw corn milled into flour has a shelf life of up to three months compared to the one- or two-day shelf life of nixtamal corn, it does not have the nutritional benefits of nixtamalization.

The third way that maize is produced for food is through the corn

TABLE 1: Estimated Demand for Corn (Grain) in Mexico

Uses of Corn in Mexico: Annual Consumption (in million tons)			
	2004	2005	2006
WHITE CORN			
Flour	3.5	3.2	3.7
Traditional tortilla industry	3.3	3.0	3.4
Tortilla consumption in rural areas	3.4	3.1	3.5
Total human consumption	10.2	9.4*	10.6
Animal consumption	2.1	1.9	2.2
Total white corn	12.3	11.3	12.8
YELLOW CORN			
Cereals and snacks	0.5	0.4	0.5
Livestock feed sector	11.8	10.8	12.3
Other uses	2.6	2.4	2.7
Total yellow corn	14.7*	13.6	15.3*
Total	27.0	24.9	28.2*

* Thus in original: sum of individual items differs from total (rounding error cannot account for discrepancy).

Source: "Situación actual y perspectivas del maíz en México, 1996–2012" (Servicio de Información Agroalimentaria y Pesquera (SIAP), n.d.).

flour and tortilla industry (Nadal 1999, 119). This industry sells corn flour as a ready-made tortilla mix to tortillerías (including those in supermarkets), along with prepared and packaged tortillas to grocery stores and supermarkets. The value of this corn flour industry is close to \$4 billion, while the corn-based snack industry in Mexico is worth over \$1 billion (SAGARPA-SIAP 2006). This industry is concentrated in the hands of the Mexican corporations Gruma, which includes the well-known subsidiary Maseca, and Minsa, and Cargill the transnational corporation based in the United States. The majority of corn destined for corn flour, starch, and cereal producers, or to be used as animal feed—which then is consumed by humans as meat—is yellow maize imported from the United States or bought from medium- or large-scale Mexican farmers. Most imported yellow corn is a transgenic variety. Since maize was one of the few crops under NAFTA to retain some subsidy for producers (under the Procampo program), medium-sized farmers, based largely in northwestern Mexico, took up corn for commercial production on

irrigated land. This new group of entrepreneurial corn farmers was able to profit by using high-yielding and largely non-GM varieties—although in 2008 illegally cultivated transgenic maize was found growing in Chihuahua.⁹

Although Mexico produces enough white corn for domestic food consumption, with the growth of the tortilla and corn flour industry, corn-based foods are increasingly made from yellow corn. The industry places Mexico's small-scale white corn growers at a disadvantage: when the big corporations do not like the price of local corn, they buy imports. This puts pressure on the price. This also means that this industry has taken over a portion of the market that previously belonged to domestic white maize producers.¹⁰ In other words, the pro-industry policies of recent years have undermined Mexico's self-sufficiency in maize for domestic food consumption. Such policies in Mexico reflect an expansion of agribusiness and neoliberal policies on the international level, or what some authors have characterized as an emergent international food regime.

Food from Nowhere: An Emergent Corporate Food Regime

The concept of a “food regime” was first used by Harriet Friedmann (1987) to describe policies, norms, institutions, and trade relations related to food and agriculture between unequal nations.¹¹ The first international food regime emerged in the late nineteenth century, when Britain was at the center of key food circuits. Tropical foods were imported from the colonies and grains and meats from the settler colonies (McMichael 2009, 144). After the Second World War a second food regime developed, as the United States used food aid to create new markets in the global south for its grain surpluses (Friedmann 1987). This food aid encouraged dietary shifts, including the consumption of grain-fed livestock and processed foods. Although this regime promoted conventional agriculture and Green Revolution technology in the name of national development, in practice international agribusiness expanded and national farm sectors were undermined (*ibid.*; McMichael 2009, 146). Mexican state policy was influenced by this international regime in particular ways, as discussed in chapter 2.

A third, emergent regime is characterized by the expansion of corporate agriculture and power in world institutions like the World Trade Organization (WTO), the continued export of subsidized

grain from the global north, and the rise of nontraditional food exports (fruits, vegetables, and meats) from the global south, produced for agribusiness. As Philip McMichael points out, the WTO and trade agreements like NAFTA preserve farm subsidies in the global north, “while Southern states have been forced to reduce agricultural protections and import staple, and export high-value, foods” (2009, 148).

This globalization of corporate agriculture expands and deepens capitalist relations. In the process it often generates “populations of displaced slum-dwellers as small farmers leave the land” (2009, 142). Additionally, the corporate agro-food system involves further dietary shifts, as more consumers from around the world eat processed foods found in supermarkets. This agro-food complex produces what the French farmer, activist, and Confédération Paysanne leader José Bové has called “food from nowhere,” or food purged of “taste, health and cultural and geographical identity” (cited in Desmarais 2007, 28). Industrial tortillas in Mexico embody the corporate food regime’s “food from nowhere” in the above senses. The neoliberal corn regime is a concept which refers to the particular configuration of this international food regime in Mexico.

Pechlaner and Otero (2008) add that this regime is characterized by the rise of genetic engineering as the main technology for capitalist agriculture and by changes in regulation which accommodate this technology. However, they importantly point out that “despite prevailing trends, sufficient local resistance to the technology could modify or even derail, the technology’s role in individual nations, and accordingly, in the unfolding food regime as a whole” (352). In Mexico the coalition In Defense of Maize acts as a policy watchdog and challenges industry claims. The activities of the coalition, along with the livelihood struggles of small-scale producers, are a reminder that food regimes do not encapsulate all food-related practices; there are other production and consumption practices which contradict, resist, or negotiate and modify the norms and goals of food regimes (McMichael 2009, 146).

CRISIS IN THE COUNTRYSIDE

After a drop in oil prices an economic crisis hit Mexico in August 1982, and the government of López-Portillo (1976–82) announced

that it could not meet its debt payments. Peso devaluations, inflation, and debt renegotiations followed (1982, 1989, 1994–95). The countryside was hit hard. By the late 1990s the United Nations Commission for Latin America and the Caribbean characterized the situation in the Mexican countryside as “an authentic crisis.” López-Portillo’s successor, President Miguel de la Madrid (1982–88), quickly implemented austerity measures, and the International Monetary Fund (IMF) prescribed stabilization programs. During his six-year term, or *sexenio*, the government privatized 743 state enterprises and reduced state expenditures from 30 percent of GDP (in 1981) to 17 percent. Real wages dropped about 60 percent. Carlos Salinas de Gortari was appointed minister of budget and planning; and six years later, as president (1988–94), he implemented a radical reform of the agrarian bureaucracy and negotiated the North American Free Trade Agreement, or NAFTA.

The country’s economic problems were followed by a number of political crises that rocked the already precarious legitimacy of the ruling party, the PRI (which had been in power since 1929), and that forged a more democratic path for the country. There were five key moments of political crisis: the government’s inadequate response to the Mexico City earthquake of 1985, the fraudulent presidential elections of 1988, the EZLN uprising in the southern state of Chiapas in 1994, the loss of the PRI majority at the national level in 1997, and the victory of the opposition party, PAN, in late 2000.¹² With the victory of the PAN, Vicente Fox, a former director of Coca Cola Mexico, became president (2000–2006). More recently the PAN’s legitimacy was questioned when two political crises unfolded during the last year of President Fox’s tenure: the contested electoral win of President Fox’s successor, Felipe Calderón, also of the PAN, and the violent repression of the Popular Assembly of the Peoples of Oaxaca (APPO), which grew out of a teachers’ strike and encampment in downtown Oaxaca city in May 2006.

Following neoliberal economic doctrine which gained favor internationally in the late 1970s and 1980s, the IMF and the World Bank prescribed economic austerity programs, the privatization of state services, and a new round of market-oriented intervention. By the end of the 1980s official development policy was promoting the allocation of resources through the market rather than the state. In Mexico the administrations of Salinas and his predecessors took a “shape up or get out” approach to smallholder farmers, advising

them to adapt to market liberalization, the privatization of state enterprises, and cutbacks to funding, or to find a different occupation. Economic crisis coupled with these policy shifts induced rural Mexicans to seek out a livelihood elsewhere.

Mexican laborers had worked in the United States throughout the twentieth century, but in recent years rural Mexicans have migrated to cities in the United States (and to a lesser extent Canada) in record numbers. The remittances that they and their compatriots sent home reached \$25 billion in 2008—with a drop after the economic decline of the following year.¹³ The significance of rural migration, however, is interpreted in different ways.

THE TWILIGHT OF THE PEASANTRY?

The debate about rural migration is related to much older debates about the fate of the peasantry under capitalism. In the early twentieth century, where V. I. Lenin saw the inevitable proletarianization of the peasantry, A. V. Chayanov saw a peasant logic of non-accumulation which withstood the disintegrative forces of capitalism. The 1960s and 1970s saw a renewed debate about peasantries, influenced by the Vietnam War and the liberation movements of the largely rural countries of the global south. In Mexico research was often polarized between the agrarian populists, the “peasantists,” who focused on the function of peasants as cheap, reserve labor for capitalists, and the “proletarianists” who focused on an inevitable or desirable transition to waged work. There were important feminist interventions in this debate on the gendered work of social reproduction, and later on whether employment (say, in export processing zones and maquiladoras) frees young women in patriarchal rural societies from the tutelage of their male relatives or rather generates other forms of gendered discipline and exploitation (Ong 1987).

Peasants were conceptualized as smallholder producers who farm land (owned or rented) with their own labor and the unpaid labor of family or sharecroppers to provide for the consumption needs of their households and sometimes for exchange or sale. Peasant community relations were seen as embodying cultural norms and moral expectations of reciprocity—a moral economy (Scott 1976). These norms were often a form of risk avoidance, in that the subsistence

needs of the household took priority over efforts to maximize agricultural returns. Peasants were seen as exploited and dominated through unequal exchange and the extraction of rents and taxes. In this way the agrarian debates considered questions of power and the social relations of production, but sometimes fell back into an essentialist conception of the peasantry or into a teleological definition of capitalism (which among other things precluded the possibility of peasant agency). Peasants were sometimes treated as a homogeneous category, in a manner that overlooked social and economic differences, or treated the process of differentiation as the result of externally imposed capitalism (Cook and Binford 1990, 18). An additional problem is that although the practices and expectations of reciprocity and risk avoidance do characterize many peasantries, peasant communities have been romanticized as being predisposed to simple reproduction, averse to profit, or constituted by egalitarian relations. Another pitfall of the agrarian debates was that domination and exploitation were sometimes viewed as external to peasant relations, not affecting their practices or norms of reciprocity. In fact, the term “peasant” became so encumbered with assumptions and political baggage that some scholars stopped using it altogether.

There were, however, participants in the agrarian debates who avoided these pitfalls and considered peasants agents and actors and not just the victims or instruments of structural or systemic conditions. Some emphasized that agrarian capital could emerge as an endogenous development (Cook and Binford 1990), or that peasants are not isolated from global capital but have long been influenced by capitalist relations of production and reproduction (Roseberry 1993).

The debate about the fate of peasants continues today. With changes to global capitalism since the 1970s, peasantries are now more connected and therefore vulnerable to the vagaries of the world market. But are we witness to, as Eric Hobsbawm has suggested (1994, 289), “the twilight of the peasantry”? Most of the world, after all, now lives in urban environments. The way this question is answered depends in part on how the peasantry is defined.

In this book I use the term “peasants” or “campesinos” to refer to small and medium-sized producers who combine agriculture for their own consumption with some production for sale, but who may also rely on off-farm employment. Since peasant households must

purchase those goods which they do not produce themselves, they need to generate cash either by selling their crops or crafts (as petty commodity producers), engaging in small commerce, or working for wages. Of course this expanded definition of the peasantry has a threshold at which it no longer holds, such as when the farm labor and other agricultural inputs (seed, fertilizer, irrigation, etc.) are monetized or when a rural household has abandoned farming and relies completely on waged employment. But what about cases that are less clear-cut? What about rural households that combine unpaid smallholder agriculture with paid agricultural labor and off-farm employment yet self-identify as campesinos, as is often the case in the southern Tehuacán Valley? Drawing on some of the insights from the earlier agrarian debates, an expanded definition includes such cases but prompts us to ask whether, and to what extent, agriculture is based on waged or unwaged labor, and to ask *why* the term “campesino” is used as a self-label. My definition is thus meant to reflect the diversification and complexity of peasant livelihood practices in rural Mexico, but also the fact that the term “campesino” is a political identity in Mexico and much of Latin America (Edelman 1999; Gledhill 1985).

Although campesinos are often portrayed as belonging to a static and homogeneous category, their identity emerged in Mexico as a highly politicized and resonant one during the revolution of 1910–20 (Boyer 2003). The revolution heralded campesinos not only as the rightful owners of the land but as the heart and soul of the nation. In the early twentieth century in places like the Tehuacán Valley where residents worked as agricultural day laborers on land they once owned (and with irrigation water they once controlled), this image of the campesino resonated. So while revolutionary leaders and the post-revolutionary state employed the symbol and identity of the campesino to garner political support for their state-building project, at the same time many rural peoples identified with the image of the campesino based on their experiences of disenfranchisement and collective memory of injustice (Boyer 2003). The campesino identity was used to negotiate and challenge the state. This was true of the southern Tehuacán valley, where residents employed a notion of campesino, alongside or in contrast to an indigenous identity, in struggles over land and water.

While to some scholars rural migration in Mexico is evidence of the displacement of the peasantry and the proletarianization of

the countryside (Kearney 1996), others contend that migrant remittances help to renew peasant production or create a new rurality (Barkin 2002). Scholars also disagree about whether migrant remittances help raise the rural standard of living and encourage economic development or rather signal class differentiation, raise consumption expectations, and do little to alter rural dependency on the United States labor market (Binford 2003; Cohen, Jones, and Conway 2005; Delgado Wise 2004; Durand, Parrado, and Massey 1996; Jones 1992).

An important contributor to Mexican scholarship, David Barkin, argues that peasants defend their maize-based livelihoods through remittances and the marketing of peasant-made goods, like hand-made tortillas; and that this selective market engagement strengthens rural society, constituting an alternative to neoliberal globalization (Barkin 2002; Barkin 2006). “New rurality” studies helpfully point to the increasing diversification of agriculture and its reliance on remittances, the flexibilization of the rural workforce, and the growth of agribusiness in agriculture; trends which are all found in the Tehuacán Valley. However, this approach can also overlook the role of the state and class relations—particularly social and economic differentiation in the countryside—or paint too positive a picture of recent rural change (Kay 2008).

To return to the question about the future of the peasantry, crisis and neoliberal policies have displaced many rural Mexicans, including half a million agricultural workers between 1995 and 2005 (Pérez, Schlesinger, and Wise 2008). Yet in certain regions like the Tehuacán Valley, these processes have not brought about an end to the peasantry—at least not yet—but have entailed the remaking and further diversification of rural livelihoods. In some cases the category or self-label of campesino may obscure the fact that such producers are no longer peasants but rural proletarians or commercial farmers, or in a process of transition from one to the other. In other cases the self-label of campesino may be a renewed or reformulated political identity for collective action against neoliberal policies, as with some participants in the coalition In Defense of Maize or the transnational organization Via Campesina.

In the southern Tehuacán Valley household survival depends on combining migrant wage labor and other income-earning strategies with small corn production for exchange, sale, or household consumption. This reliance on nonagricultural income is not new, but it

has intensified. Throughout the twentieth century residents combined agricultural production with waged labor, and sold goods in regional markets; but more recently, this paid employment has generally been found in valley agribusiness and maquiladoras, or in the United States.

Today older residents self-label as campesinos and rely on the migrant remittances of younger relatives for household reproduction, including maize agriculture. For their part, many migrants return to their hometowns to build houses, get married, and live for extended periods, often until their money runs out. This is a process of semi- or temporary proletarianization, in the sense that residents go back and forth between the worlds of unpaid work and paid employment many times over the course of their lives. Residents also undertake multiple income-generating strategies at the same time, which can include both unpaid agriculture and paid agricultural work or off-farm employment. Maize farming by self-identified peasants is a significant activity in San José, but agriculture is also on the decline, and the social relations of production and reproduction are changing. Many households appear to be in transition. For this reason I argue that this strategy of combining corn agriculture and off-farm work is not part of a “new” rurality, at least not in places like the valley, for two reasons. First, agribusiness plants (like poultry hatcheries) and maquiladora factories and workshops have moved into the valley, and residents provide an inexpensive and flexible source of labor for industry. The region is best characterized as an increasingly peri-urban space rather than a renewed rural space. Although country and city have long been interconnected through trade, political projects, capitalist accumulation, and the relations of production (Williams 1973), in recent years capital increasingly blurs the separation between rural and urban spaces. Although I refer to Sanjosepeños as “rural” residents, members of the younger (and largely male) generation spend at least as much time in the urban United States as in their rural Mexican hometowns. These young men, and to some degree young women, are more mobile than their parents or grandparents were.

Second, although labor migration and semi-proletarianization support rural households, many households no longer rely primarily on agriculture. For many residents these changes have happened within one or two generations. In addition to rising costs and lowered corn prices, there have been shortages in irrigation water and a

loss of interest and knowledge about maize agriculture among the younger generation. As livelihood strategies diversify, the future of maize agriculture and its campesino producers is increasingly uncertain.

CONCEPTUALIZING GLOBALIZATION

So-called primitive accumulation, therefore, is nothing else than the historical process of divorcing the producer from the means of production . . . And this history, the history of their expropriation, is written in the annals of mankind in letters of blood and fire.

—Marx, *Capital* vol. one, part 8, 874–75

To assert the local is in no sense to deny the *global* character of capitalism (both take place simultaneously, (of course) or to obviate the need to theorize the *abstract* properties (for example, the crisis-proneness) of capitalism. Our (spatial) point is simply how things develop depends in part on *where* they develop, on what has been historically sedimented there, on the social and spatial structures that are already in place there.

—Pred and Watts 1992, 11

The narratives of maize agriculture, and its practices, provide a window onto neoliberal policies and “globalization.” Neoliberal globalization has been marked by the growth of transnational corporations, the increased importance of the supranational lending institutions such as the World Bank and the International Monetary Fund, and post-Fordist flexible accumulation strategies (outsourcing, free trade zones, subcontracting, information economies, etc.) that signaled the end of the Bretton Woods accord.¹⁴

Globalization is not the introduction of new markets and commodities—since from the outset, capitalism has had a “globalizing imperative” and even before the colonial era Mesoamerica had rich market and commodity traditions (Cook 2006)—but rather an acceleration of capitalist accumulation and commodification. Following David Harvey (1989), globalization is an intensification of the “time-space compression” of capital accumulation, whereby the spatial

boundaries and impediments to the movement of commodities—which at times includes labor—are increasingly displaced.

While the global institutions and transnational corporations mentioned above suggest that globalization is driven “from above,” its processes are also (and could be further) directed “from below.” Not only do organized social and political movements shape the direction of globalizing economic processes and state policies, but as we go about our daily lives—as consumers, students, or farmers, for example—acting within the constraints of historically shaped formations and these globalizing processes, we have the potential to affect these processes and policies. Rural producers from the global south, like those of the Tehuacán Valley, are affected by these processes, but they also make decisions about how best to respond to them, they build political alliances, and they make requests and demands for support from regional state officials. At the same time, it should be stressed that social actors are situated differently, and not everyone in the same social location acts in the same way or with the same concrete effects. While agro-food corporations in the Mexican countryside are actors with more political and financial power than campesinos and factory workers of the Tehuacán Valley, that they are powerful actors does not in itself explain the complexity of what is taking place in rural Mexico, nor foretell the future. Agro-food corporations have exerted their influence on the government to avoid paying the over-quota tariffs on corn imports, and they have influenced the design of the recent Biosafety Law, but peasants respond, resist, and react, and Mexican activists and their international networks pressure politicians and state officials to address the problems surrounding the regulation of GM corn imports and field trials.

Earlier critiques of a political economy approach in anthropology argued that the third world was treated as the shore at which the ship of history arrived, in Sherry Ortner’s well-known formulation (1984). More recently, Anna Tsing (2000) has argued that in the study of globalization, the global south is frequently treated as the “local” which is acted upon by a process of globalization emanating from the global north. I hope to avoid the pitfalls of such conceptual binaries between the local and the global, tradition and modernity, stagnancy and change, victim and agent, by drawing on insights from the anthropology of culture and political economy, and their

overlap with social geography and political ecology perspectives. The work of Pred and Watts cited above, for instance, takes into account both the structure of capital accumulation and its historical, cultural and geographical contingency. In other words, globalization, like any moment in the history of capital, takes form through particular spaces, interacting with and remaking natural environments, social relations, and cultural meanings. This process includes interactions between humans and the natural environment. Transgenes, agricultural pests, and soil fertility, for example, interact with each other and humans in an active and unpredictable manner. This anthropological approach insists upon a historical perspective (the history of particular places and “what is historically sedimented there”) and multiple scales of analysis, not simply the local and the global. Ethnographic accounts can help us see how contemporary capitalism works through, and is shaped by, particular places, environments, and cultural practices.

Globalization often conjures up the idea of increased and rapid interconnections, flows, and mobility of people, cultures, capital, and goods, but this imagery can deflect attention from how this mobility is restricted, stratified, or “gated” (Cunningham 2004). While globalization renders national borders more porous to certain movements, such as financial transactions or cultural forms expressed and mediated by the internet, it also entails the regulation of people in motion through heightened border and immigration policies, and has done so particularly since September 11, 2001. This is certainly true of the border between the United States and Mexico, the most heavily traversed border in the world, where on any given day some 4,600 Mexicans are arrested and deported for illegal border crossings (ibid. 338). In the mid-1990s the United States government adopted a new border enforcement strategy and closed off parts of the border, which unintentionally redirected illegal crossers to more dangerous routes. As a consequence, the number of deaths due to dehydration and sunstroke among illegal crossers rose. On average, one such border crosser dies while attempting to make it into the United States for every day of the year (ibid.).

The term “neoliberal” is thus used in this book when referring to globalization to indicate the key role of governments in regulating the movement of people; to signal the role of governments and supranational organizations in establishing the policies, trade agreements, and legislation that contribute to the increased mobility

of capital; and to highlight that such policies are contingent and changeable rather than predictable and inevitable. In this regard Ankie Hoogvelt (2001) provides a helpful distinction between the process of globalization and the ideology about the process. The former is “a real historical process which marks, in a sentence, the ascendancy of real-time, trans-border economic activity over clock-time economic activity,” or the accelerated space-time compression of flexible accumulation (154). The ideology, which Hoogvelt calls “globalism,” reifies the process as being beyond human agency or government responsibility. In addition to suggesting that the profits made through free competitive markets will trickle down to the rest of the population, the ideology portrays the dismantling of market barriers as inevitable. In Hoogvelt’s words, there is “the belief in the efficiency of free competitive markets and the belief that this efficiency will maximize benefits for the greatest number of people in the long run” (155). Markets are seen as self-regulating, one of the tenets of eighteenth-century liberalism, but as the critics of neoliberalism have shown, governments play a central role in regulating market deregulation. Governments regulate deregulation through monetary policies and the restructuring of the welfare or developmentalist state (153–55). In Mexico, as we shall see, government proponents of neoliberal policies have argued that the problem facing small maize producers is insufficient access to the market. Free trade was heralded as the process that would bring Mexico into the First World. The assumption continues to be that rural poverty is caused by being left behind during market expansion or left out of economic growth, rather than by uneven incorporation into the ambiguous process of capitalist accumulation and development projects.

Another aspect of globalization worth mentioning is the increased reach and intensity of commodification and commodity exchanges. As pointed out in an anthropological collection on the subject, the study of commodities, or goods produced for exchange, “offers a window onto large-scale processes that are profoundly transforming our era” (Stone, Haugerud, and Little 2000, 1). Commodities involve two orders of value, that of exchange and that of use.¹⁵ While use value pertains to the distinct properties of a good and how those qualities satisfy human needs or wants, exchange measures the value of a thing in relation to other things (Marx 1977, 128). As goods become exchanged in a systematic way, people see them as

having a relative value: they measure the worth of one good as equivalent to a certain quantity of another. A key factor in determining value is what Marx called “socially necessary labor time,” or the amount of labor (and all the activities and services to train or support that labor) needed under certain conditions to make that good. In short, commodities represent congealed labor time.

The anthropologist Scott Cook points to a three-sided process (exchange value, use value, and symbolic value) through which people determine the value of goods. He argues that pre-capitalist Mesoamerica was made up of “commodity cultures” and had a degree of producers’ alienation from the market goods they made and a process of social differentiation. But unlike in capitalist economies, the value of exchange in pre-capitalist Mesoamerica was likely subordinate to symbolic value (2006, 189–90).

Although production is dominated by exchange value in capitalist societies, there are goods and services that are not mediated by the market. Feminists rightly point out that capitalist societies rely on areas of production and social reproduction which are not commodified, such as the everyday domestic work of the household generally performed by women or the subsistence agriculture of peasants (Pearson, Whitehead, and Young 1981). And commodification is not a unidirectional process: there are instances of de-commodification when an economic good or service is no longer produced for exchange or by waged labor. Some rural communities in Mexico, for instance, have returned to subsistence agriculture after years of relying on the sale of goods or labor—a process of re-peasantization (Walsh and Ferry 2003).

Under capitalism, as Karl Marx famously argued, labor power itself became a commodity—although the treatment of humans as property, or slavery, did exist before capitalism, and simultaneously with capitalism. The commodification of labor was a consequence of the historical process of separating peasants (and later others) from determining the value of what they produced and exchanged, and separating them as well from the ability to maintain themselves without selling their own labor power. Marx called this process of alienation “primitive accumulation.” Since this separation or alienation is ongoing today, David Harvey (2003) prefers the term “accumulation by dispossession.” Profits are amassed by stripping people of their access to resources or through the “enclosure” of a communal or open-access resource, undermining people’s ability to main-

tain themselves and their households without selling their labor power. Indeed, scholars point to the current wave of rural displacement as “the great global enclosure of our times” (Araghi 2009). In the Mexican countryside neoliberal globalization and the effects of economic crisis contribute to accumulation by dispossession: the advance of capital in the search of profit separates rural people even further from their means of production. In the southern Tehuacán Valley this is a gendered process, in which young, indigenous women and men are drawn into maquiladora employment in particular ways and young men seek their fortunes across the border, where they are seen as homogeneously “Mexican.”

Although rural labor migration helps to raise consumption levels and living standards for some, accumulation by dispossession is an unmistakably violent process. So while studying commodities provides a useful lens onto the process of globalization, partly because commodities “carry cultural messages” (as they do in noncapitalist systems) and “are embedded in political and social systems which they both reflect and help to shape,” commodities also signal and embody relations of power and exploitation under global capitalism. They draw our attention to questions of power in terms of both the structural or systematic features of the global economy and questions of political agency and the particularities of place.

This book draws on several insights from the anthropological study of commodities,¹⁶ political economy, and social geography—more specifically, the insight that maize can be “diverted” into the commodity phase; that peasants are undergoing “dispossession” as part of the process of capitalist accumulation; and that globalization, as a process of expanded commodification and accumulation, has both the structural features associated with global capital and various place-based contingencies—historical, cultural, political, and environmental.

In the Tehuacán Valley the interactions between these structural features and contingencies are deeply gendered as well as linked to relations of racialized ethnicity. The movement of three commodities in particular is tied to growing economic disparities and the remaking of social and natural environments: labor, water, and maize. Spring water has had a profound influence on the organization of community and the relationships between households of different means. After the Mexican revolution there was renewed conflict over the control and ownership of irrigation water in the

Tehuacán Valley. Some residents were able to amass large shares of the precious liquid. Understanding this history of water is central to understanding the local and regional influences on Sanjosepeños's more recent responses to economic and environmental crisis.

In more recent years globalization has led to a proliferation of commodities flowing in and out of the valley, such as migrant labor, blue jeans made in valley maquiladoras, and various types of maize for food and animal feed. Residents are dependent on both valley and United States employment. As we shall see, access to migrant remittances has enabled some residents to invest in agriculture and machinery while others are left without the funds to do so. Remittances and labor migration have also contributed to higher consumption expectations and the monetization of some agriculture. Maize is a commodity in the valley, grown for the purpose of exchange or sale. However, maize is not always cultivated for the purposes of exchange. Households may grow maize with the intention of consuming it in the form of tortillas, but along the way it is "diverted" into the commodity phase, into being exchanged between neighbors or sold for money (Appadurai 1986, 26). Maize is such an important crop in part because it is the cornerstone of the diet and as such can be diverted for exchange in times of crisis or income shortfalls.

This book attempts to balance an analysis of the GM corn debates with an examination of what is taking place in the countryside. To understand what is at stake in the controversy over transgenic corn requires engaging with a topic and a group of social actors (and an anthropological literature on peasants) which for some may seem anachronistic. I argue, however, that in Mexico, the debate about GM corn is fundamentally linked to the future of campesinos and the countryside.