Commodity or Kin: Corn, Sovereignty and Habitable Futures in Mexico

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Abstract

The food sovereignty movement offers both practical and ideological solutions to the social and ecological harms of industrialized food systems. In Mexico, civil society organizations work toward goals of food sovereignty through the 'defense of corn,' aiming to both prohibit transgenic corn on a policy level and support campesino (farmer, peasant) preservation of native varieties. This research highlights civil society networks as intermediaries in the distinctive but interacting claims to (food) sovereignty made by the state and campesino communities. By exploring the role of corn as both an economic and relational entity, in the lives, livelihoods and cultures that surround it, this study aims to take food seriously as a site through which sovereignty is claimed. Sovereignty is revealed to encompass not only interactions between the state, its citizens, and transnational actors, but also the assertion of community agency over their bodies, environments, and community dynamics. This builds upon decolonial conceptualizations of sovereignty, brought forth by Bonilla (2017) and Bryant and Reeves (2021), further moving toward a multispecies approach in which affective relationships to corn are centered in campesino claims to sovereignty. The propensity of civil society networks to connect traditional knowledge systems with science offers a vision through which food sovereignty might answer calls from anthropologists and Indigenous academics to hold these worldviews together not only for a just future of food, but for a more meaningful ideal of sustainability.

Keywords: Food sovereignty, transgenic maize; biocultural diversity; grassroot movements

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I felt at home as soon as I touched down in Mexico. The warmth of the people, the flavours of the cuisine, and the art and chaos of the city welcomed me with open arms. This is in no small part thanks to the Semillas de Vida team, who had such patience in allowing me to ask the 'obvious' questions and took such care in explaining the complexity and diversity of civil society networks, governmental agencies, and communities. I am so grateful, not only for their help in orienting me, their invitations to participate, and the friendships that I know will endure, but also for their dedication to a cause that is so important both locally and globally. The representatives of other organizations that I worked with throughout this process, ANEC, Sin Maíz No Hay País, and CONABIO all shared so much with me in their visions for the world, and for change. I thank each of these civil organizers for sharing their time and knowledge. To the campesinxs, farmers, and stewards of native corn who told me their stories, welcomed me into their homes, and included me in processes from planting to cooking native corn, I will be forever changed by these experiences. There is something so special in finding deeply rooted commonalities with people who have lived lives so distinct from my own. Their work and their outlooks are precious to the world, and I'm thankful that they continue to steward their lands and cultures. The time, energy, wisdom, and generosity of each of my interlocutors has truly filled me with hope and inspiration. I hope that in some small way this research can give back to them, and that they see some part of themselves in this work. Let's change the world, starting with our food systems.

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"Even a wounded world is feeding us. Even a wounded world holds us, giving us moments of wonder and joy. I choose joy over despair. Not because I have my head in the sand, but because joy is what the world gives me daily and I must return the gift."

- Robin Wall Kimmerer

Introduction

We parked on a quiet cobblestone backstreet and dipped into a courtyard. It was March 2023, and the spring sun rose hot and high overhead. Dried, colourful corn cobs hung from the brick archways and adorned a large sign, which welcomed us to the 'Casa de Semillas' (House of Seeds) for the 3rd annual native seed fair. This was Milpa Alta, a neighbourhood on the outskirts of Mexico City named for its agricultural tradition.

Through the courtyard, tents were set up alongside a goat pen, a couple rows of tables stretched out beneath them. A modest turn out of about ten producers displayed their impressive diversity of native seeds. Corn of all shapes, sizes, and colours overflowed from their stands. Each would have unique flavours, nutritional attributes, climate and soil preferences, resistances and uses; characteristics honed by their respective communities over millennia of regionally specific practices of selection and cultivation. They were for sale, alongside other artisanal products, jewelry made from seeds, hot sauces, and ready-to-eat tamales, wrapped cozily in their corn husks. This seed fair, though younger and smaller than many others that had been popping up over the last 30 years, was a celebration of native agrobiodiversity, and an opportunity to share in a common culture of corn. Producers and guests would participate in a local commerce of native maize seeds, build connections with like-minded individuals, and spend time exchanging knowledge with one another, as well as academics and civil society organizers.

Inside the building there was a room with chairs set up and 25 or 30 audience members seated, notebooks in hand, listening to presentations from each of these actors. I took a seat with some of

the other collaborators of Semillas de Vida, a civil society organization with whom I worked, to listen to Ana, the director, present. Supported by attentive nods from the audience, she spoke passionately about the diversity of native corn varieties, and the importance of campesino work in preserving Mexico's rich biocultural diversity. Placing this in contention with transgenic (genetically modified) corn, she would argue convincingly that the seeds pushed by agroindustry not only diminish health, and the environment, but that transgenics also "take power out of the hands of the community, the campesino."

Corn was a question of sovereignty.

This research asks how sovereignty, when viewed through the lens of food, opens the concept to claims made beyond the state. Moreover, how do civil society organizations and networks position themselves between claims made by campesinos and the state, when they work in the 'defense of corn?' What kind of information or action moves these actors towards visions of food sovereignty?

Semillas de Vida (translated to Seeds of Life), a smaller non-profit with whom I spent much of my research, took a dual approach to the 'defense of corn.' Founded in 2006, the organization worked directly with campesinos to support the community preservation of native maize varieties, while simultaneously advancing policy reform. Governmental interventions were often supported by the organizations' participation in alliances, such as Sin Maíz No Hay País, which translates to 'Without Corn There is No Country'. With their main goal being the prohibition of transgenic corn, the name of this alliance alluded to the connection they drew between the nation of Mexico, sovereignty, and this important staple crop.

This research explores how the dual approach to the 'defense of corn' positions civil society groups as intermediaries in the distinct but interacting (food) sovereignty claims made by the state, and communities. By exploring the role of corn, in the lives, livelihoods and cultures that surround it, this research aims to take food seriously as a site through which sovereignty is claimed. Sovereignty here not *only* refers to interactions between the state, its citizens, and transnational actors, although this is at play, but also encompasses the assertion of community agency over their bodies, environments, and community dynamics. Considering corn as both an economic and relational entity sheds light on the ways in which sovereignty can be reimagined when claimed through food, to incorporate a multispecies, and multi-ontological approach. This is exemplified by the *relationships* between native maize and its cultures, as emphasized by civil organizations and their partner communities. These actors draw material and immaterial distinctions between native and transgenic corn varieties, highlighting the ways in which two worldviews, two ethics, and two knowledge systems are at odds. Civil society networks, in their intermediary role work to weave these ideologies and practices together, raising questions about what this form of sovereignty might entail both in the construction of equitable future food system, as well as the widening of climate resilience.

Context: The Life Worlds of Maize

Corn is widely considered a staple of Mexican culture and cuisine, eaten daily by the country's inhabitants, and featuring in regional dishes, celebrations, and stories (Tello, 2021). As Indigenous peoples of this region coevolved with and domesticated corn from its grassy ancestor, *teocintle,* it became the backbone of the country's food system (Ibid). Today, *campesinos* (translated to farmers, or peasants) still steward over 60 native varieties of maize, each with their own characteristics, uses, and

traditions (Ibid). Corn in this context cannot be removed from the biodiversity of its agroecosystem, nor the cultures that have stewarded it for time immemorial. This diverse lifeworld of maize, however, now exists in contention with its industrialized counterpart. The globalization of our food systems has changed the way that we produce, process, and distribute food, treating it as a commodity (Benton et al., 2021). Maize is now grown en masse and transported around the world not only for direct consumption, but for products like animal feed, processed sugar substitutes, and biofuels (Williams, 2023). The United States is responsible for 10-20% of the global production, with a considerable portion of their export going to Mexico (Ibid). The technological alterations necessary for the intensification of production involve a homogenization of the agroecosystem: monocultures, pesticides to eliminate other species, and the genetic modification of seeds, that diminishes the genetic diversity of the crop itself (Hurt, 2020).

Transgenics, also called genetically modified organisms or GMOs, have had genes transferred from other organisms into their genetic code, imbuing them with specific traits (Kinchy, 2012). This technology can include vitamin fortifications, or immunity from certain pests, but it is also commonly used to make crops resistant to powerful chemical pesticides, including glyphosate (also known as Roundup) (Ibid). Along with diminishing the diversity and health of surrounding ecosystems, these industrial agricultural inputs have been found to directly impact human health, especially glyphosate which has increasingly been recognized as a carcinogenic substance (Ibid; Myers et. al, 2016). Moreover, much like Ana alluded to, one of the most important problems highlighted by civil society organizations is the consolidation of power that these entities have accrued through the commoditization of seeds. Today, "just four companies control 60% of the global commercial seed industry and 90% of the global grain trade, and three companies control 70% of the agrochemical industry." (Canfield, 2022, 3) In this way, spaces like seed fairs represent an

important form of resistance to the power of big agrobusiness, especially from the U.S, as farmers claim sovereignty over the genetic diversity of their crops, and their food system as a whole.

Industrialized practices including mechanization, chemical fertilizers and pesticides, and genetically modified grain crops, were introduced in the 1960s as a part of the suite of prescriptions of the Green Revolution (Hurt, 2020). Under a discourse of 'food security' these technologies were imposed as a catchall solution to feeding a growing global population through increased efficiency, especially in the Global South (Ibid). The transformation of traditional foodways around the world, however, did little to address problems of inequality within agrarian communities, further compounding social stressors with the degradation of soils, water systems, biodiversity, and other environmental factors essential for productive agroecosystems (Ibid). This was intensified through neoliberal policy of the 1980s and 90s (Baker, 2012). Under the assumption that the free market would self-regulate, international development agencies, national governments and trade organizations followed a 'neoliberalization' of agriculture, in favour of "unrelenting privatization, deregulation, corporatization and financialization." (Edelmen, 2014, 927)

Ana, during her presentation would argue that the legacies of neoliberalism continue today, with the U.S blocking the Mexican state from prohibiting transgenic corn, on the basis of the trade agreement between the nations. An audience member stood to ask about the claims that transgenic corn was imperative for food security. "Food security itself is a term that comes from the FAO," Ana responded, arguing that in the face of intellectual property laws, neoliberal histories, and the economic interests of governments and corporations, "food sovereignty is a better goal to strive for because it implies campesino control over seeds, lands, and waters, and the ability of these communities to decide what to grow." A man from the front row, sporting a khaki vest with patches

from Chapingo University stood up to add that Mexico had resisted transgenic corn through a long struggle. "We *can* produce enough, and there are studies to back this."

Civil society organizations began to emerge focussed on the contestation of transgenic corn as well as food sovereignty, as the state receded under neoliberalism in the 1990s (Baker, 2012). Considering the ubiquity of this crop within the country's history, culture, agrobiodiversity, and economy, the 'defense of corn' facilitates wider goals of food sovereignty by centering local knowledge, agroecology, and campesino rights, as part of the resistance to transgenics. Proponents of food sovereignty claim that "increased control over the food system by both consumers and producers, who are seen as having shared collective interests," (Kamal, 2015, 564) would produce food systems that steward biocultural diversity. In this way, the movement argues not only for healthy, culturally appropriate, and ecologically sound food systems, but also for the right of peoples "to define their own food and agriculture systems" (Nyéléni, 2015) This emphasis on community agency is thus not only a question of subsistence, but of aspirations for a future that works *with* the natural world, rather than extracting from it.

In contrast to traditional food production, which developed the diversity of crops over millennia, industrial agriculture now is figured to be responsible for up to 80% of biodiversity loss globally, and one third of carbon emissions (Benton et al., 2021). This is the great paradox of our contemporary food systems: The very thing we all rely on for survival, every day, every human, is undermining the knowledge and environmental conditions necessary for cultivation. Corn, and the Mexican context further exemplify how food goes beyond the question of subsistence, as a deeply engrained part of our economies, cultures, communities, and relationships to the natural world. In centering these relationships, the food sovereignty movement offers both practical and ideological shifts away from

the extractive, dominant food system. That is, community agency is understood to fundamentally change the system, and our way of relating to it. For the actors working in the 'defense of corn,' the cultures and traditions surrounding native corn varieties, go hand in hand with its protection, further illuminating the intricate connection between humans and ecosystems and the significance this holds for climate resilient, and truly 'sustainable' futures.

Sovereignty over Food Systems

Food is a connector. It ties humans to our lands and ecosystems not only as one of our most basic needs for sustaining our bodies, but also through its implications on livelihoods, cultural practices, and community dynamics. Anthropology has long recognized the cultural implications of food beyond survival and has carried this into studies of food sovereignty as a both concept and movement (Canfield, 2022). Much of contemporary literature on food sovereignty focuses on the political and legal implications of this movement, in its propensity to push for local and community driven solutions, in the age of globalization (Macrae, 2016; Edelman, 2014; Canfield, 2022). As proponents of food sovereignty call for a shift in agriculture, environmental care and social justice, questions emerge regarding how current economic and political systems might accommodate this vision (ibid). However, in highlighting the conceptual implications of food sovereignty frameworks, this study aims to expand understandings of the contentions between states, international actors, and communities toward an unravelling of hegemonic world orders. In his book, *Translating Food Sovereignty,* Matthew Canfield (2022) focusses on how these localized movements are communicated and proliferated on national and international platforms. To substantiate his argument, he first demonstrates how hunger has started revolutions across the world, and throughout history, arguing

that food systems serve as "symbolic and material arenas of struggle through which societies have questioned, contested, and reconstructed dominant regulatory arrangements." (Canfield, 2022, 9) I follow his framing of food as a determinate of both survival *and* ways of life, to argue for food as an important site for studying claims to sovereignty.

Many anthropological studies consider sovereignty "intrinsically linked to life as a biological force and to the body," through biopower, or the capacity to decide who lives and how (Hansen and Stepputat, 2017, 301). Throughout this analysis, food, and in particular corn is seen to exemplify this. The contamination and homogenization of industrial agricultural practices harm both human and environmental health, in effect, jeopardizing the survival of farmers and their communities (Benton et al., 2021; Kinchy, 2012). Moreover, as these practices become widespread, or dispossess people of their livelihoods, they also transform *how* people live, compromising community capacities to practice cultural traditions around farming, processing, seed saving and eating native varieties (Kloppenburg, 2010). As both the life force, and the way of life are transformed by industrial corn production, the companies and governments that control seeds, agrochemicals, or subsidies, also gain power over populations (Ibid). In contrast, when communities claim sovereignty over their food systems, to plant native corn varieties, they are gaining control over what goes into their bodies, and the way that they practice their agricultural traditions. In this way, this research considers corn as a site for exercising biopower, in the exploration of the claims to sovereignty made by both the state, and campesino communities.

Sovereignty, to this end, is often intricately connected to violence. Many authors have historically centered arguments about how sovereignty is claimed around legal, or *de jure*, recognitions of the nation-state and the legitimization of violence (Agamben, 1995; Foucault, 1980 in Hansen and

Stepputat, 2006). Hansen and Stepputat (2006) also expand upon this conceptualization, bringing to light the claims to sovereignty enacted "both within and beyond the modern state." (301). That is to say that communities, corporations, and other institutions can exercise a *de facto* sovereignty, that is still based in their monopolization, or at least justification, of violence (Ibid). While this study does identify a form of violence enacted by state and non-state actors, it also reveals this to be just *one way* in which sovereignty is claimed by the state and communities. In the context of food, even this more classical view of sovereignty takes on a different quality.

With the continued intervention of the U.S on Mexican food systems, civil society brings to light how these legal claims are in fact grounded in violence, but not in the state (or corporate) capacity to exert force. The harms that agrochemicals and genetically modified organisms present for both human and environmental health, constitute slow, systemic, and often discounted forms of violence. Paul Farmer (2004) explores the effects of systemic and institutional inequalities that are exerted oppressively upon entire social orders, as structural violence, arguing they are often defined by race, class, wealth, ethnicity, religion, or some intersection of culturally determined 'otherness' (315). These fallouts, though certainly institutional and unequal, might better be conceptualized as "slow violence," made invisible by their lack of 'spectacularity,' and the doubt cast on scientific studies that support the embodied knowledge of communities (Nixon, 2011). In this way, the industrial food system *is* exerting violence and can continue based on both legal and economic states of exception. However, even within this claim for health, the campesinos I spoke to, and the food sovereignty movement at large opts rather to center agency, and the capacities of communities to make decisions about their own bodies, environments, and livelihoods.

Nixon (2011) argues that slow violence often has disproportionate effects on already marginalized populations. By linking an intensification of resource extraction to the disenfranchisement of peoples (Ibid), he follows decolonial scholarship regarding capitalist structures. In their book *A History of the World in Seven Cheap Things: A Guide to Capitalism, Nature, and the Future,* Patel and Moore (2018) highlight the propensity of capitalism to justify extractivism through ideologies of superiority – the domination of humans over nature, and over other humans. In this way, contamination, resource extraction, and privatization are linked to the subjugation of people. One of the strategies through which this economic system proliferate is through the enclosure of the commons (Harvey, 2003). By privatizing communally managed resources, corporations and states accumulate wealth, simultaneously dispossessing people and communities of their rights to continue using and interacting with them. Andrea Muelebach (2018) argues that this 'accumulation by dispossession' (Harvey, 2003), is accompanied by the 'evacuation of democracy.' As communities lose their rights to a communally used and managed resource, they also lose their abilities to make decisions communally about those resources. When democracy is taken as a group decision-making capacity, it also speaks to the types of claims to sovereignty that are made and exemplified through the 'defense of corn'. This movement situates the sovereignty of the people as a control of the quotidian, highlighting ideas of liberation, freedom of imagination and expression, and power "over what they can eat, what they can drink, over the conditions of their environment." (Bonilla, 2017)

In this sense, food sovereignty offers a vision through which sovereignty can be reimagined outside of the state, and beyond violence. As the state-centric view of sovereignty has been critiqued as a "discursive figure produced through the colonial encounter," (Bonilla, 2017, 332) these decolonial interpretations of the term open the stage for an approach that, my investigation argues, can incorporate non-dominant and multispecies worldviews. As the campesinos involved in this study

assert agency over the type of corn they grow and the practices they use, they are also making claims surrounding the connections that their cultures foster with the more-than-human world. By placing humans as active participants in the ecosystem, this agency over biocultural diversity constitutes what Anna Tsing (2017), identifies as a multispecies resurgence. That is to say, the ability to manage food and seeds as a 'resource', is better understood as a responsibility based in the reciprocity between communities and ecosystems. Arturo Escobar (2017) positions these relational worldviews in contention with the 'plantation form,' a homogenizing biology and ontology. Through this lens, the move toward food sovereignty and reclamation of native seeds as commons is not only a literal resistance to monoculture, but also represents sovereignty claimed through the *maintenance* of these ways of living with corn, and the more-than-human in general (Ibid). These counter-hegemonic ontologies, however, exist in what Escobar (2017) describes as a pluriverse, "a world where many worlds fit." (239) In this sense, they are not isolated from the other ways of knowing that comprise society, including scientific knowledge.

The effects of the plantation can be expanded out to encompass the extractive practices of humanity as a whole. As climate change brings to light the 'unsustainability' of capitalism, including its tenant of exponential growth and the underlying ideology of human mastery over nature, working towards a future that reimagines *how* we live on Earth becomes ever more pressing. Arjun Appadurai (2013) posits that there are two ethics through which to see and relate to the future, and its uncertainty. The "ethics of probability" is understood to be the hegemonic propensity of societal actors to privilege a statistical analysis of risk, and especially economic risk, in the actions towards the future (Appadurai, 2013, 3). Although the civil organizations defending corn can speak this language, the work of promoting food sovereignty highlights an oppositional force, in the "ethics of possibility." This way of relating to the increasing uncertainty of a warmed future, seeks to encapsulate affect and action

that not only allows for the imagination of a hopeful future, but also "produces greater equity in... the [cultural] capacity to aspire." (Appadurai, 2013, 295) This is exemplified in the food sovereignty movement, as farming practices grounded in natural systems and traditional knowledges provide an alternative to the destruction of industrialized agriculture. In this way, the movement widens aspiration toward a future in which "the intrinsic value of diversity—whether cultural or biological—emerges as the foundation stone of hope for a liveable future earth." (Brightman and Lewis, 2017, 6). In other words, biocultural diversity moves us beyond sustainability, and towards *habitability* (Chakrabarty, 2021).

In their role as intermediaries between communities and the state, civil society organizations work to connect campesino traditional knowledge and emerging scientific knowledge, substantiating the claims of each actor, in the world of the other. The ways of knowing that are propagated by these networks have deep roots in the way they connect humans and the environment for a habitable future. In this way, the claims to food sovereignty supported and raised at state and community levels are future-oriented and aspirational, in what Bryant and Reeves (2021) argue constitutes 'sovereign agency.' These organizations and their networks function like the *milpa,* a diverse and ancient agroecosystem from the region that centers a symbiosis of corn with beans, squash, and a bounty of other native edibles, to build diverse, culturally specific, and environmentally sound food systems. Much like the plants within this system, the networks of civil organizations, communities, and government institutions communicate between one another, send resources, share information, and fulfill unique roles in the structure of a wider system. One of these functions is to highlight campesino knowledge and work within the political sphere. In this way, the intermediary work of civil society works to "constitute institution and subject in ways that make the latter politically recognizable and capable of agentive action." (Bryant and Reeves 2021, 2). Communities' agency is

thus brought forth as a politically meaningful claim to sovereignty over their food system. Moreover, community work heightens campesino access to science sciences surrounding agroecology, and the risks of industrial agriculture, in a way that can (though it does not always) support their traditional and embodied ways of knowing about their lands, practices, and the effects of agrochemicals and transgenics. In the best of cases, this can serve to merge science and traditional knowledge for the protection of corn and its cultures.

By focussing on this connecting role between top-down and bottom-up claims to food sovereignty, this investigation offers an insight into an identified gap in the study of food sovereignty by attending to "linking of levels, and attention to linkages, which we see as bringing a distinctively anthropological approach to the topic." (Macrae, 2016, 230) Through the lens of these linkages, or 'spaces in between,' this research asks how we might imagine a future where the subversion of the ideological human/nature divide, can be borne from this marriage of worldviews. As we face the turbulence of an increasingly uncertain climate future, this research follows calls by anthropologists and Indigenous scholars to look to both science and Indigenous wisdom, to guide the reconnection of humans with the ecosystems to which we inherently belong (Whyte, 2017; Kimmerer, 2013; Tsing, 2017; Escobar, 2017).

Studying the Spaces in Between

Much of this research was carried out as participant observation, while working in a volunteer position at Semillas de Vida, between February and April 2023. With Semillas de Vida, I participated in two seed fairs, a senate hearing, seed saving workshops, and a handful of farm visits, both within and outside of Mexico City, where the organization is based. Mexico City is also home to a wider network of civil society actors that are focussed on these themes. By partaking in the alliances formed by these groups, I was able to gain insight into how diverse civil society organizations including national and transnational non-profits, campesino organizations and more local projects, work together. I immersed myself as a part of the communications team for both Semillas de Vida and Sin Maíz No Hay País in a purposeful effort to reflect researcher-participant relationships that have the capacity to bring the discipline of anthropology into an anticolonial realm, and 'beyond complicity.' Although I could not pursue a fully participatory research plan, I did work with Semillas de Vida to create one participatory workshop, mapping actors involved with shaping the food system around maize in Mexico. Rather, my intention was to follow an 'engaged' anthropology (Mathers and Novelli, 2007), in recognition that I stand in solidarity with my interlocutors' goals to defend native corn and its cultures, promote and preserve biocultural diversity, and pursue food sovereignty.

To this end, the participants within this research mainly consisted of civil society organizers, and campesinos who also chose to work with civil society. Each of their names has been changed within the thesis to protect their identities. When possible, I visited farms in order to conduct semi-structured interviews, and thus participated in a multi-sited ethnography, even within the city. Some of my interviews and farm visits involved other organizations, including a nationwide organization

focussed on commercialization for smallholder farmers called National Association of Rural Producers Marketing Companies (ANEC) and governmental institution National Commission for the Knowledge and Use of Biodiversity (CONABIO). With CONABIO, I visited farms in the peri-urban neighbourhood of Tlahuac and held an interview with the director of an agrobiodiversity project. With ANEC, I was unable to visit farms, but held interviews with two campesinos and the director of the organization in Mexico City. I visited several farmers connected to Semillas de Vida, as they were my main research population, including two peri-urban sites, Milpa Alta and Tlalpan, and two rural sites, Cholula and Coixtlahuaca. The latter was the town within which I spent the most amount of time, interviewing three campesinxs, and participating in two seed saving workshops. The name of the town has also been changed for the privacy of interlocutors. These sites allowed me to gain insight into the huge diversity of campesinos that exists in the country, each with their own context, that these organizations, and eventually policy are aiming to grasp, and support.

In aligning my research questions, methodologies, and theory with contemporary discourse on decolonization, I aimed to honour Indigenous frameworks for ethical researcher-researched relationships, based on principles of reflexivity, reciprocity, and responsibility (Wilson, 2008). I was especially aware of this, given my positionality as a white foreigner, second-language Spanish speaker, and coming from a country (Canada) that has relationships of power and extraction with my host country. Keeping a thorough log and notes helped me to maintain this reflexivity throughout the research process, and I did my utmost to attend to my relationships with interlocutors with care. Through a decolonial lens, the role of the researcher is not one of 'discovering' knowledge, nor of 'giving voice' to a marginalized group, but rather to be a learner, listener, and ultimately a storyteller. My hope is that I have done justice to all the beautiful teachings

shared with me throughout my time in Mexico, and that each of my interlocutors will recognize a piece of themselves in the story I tell.

Roadmap: Corn and its Relations

To explore state and campesino communities claims to sovereignty made through corn, the first chapter will consider these actors' relationships to corn as a commodity. Civil society organizations' roles in supporting and contesting these claims, towards the 'defense of (native) maize,' sheds light on the multifarious effects of neoliberalism in Mexico. On one side, corn as a commodity allows the continued neoliberal assertion of power by the U.S. over Mexico, but it is also essential in the claims to food sovereignty made by producers at a community level. Through their distinct economic relationships to this crop, a duality emerges between transgenic and native maize varieties. As (transgenic) maize becomes a site for international claims based on its economic value, it is removed from its cultural implications. However, the campesinos protecting native corn interact with it as an economic entity, while maintaining its other meanings. In this way, corn as a commodity is not always removed from its lifeworld, as economic claims are made concurrently by overlapping sovereignties to resist one another, with civil society brokering these seemingly distinct interpretations.

The following chapter explores a relational element to the sovereignty claimed by communities. Corn as a commodity did not mean the same thing to campesinos as it did to companies, I argue, because corn was also seen as kin. Kinship relationships and the affect fortified between humans and the rest of nature through corn, offer a different interpretation of sovereignty that supports a

multispecies vision of food, land, and agriculture systems. This is exemplified through Jack Kloppenburg's (2010) argument that the seed and its genetics are a commons, subject to 'dispossession by accumulation.' I build upon this argument to highlight the ways in which seeds as commons can subvert the ideologies of ownership and superiority that underpin capitalism. With this inclusion and interpretation of the environment, sovereignty is brought into conversation with ideas of 'habitability' (Chakrabarty, 2021) a movement beyond anthropocentric and Western conceptualizations of sustainability.

In the first chapters, many examples include civil society and its interactions with other actors. With this in mind, the final chapter will argue that the civil organizations involved in the study leverage different forms of knowledge in order to position themselves as intermediaries between campesino communities and the Mexican government. Considering the importance of knowledge and knowledge regimes to colonization and concentrated state power over people and ecosystems, I argue that it is also a central to claiming sovereignty (Wood and Wood, 2020). In this case, civil society works to close gaps between the embodied and traditional knowledge of campesino communities, and the scientific knowledge necessary to appeal to the mainstream 'politics of probability.' (Appadurai, 2013) Thus, they act as connectors between knowledge regimes, in favour of "the weaving together of worldviews" to build truly sustainable, equitable, and regenerative futures (Kimmerer, 2013). By using the agrobiodiversity of the *milpa* as a metaphor, I will describe how organizations can strengthen each other by fulfilling different roles, toward the same ends, ultimately nourishing one another, and the system as a whole.

This exploration of 'the defense of corn' offers to take sovereignty seriously when claimed through food systems. The mediative qualities that civil society takes between the state, and communities, highlights the ways in which claims to sovereignty by these actors are both distinct and interacting. Though maintaining more classical views to state-centric sovereignty, I aim to contribute to the discourse on decolonial perspectives of this concept. By zooming in on the relationships that constitute cultures of corn, sovereignty is approached through a multispecies lens. The diversity of the ontologies that allow for these relationships, entails a sovereignty claimed through agency over community livelihoods, health, environments, and practices. In this way, community sovereignty resists both the biological and ideological homogenization of industrialized agriculture, and capitalism at large. The role of food in connecting humans to the environment means that claiming this sovereignty as agency, propagates visions of the future that transcend 'sustainability' in favour of aspirations towards 'habitability': the Earth made livable for a diversity of communities and ecosystems (Chakrabarty, 2021). In working towards food systems that add to, rather than extract from the Earth and communities, civil society networks offer an insight into the way that science and traditional knowledges can walk hand in hand. As we move forward in the uncertainties of climate change, this shift in discourse, to include the more-than-human and her stewards, is most certainly what we need.

Chapter 1. Corn as a Commodity

Diversity on display at the Milpa Alta native seed fair, March 3rd, 2023

We walked through the red gate and into the lush courtyard of ANEC's office. Across the driveway was an airy conference room, sliding glass doors open, where the alliance Sin Maíz No Hay País would hold this month's meeting. The walls were adorned with colourful works of Indigenous art, each dated with a different anniversary of the organization – 25 years of working with and for campesinos. ANEC is unique in its focus on maize productivity and commercialization, but still holds values of community agency, and native corn preservation at its core by supporting campesino organizations to sell their harvests in national markets and improving soil health through agroecology. Three of the most influential women within the alliance stood by the table greeting the others as they trickled in: individuals and representatives of a range of civil organizations, including Semillas de Vida, Greenpeace Mexico, and ANEC. The others, about 15 of them, would join via Zoom, from all walks of life, from native seed producers to scientists advocating against chemical pesticides. We helped ourselves to amaranth cookies and coffee as the conversation quickly began to flow freely.

"This is urgent," Paula said, pulling her silver hair into a low ponytail. As a prevalent nutritionist, academic and founding member of Sin Maíz No Hay País, she spoke with an air of authority, and garnered supportive nods from her peers. "How will we respond to the new decree?"

This eclectic group of activists had been working to push the Mexican government to ban genetically modified corn since the early 2000s, of course with a flow of new energy and emerging decision-makers over the years. Originally designed as a temporary campaign, that would work to support a class action lawsuit against transgenic corn (La Demanda Colectiva), Sin Maíz No Hay País had become a longstanding oppositional force to the Mexican government, and the interests of big agribusiness. Their influence over health and agriculture law reform surrounding Mexico's most

important staple food had seen great success, with the 2013 prohibition of transgenic corn being planted in Mexican soil (Tello and Morales-Hernández, 2015). More recently, there had been reason to believe that they would soon achieve another important step: to also prohibit the import of transgenic corn into the country. The presidential administration had put out a decree in 2020, promising to phase out the import of transgenic corn well as the use of glyphosate, a chemical pesticide classified by the World Health Organization as a 'probable human carcinogen' (Myers et. al, 2016), by 2024. The decree promised a complete replacement of these two agricultural inputs supported by agroecological transition, arguing that these actions should protect both the health of Mexican citizens, as well as the country's biocultural diversity (Secretaria de Gobernacion, 2020). In a rare occurrence, the alliance was in support of a governmental action, rather than against it.

As the date of this transition approached, the likelihood of its fruition faded. Contestation over the ban had begun to rear its head. The United States, the main exporter of genetically modified corn products to Mexico, had a considerable economic interest in, what the USDA dubbed, 'the Corn Decree' (Chinh, 2023). The U.S positioned the prohibition of these products as a violation of the U.S, Mexico, Canada trade agreement (abbreviated USMCA, or T-MEC in Spanish) (Ibid). Their first step in threatening international legal repercussions, was to demand scientific evidence proving that the harms caused by genetically modified corn could justify the policy (Ibid). In response, the Mexican government conceded on many of their commitments, promising to ban only the use of transgenic maize in specific products for human consumption, and leaving the dates for compliance undetermined (Secretaria de Gobernacion, 2023). In this way, the decree was simultaneously supporting and undermining years of activism by Sin Maíz No Hay País. This diverse group of activists needed to find their collective voice through overlapping and conflicting perspectives on this new iteration of the ban on transgenic corn. This would determine their strategy for influencing

both policy and discourse, an especially pertinent task given the suddenly international scale of the debate. Ironically, the entrance of the U.S into the debate also held opportunities for reaching a wider platform, as media outlets jumped on the topic.

As the group went back and forth debating how to respond to the decree, it became clear that for the activists at Sin Maíz No Hay País, it was not only the lack of clarity or the weakness of the policy that left them with a sour taste in their mouths. There was a sense that the U.S was exercising power over their food system with brute force. Even before the meeting, Nicolas, a co-worker at Semillas de Vida had posed the question at our office multiple times, with the same incredulous tone: "Why does the United States get to decide what is hurting us?" Paula, and other participants, echoed the sentiment during the meeting, declaring, "We don't want harmful maize, we want that which gives self-sufficiency and sovereignty." Even with unclear evidence about the direct harms of transgenic corn on human health, this corn was understood as being less nutritious than native varieties, taking agency away from communities, as well as contaminating the environment with agrochemicals and the depletion of biodiversity. By using both sovereignty and self-sufficiency to describe the food system they wanted, Paula also implied the importance of decreasing dependence on their not-so-friendly northern neighbour. In this way, the U.S move to hold Mexico to their previous levels of importation, was a move to discount the control that Mexican citizens had over their health, environment, and food system.

The Corn Decree gave Sin Maíz No Hay País an opportunity to fight for maize to be recognized beyond its economic value as a commodity, and instead as an emblem of Mexican cultural and agrobiodiversity, and a question of health. Moreover, their argumentation highlighted corn as a site through which power is exercised by the state and international actors upon communities. As such

they draw attention to the ways in which classical claims for state-centric sovereignty remain an important element of food sovereignty, as food and specifically corn in the Mexican context is used to determine who lives, and how. In relating transgenic corn to international and state claims to sovereignty, and histories of neoliberalism, this chapter aims to engage with corn as a commodity. While native maize does not live outside of these economic realities, the producers buying and selling it relate to its commercialization in a fundamentally different way than corporations, or the United States. Corn in the hands of campesinos remains integral to the communities, environments, and relationships from which it emerges. The chapter will thus also highlight unintended consequences of neoliberal policy in promoting collective action, especially through civil society groups. In this light, a decolonial view of sovereignty can also be gleaned from corn as a commodity, in the context of native maize and its communities and the assertion of agency over the quotidian. By exploring neoliberal histories and the rise of civil society in supporting campesinos, this chapter highlights claims to food sovereignty at both state and community levels, in their relations to corn as a commodity.

"Who Controls the Food, Controls the People"

What is more important to the life and death of an individual than food? Access to this essential resource dictates our survival, but also shapes our cultures, livelihoods, and ways of life. Even the state of our economies is often judged by the price of our staple foods: bread in many countries, and corn tortilla in Mexico. Our food systems govern who produces our food and how, as well as what types of nutrients that are available and to whom. In this way, food and food systems are also leveraged as sites of power, and arguably *biopower* (Lemm and Vatter, 2014). Capitalist structures

allow for corporations and states to consolidate power and exercise sovereignty over populations (Diphoorn and Wiegink, 2022). Especially in the context of industrialized agriculture and increasingly globalized food systems, this mechanism through which to exercise biopower has transnational implications. The visceral response of civil society to the 'Corn Decree' exemplified these feeling of dispossession, as the United States overtook their capacity as a community, and as a nation to make decisions about what sustains their bodies. For these activists, the U.S. move to block reforms that would move Mexican food systems towards agroecology and community agency, constituted a continuation of neoliberal governance that divorces corn from its biocultural significance.

The economic imperiousness of the United States has held a heavy hand over Mexican food systems and was intensified with the introduction of neoliberal policy (Baker, 2012). This set of policies and state actions in the 1980s and 90s reorganized agricultural practice throughout the country in favour of large-scale and industrialized operations (Harvey, 2007). By removing state subsidies and supports and dissolving traditionally communal lands, campesino livelihoods were transformed (Ibid). David Harvey (2007) used Mexico as a primary example in his discussion of neoliberalism to demonstrate how the removal of trade barriers and state responsibilities served to consolidate power for elites, not just as individuals, but as corporations, international institutions, and governments, especially pointing to the U.S. In this way, he argues that these actors were able to exert power over governments and populations around the world (Ibid). In the context of Mexico, the IMF and the U.S government offered to free the state from its debts, under the conditions that they implemented neoliberal policy -- increasing privatization, commodification, and 'free' trade under NAFTA (Ibid). Not only did this impede the traditional farming and livelihoods of smallholders, but it also opened the nation to "cheap imports from the efficient but also highly subsidized agribusinesses in the

United States [which] drove down the price of corn and other products to the point where only the most efficient and affluent Mexican farmers could compete." (Ibid, 101) In this way, the U.S flooded the Mexican market with their product, and many campesinos were pushed from their traditional lands and livelihoods. In turn, Mexico became increasingly reliant on U.S corn to feed its population. For the organizations within Sin Maíz No Hay País, the fight to preserve native varieties is tied to the revitalization of the cultures and agrobiodiversity that so many campesinos had to leave behind in the aftermath of these policies.

Neoliberal policy worked to remove communities from their abilities to feed themselves, and their nation. In turn globalized food systems focussed more on the import and export of commodified products, and power was consolidated for U.S agrobusiness within Mexico, not only for producers of corn, but also for the companies producing transgenic seeds, fertilizers, pesticides, and other inputs (Hayden, 2006). Now, growing concern surrounding the safety of these agricultural inputs brings this consolidation of power into the realm of *biopower* in a new way. The U.S. demand for scientific evidence proving the harmfulness of their product "brought life and its mechanisms into the realm of explicit calculations and made knowledge-power an agent of transformation of human life." (Foucault 1980a:143, in Petryna, 2013, 13) Only with science deemed acceptable to the U.S, and the harms they deem visible, can the Mexican state, and citizens themselves exercise control over the life, and livelihood that corn represents. In this way, Nicolas's poignant question, "Why does the U.S get to decide what is hurting us?" reveals that the control of Mexico's staple food by the U.S, not only speaks to the immediate threats of having sufficient food and economic stability, but also to a slow violence of this *particular* maize threatening detrimental effects on health, environment, and culture in the long-term.

As the government stepped back from its involvement in community support and social welfare, civil society rose, both replacing it through community-based projects, and advocating for agrarian policy reform (Richard, 2016). In this light, many of the activists working within Sin Maíz No Hay País, with their history campaigning for La Defensa Colectiva, also work to bring new laws to the senate, and garner support from them. While the Corn Decree was being released, another policy was also being discussed in the senate. The "Law for Sustainable and Adequate Food," which had been 11 years in the making, promised to institutionalize food security measures, and hold the Mexican government accountable to the United Nations call for the human right to food. Food security gained traction on the international stage, understood as a humanistic approach to security beginning with the 1974 World Food Conference (Carney, 2012). The framework of security, in this case, transcends its original conceptualization of understanding and justifying state responses to threats of violence and war. Security is applied to food in a 'wider' logic, including "anything that can be persuasively identified as posing a threat to the very existence of the state or society." (Goldstein, 2010, 490) In this way, food is recognized as imperative to the state, and thus to state claims to sovereignty. To this end, food security is widely recognized to have ushered in the Green Revolution and harkens back to the faults of industrial agriculture, including the genetically modified seeds and agrochemicals so contested by my interlocutors (Hurt, 2020).

Although the term food security has changed over time to circumvent the negative connotations of its history, and to include more cultural and environmental concessions, many still prefer to invoke a framework of sovereignty, even over a rights discourse (Carney, 2012). This was true for Senator Ana Lilia Rivera Rivera, a well-known ally to the civil organizations with whom I worked, who spoke passionately about the law as essential to survival, and to reaching food sovereignty. By invoking food as a matter of life and death, she related it to biopower, bringing forth the ideas that I had

heard from civil society: that the control of the corn sector by the U.S and agrobusiness was also a question of sovereignty. After all, she demanded, "Who controls the food, controls the people." For her, legally guaranteeing a turn towards agroecology and the protection of native corns, also meant a return of power to campesino communities. Thus, supporting her argument that "food should not, and does not need to be in the hands of a small elite." In this way, having sovereignty over food not only highlights the importance of inclusivity in decision-making, locality, culture, and the non-human world, but it also "represents a form of resistance to neoliberal economic development, industrial agriculture, and unbalanced trade relationships." (Carney, 2012, 72)

When the State Steps Out

Both civil society and farming communities involved in the 'defense of corn' would often frame their activism as a resistance, or at least reaction to the neoliberal political era in Mexico. For them, the agrarian change that dissolved campesino supports, and those which allowed the privatization and consolidation of industrial agribusiness, were direct and visceral experiences of dispossession. In other contexts, neoliberal privatization and competition in the economy also give way to subjectivities, or 'technologies of self' formed "in alignment with values of individualism, entrepreneurialism, and market competition." (Ganti, 2014, 94) However, for the interlocutors involved in this study, neoliberalism fostered cultures of collectivity and environmental care demonstrating the ironic turn for this dogma to "accommodate a theory of collective rights even though common scholarly understandings of it assume it is an aggressively individualistic ideology." (Ganti, 2014, 95) In the absence of the state and parastatal corporations, rose civil networks

supporting decentralized market strategies, local commerce, community driven food systems, and agroecological solutions.

In a noisy restaurant near the historic center of Mexico City, I met Luis, an older farmer from Chiapas. He had made the long trip from his rural and largely Indigenous state, to represent ANEC, as a leader of the organization. We spoke while he and his colleagues ate a late lunch, they would get back to work after our discussion. A mariachi band playing loudly in the background, I asked him about how he had become involved in ANEC. He launched into his story, highlighting the transition toward neoliberal policy that had brought the organization to existence, and to his life. The agricultural inputs imposed during the Green Revolution, in the 1960s and 70s, had allowed for Mexican production to increase very rapidly (Sonnefield, 1992). The food system was transformed to center efficiency and commodification brought by monocultures, chemicals, genetically modified crops, and mechanization (Ibid). These changes were stimulated through state subsidies, and the birth of parastatal companies that controlled these inputs, especially chemical fertilizers (Ibid).

Before neoliberalism, the government "practically gave us the fertilizers for free!" Luis told me. "Then, when CONASUPO (The National Company for Subsidies for the Population), disappeared we were all crying. What were we going to do for the commercialization of corn?" The dissolution of CONASUPO, as well as the privatization of the national fertilizer company, FertiMex, had caused the prices of inputs to skyrocket (Sonnefield, 1992). Luis and his community faced challenges as small and medium-scale farmers. Producing and selling enough of their corn to make ends meet became increasingly difficult, which he attributed both to a damaged soil health from the overuse of fertilizers, as well as a lack of support in reaching the national market. Many of the men, and even whole families migrated, and continue to do so, to find work on large-scale farms, in factories, or in

the informal sector. Those who stayed sought alternatives, forming a cooperative where they could work in community to pool resources and product. "So that's where ANEC comes in," Luis told me, nodding his head with pride, "organizing the campesinos so that we can market our corn and sell it."

ANEC is focussed on the commercialization of corn, however, their approach to both production and sales, has allowed them to work with the market to foster community values and environmental care – two pillars of food sovereignty. The organization worked to encourage regional farmer cooperatives, linking them together, and to national markets. This allowed small-scale farmers to compete with corn coming from large-scale industrialized agriculture, by way of collectivity. In this way, the commercialization of corn was a way for communities to continue their agrarian cultures, strengthen bonds with other producers, and maintain, or reclaim sovereignty over their livelihoods. While community agency and economic prosperity were enhanced through the linking of cooperatives, it was agroecology that allowed for communities to improve yields while claiming sovereignty over their means of production. Agroecology is an agricultural methodology that works *with* ecosystems, especially focusing on building soil health using 'bio-inputs,' rich in microorganisms, and naturally occurring nutrients. "That, we can do ourselves." Luis told me. "We don't need to buy it. We can do everything we are doing with what the Earth itself gives."

The organization helped these farmers to form cooperatives to produce bio-inputs as well, so they could process compost and make elixirs within their communities, boosting the productivity of their land. Not only did this prevent further contamination of the soil (and farmers) with chemicals, it also nourished and healed the soil. Agroecology, moreover, was a marriage of science and the traditional farming knowledge that these communities would have been using before the

introduction of cheap fertilizers. For Luis, the soil health underpins productivity, both of which were intricately tied to the cohesiveness of his community at large. "The young people are leaving because the soil no longer gives," he explained to me, patting his younger *compañero* on the back. So, if they could rebuild soil health, they could also reinvigorate their community, including traditional practices. In this way, capacity trainings that ANEC sponsored allowed campesinos to foster agricultural prosperity within their own communities and protected them from the arbitrarily changing fertilizer costs that had devastated their community agroecology.

Non-governmental organizations are "an essential feature of the decentralized and privatizing political-economic landscape associated with neoliberalism," often stepping in to fill roles that the government has left (Ganti, 2014, 97). ANEC emerged in this light, supporting farmers both in production and commerce. Scholars argue that these organizations can undermine already weakened states or serve to further implement neoliberal policy through development aid (Ganti, 2014). However, I would contend that the opposite is also true, when these organizations reimagine, rather than replace the supports provided. ANEC, for example, did not help farmers to compete in the market by providing fertilizers, or subsidies as a new, privatized CONASUPO. Instead, they searched for ways to subvert the industrialized practices that left farmers vulnerable in the first place. Today, the Mexican state has used their project as model through which to invoke an 'agroecological transition' on a national scale. Rather than weakening the state, civil society has thus served to strengthen it, developing alternatives and demonstrating their viability. In an unexpected turn, the neoliberal privatization of the national agrochemical companies promoted environmentally sound farming for smaller-scale producers across the country.

For many interlocutors, making the switch away from chemical fertilizers was a purely economic decision, felt with brutality. However, in hindsight, the nonchemical agriculture now adopted by many of these farmers, holds benefits that transcend the representation of farms as businesses, and the conceptualization of corn as a commodity. Especially when their abilities to subsist nutritionally and economically off their land are supported through commerce, the turn from industrial agriculture allowed many campesinos to exercise sovereignty over their livelihoods. In gaining freedom from the dependence on or dispossession by big agrobusiness, they could also build community, protect their health, and nurture mutually beneficial relationships with the more-than-human.

Commerce, Community, and Achieving Food Sovereignty

For many of the campesinos I spoke to, like Luis, understanding corn as a commodity was crucial to realizing their visions of food sovereignty. All of the farmers I spoke with produced corn on a small-scale, as a staple crop that they themselves consume. However, none did so in a 'vacuum'. That is to say, despite the diversity of these producers, they each relied on and participated in the purchase and sale of corn in some capacity. Although their relationships to corn were commonly preceded by values of identity and kinship, also engaging with corn as a commodity allowed for the continuation and proliferation of native corn varieties, and in turn campesino cultures. That being said, the ways markets reached, and reasons for participating varied based on the context. This revealed how food sovereignty could be achieved through the sale and purchase of corn on different scales, and for different objectives. Luis for example, whose goals were more based in commercialization, and national sales, spoke to the economic viability of agriculture in his community to prevent labour

emigration, and allow his community members to stay, and work the land. In contrast, campesinos in Coixtlahuaca, produced exclusively for the subsistence of their families. In this way, they were concerned more with the ability to exchange seeds and grain locally. For them, this had been an important strategy for producers to overcome a year marked by devastating drought.

Sat in at a sunny table in her garden, Doña Isabela, an older Coixtlahuaca native told me that the harvest was so stunted the year before, her family had only managed to harvest 24 cobs of corn. In order to satisfy their food needs that year, as well as seed for the upcoming planting season, they had needed to purchase corn. "We prefer to buy, although it can be a little expensive, from people from our own town, who have this (native) corn. To continue conserving it because we know it (the cob) will fill, it's sure." Buying native corn, and especially local varieties was much more desirable than buying hybrid corn from the government (*maíz de bolsa*), because she trusted it, and trusted in her community over the seed companies. In this way, the ability to participate in a local commerce demonstrates one way in which "the political and administrative decentralization associated with neoliberal reforms could be more empowering at a local level." (Ganti, 2014, 95) For some community members in Coixtlahuaca, the absence of governmental intervention to provide *maíz de bolsa*, built trust in their community resources, reliance on one another, and maintained the preservation of their native varieties.

The sale of native corn was also connected, in some cases, to a proliferation of cultures of corn for wider communities. For one interlocutor, the popcorn variety native to her home region is close to extinction, so for her, she sells seeds specifically "because I want more people to plant it." In this way, participating in the commerce of this corn, was essential to its proliferation and that of the histories and cultures that accompanied it. This vision of sharing culturally important varieties on a

grander scale, led another campesino to connect the sale of corn as a direct way to achieve food sovereignty. After helping seed the milpa with her, Valeria and I sat between her fruit trees looking down at the hazy city below. She told me,

> "I believe that food sovereignty (*soberanía alimentaria)* has to do with the collective. With the country in general. And self-sufficiency (*autosuficencia)* has to do with yourself, your nuclear family, in particular. To have food self-sufficiency doesn't give food sovereignty to the rest. Because, well, at least I can be producing for myself, but if I don't produce for others then it doesn't give sovereignty to the rest of them."

Overwhelmingly, food sovereignty, was not practiced for an individual, but rather required that a whole community, region, or even nation is invited to participate. The purchase and consumption of native corn, rather than '*maíz de bolsa*,' (meaning corn purchased from companies or the government, often hybrids) was an important feature for achieving this, eclipsing individualistic ideas that each person should work in competition with one another.

Native seed fairs, like the one described at the beginning of this work, offer a way in which local or community sovereignty has been scaled up to regional and national levels. The Tlaxcala native seed fair was in its 25th year when I was there, in March 2023. The square in the small town of Vicente Guerrero was shaded in the red-orange light of the tarpaulins strung above it. A maze of tables was lined into aisles, each adorned with the striking colours of Mexican agrobiodiversity. Producers from all over the country gathered to sell their products; from colorful corns, seeds and preserves, to jewelry, art, and other artisanal products. The diverse cultures surrounding native corn were on beautiful display. Each were able to practice the localized commerce so important to the movement,

while sharing ideas, knowledge, and support. By gathering to engage with corn as a commodity (in its simplest sense, something to be bought and sold), these producers were able to engage in the preservation of native varieties on a national scale. Moreover, the discussions and presentations positioned campesino work as political activism, with the fight against the corporatization of seeds hinging on community claims to sovereignty over their cultural practices surrounding seeds.

Commodity and its Competing Sovereignties

Through the lens of corn as a commodity, it becomes clear that the economic engagement with this staple is used by both the state and communities to claim sovereignty, not only over the food system, but over the lives and livelihoods of the population. In this way, sovereignty is being claimed simultaneously at state and community levels, but in vastly different ways. By employing corn as a commodity via trade agreements born from the neoliberal era, the U.S aims to assert control over what goes into the bodies of Mexican citizens. The role of violence in this transnational show of power is made visible, as civil society groups contest the import of U.S transgenic corn based on the 'slow violence' of its environmental and bodily harms. In this way, the 'Corn Decree' lends itself to more classical visions of sovereignty, as legal, or *de jure*, recognitions of the nation-state and the legitimization of violence (Hansen and Stepputat, 2006). When commodified to the ends of industrial agriculture and transnational trade, maize represents the food system as an "extractive enclave, from which capital is disconnected from its surroundings." (Diphoorn and Wiegink, 2022, 425). That is, this form of commodification seeks to divorce maize from the biocultural significance it holds in the Mexican culture.

In contrast, when campesinos engaged with corn as a commodity, it spoke not to the control over another population, but to an agency over their own livelihoods, bodies, communities, and ecosystems. The commerce surrounding *this* corn thus expanded the field of sovereignty to include others, on community, regional and national scales. The neoliberal recession of the state did consolidate power for the U.S and its corporations in a way that continues to be felt, however it also strengthened community and civil society movements towards food sovereignty. By highlighting the role of civil society networks in mediating relationships between the state, transnational actors, and communities, claims to sovereignty through food emerge as simultaneous, interacting, and non-linear. In this way, the food sovereignty framework allows a reimagination of sovereignty as a 'native category,' through which it can be claimed simultaneously in state-centric, as well as locally specific ways, the latter often implying relationality and interdependency (Bonilla, 2017). Communities and the civil society networks highlight the multifaceted relationships to corn, with commodity being just one modality through which to engage with it. In this way, the movement for the defense of corn opens a vision sovereignty that includes and underpins another campesino relationality: corn as kin.

Chapter 2. Corn as Kin

Maíz Temporal, a native variety of corn, hangs to dry with the laundry, in a method of seed saving. Coixtlahuaca, February 26th 2023

Like most cosmologies, the Mayan creation story holds lessons not only for how to behave in the world, but how to relate to it. Within this parable, ethics of responsibility, respect and reciprocity are inseparable from the land, and what it gives: maize. After many attempts to create humans made of different materials, each with detrimental downfalls,

> "…the gods tried again to fashion humans who would live right in the beautiful world they had created, in respect and gratitude and humility. From two baskets of corn, yellow and white, they ground a fine meal, mixed it with water, and shaped a people made of corn. They were fed on corn liquor and oh these were good people. They could dance and sing and they had words to tell stories and offer up prayers. Their hearts were filled with compassion for the rest of Creation. They were wise enough to be grateful. The gods had learned their lesson, so to protect the corn people from the overpowering arrogance of their predecessors, the people made of light, they passed a veil before the eyes of the corn people, clouding their vision as breath clouds a mirror. These people of corn are the ones who were respectful and grateful for the world that sustained them -- and so they were the people who were sustained upon the earth. (Adapted from oral tradition)" (Kimmerer 2013, 343)

What does it mean to be an *hijo del maíz* (child of corn), for the people who grow and eat it daily? The campesinos I spoke to, whether Mayan or not, had this relationship with corn: that it is not only food, but a part of their being, and something they identify with far beyond vocation or gastronomy. The love, care, and trust that accompanies this kinship, I argue, offers a multispecies approach to sovereignty, through the lens of food. This is exemplified through the understanding of native seeds and their genes as commons, transcending the ideologies of ownership and ultimately the human-nature divide that underpins capitalism. A sovereignty built through biocultural diversity, identity,

and relationality, alludes to a shift in discourse, suggesting "the ability to shape the conditions of possibility for thriving and becoming—that is, the conditions of habitability." (Langwick, 2018, 435) The necessary inclusion of the more-than-human and diverse worldviews in these claims to food sovereignty, suggests the reimagination of how we live and work together for the regeneration of our planet, beyond sustainability. This chapter explores the ways in which corn as kin can represent a form of sovereignty through relationality to the more-than-human world, as humans are understood as integral to their ecosystems.

A Human/Nature Relationship

In her dark, smoky kitchen, Doña Isabela kneaded a mountain of yellow-white *masa* (dough) with impressive force, given her age and stature. She beckoned me over as she formed a ball in her hand and placed it between the metal press. "You try," she said, through her cheeky grin. We had seen this maize that morning at the mill, already pre-'cooked' through an ancient process known as *nixtamalization* which allows the nutrients to be better absorbed by the human body. The miller passed the corn through the machine by hand, grinding it with just the right amount of water to form a dough, as Doña Isabela's daughter collected it into a colourful woven basket. In the chill of the early morning, the small brick room was warmed with the chatter and laughter of the community's women waiting patiently for their turn to sit at the mill with its proprietor and transform maize to *masa*.

Now, Doña Isabela was expertly transferring the thin discs onto the woodfire stove. A young niece stood by, ready to flip them with a light touch of the hand, just as she had been taught. Cracked beans steamed as they were served from their clay pot, along with the tortillas, *ahogada*, smothered in a smoky red salsa ground with a mortar and pestle. Later, Isabela's husband, Don Eduardo, would lead us through the *milpa* to an open field and demonstrate how to plant their other variety of corn, *maíz cajete*, "like what you grind the salsa in," they explained. Don Eduardo used the half-moon of the *coa* (a traditional tool) to form a small well, or *cajete*, in the ground. He spun the tool around, piercing a hole in the center of the well, and dropped some seeds from the basket at his hip. In this way, the seed could reach the little bit of moisture in the dry soil as it waited, and as the family prayed, for the rain. When it did grow, the small plant would find itself sheltered from the wind. The next month, some community members would gather to build a large water catchment on this property. Taking a break from the heat, I sat with Doña Isabela in the shade of her garden, as she removed the spines from some nopal cactus for lunch. Speaking of the varieties of corn that she and her family steward, she told me,

> "My dad had this color of corn, and he took great care of it. It has been with me my whole life. And the tortilla… not the ones from the machine [meaning processed or bought tortillas], [although] I do eat them out of necessity… but a tortilla made from my own corn that I know has accompanied me for years. Well, it is part of my existence, of the land. Because we say, 'we are dust and to dust we return.' So, we love the Earth as our mother, no? Personally, I give thanks to this land, and I ask her forgiveness, because many times we have contaminated her so much."

Doña Isabela, both in her actions and words shows how the continuity of her culture is tied to concentric circles of kinship between family and community, crop, and its environment. The actions of planting, processing, preparing, and eating native corns connect her to the land, and by sharing in these experiences and passing this knowledge through generations, the community lifeworld is tied to the land as well. Corn is connector and engaging with it in this way centers the affective attachments that form campesino identities.

The campesinos I spoke with were a diverse group of people. Some, like Doña Isabela, had lived their whole lives in the countryside, while for others, the city had expanded into their farming communities as they grew up. Some planted solely for the subsistence of their families, others also sold their crop, either as grain or as *tlacoyos* in the market. Some were young and had come back to traditions of farming after spending time in universities, drawn to the peace of working the land, the connection to their culture, and what farming could mean for the environment. Along with their connections to civil society organizations, the commonality of these campesinos was in the preservation of native maize. Despite their diverse contexts, this shared undertaking also imbued them with common ways of relating to this crop and the agrobiodiversity it entailed.

When asked about their relationships with corn, each producer I spoke with would begin with a story of their family. Valeria, a producer from a peri-urban neighbourhood of Mexico City, told me with a good-natured laugh, "I was born in the milpa, sowing seeds and everything." Though hyperbolic, this represented her connection to corn, and the farming system in a deeply familial way, as she learned and participated alongside her parents, and grandparents. For her, and most every other producer, native corn and the knowledge surrounding it was an inheritance, and the goal was to steward both for future generations. When I asked, Alba, an interlocutor who had come to

farming in a more round-about way, what it meant to work with native corn, she inhaled deeply, and on the exhale professed, "For me, it represents my history, my root, my past, my heart, everything that was left for me, what I am, and what I want to be." In this way, she connected these ancestral ties to her own identity: intrinsic, material, and aspirational. Although some producers did refer to themselves as *hijos del maiz,* these more subtle ways of connecting corn and to the being of the individual produced a similar affect: caring for corn as kin. Moreover, corn was often spoken about alongside other native plants, and in turn the sentiments, responsibilities, and explicit language of kinship were extended to the wider ecosystem.

> "I call her my mother Earth." Luis told me. "I love her, I give to her, I talk to her so that the Earth listens to me. What does she want? And if they join, I tell the young people when I go to sow, I talk to her. I ask for permission, and she has never left me hungry… there are lands that do not give... but not with love. The earth stands still with love. Tenderness, one must give that. Love, affection, life."

To be an *hijo del maíz* (child of corn) is to engage with the plant as a part of its context, both cultural and ecological. These ways of relating to the Earth, and to plants was echoed by many interlocutors, especially those who lived in the countryside and had been planting their whole lives: Referring the Earth as a mother, engaging with the non-human (sometimes verbally), asking permission to sow, and communicating this as showing love. However, the affects underlying those shows of kinship were present in all my interviews. These were relationships built on love, connection, trust, care, responsibility, and reciprocity. Trust that by taking care of the corn, and its ecosystem, it will sustain you, and future generations: the cob will fill with kernels, it will be flavourful and nutritious, keeping you full for longer, and it will protect you from illness.

In contrast, *maíz de bolsa*, (translated to corn from the bag, meaning purchased or hybridized) and highly processed transgenic corn products were understood by producers to be untrustworthy. Many producers that I spoke with mentioned that they had planted *maíz de bolsa* at some point, and bought and eaten tortillas made from processed, transgenic corn flour. The conclusion for most was that it was insufficient, growing well for only one season, not having much flavour, nor keeping them full for long. Moreover, it was certainly not worth the risk of proliferating illness in their community. Campesinos related a range of negative outcomes to the introduction of *maíz de bolsa*, from obesity, diabetes, and other diet-related diseases to the cancers and soil infertility connected to chemical pesticide and fertilizer contamination. These corns were fundamentally different in a material and immaterial sense, even if they both get planted in the soil, and eaten as tortilla. Stewarding native corn entails an intimacy with the Earth, an ideology of interconnectedness, while *maíz de bolsa* represented commodification, disconnect, and contamination.

The distinction between diverse, native agroecosystems and the homogeneity of industrial 'plantation' agriculture has been used by many scholars as an analogy to describe the consequences of hegemonic ideologies of domination on both human community and the natural world (Tsing, 2017; Patel and Moore, 2018; Escobar, 2017). When corn is contaminated, a trust is broken. This is Doña Isabela asking for forgiveness, and the fear that Luis expressed, when the fertilizers deteriorated the soil, and his community members had to migrate. In her study of the interconnected and symbiotic relationships between traditional farming in Honshu Japan, forest ecosystems, and matsutake mushrooms, Anna Tsing (2017) argues that this contamination is one of the ways in which the plantation, or the 'simplified ecologies' of industrial agriculture allow for the removal of species from their 'life worlds.' The degradation of natures and humans dispossess them

of their abilities to enter relationships of care and responsibility with one another, and as such, the cultures that work *with* biodiversity, like these farming communities, and the campesinos in this study, are also obstructed (Ibid). In this way, "the 'plantation form' effaces the relations maintained with and by the forest-world (heterogenous, diverse)," Escobar argues, "to bring about the ontological occupation of local relational worlds." (2017, 245) That is to say, that the imposition of this agricultural system, reinforces the propagation of a worldview in which the more-than-human is reduced to resource. This is reminiscent of the biopolitical reduction of humans to their economic capacities, posed by Foucault (Lemm, and Vatter, 2014), and Patel and Moore (2018) argue that they share the same root: a philosophy of domination, extraction, and mastery over nature. It is this complex of superiority that has been engrained and institutionalized, proliferated by the economics/ideologies of the plantation world, and it is this complex of superiority that the Mayan creation story at the beginning of the chapter warns against. In this light, might relating to the more-than-human as kin teach us our place in the ecosystem?

Through these examples of the human-nature connection, these authors point to the capitalist propensity to separate the two. While neoliberalism is an important analytical tool in understanding the state of food sovereignty in Mexico, this ideological movement is a relatively recent invention, existing only as an intensification of capitalism, the economic system that is arguably much more encompassing and deeply engrained within dominant society. Scholarship regarding neoliberalism often concerns itself with the way that a powerful few relate to the majority, through "a political agenda that was hostile to the idea of economic decisions being predicated on working-class interests." (Ganti, 2014, 93) This relationship between economics and power is echoed by Patel and Moore (2018), as they describe the ways in which human life is devalued through labour, colonization, slavery, policing, poverty, and other forms of supremacy. However, they also argue

that the domination, or what they call "cheapening" of nature, via commodification and pollution, is a precursor the domination of peoples, in that "capitalism's practices of cheap nature would define whose lives and whose work mattered-and whose did not." (Patel and Moore, 2018, 22) To this end, the food sovereignty movement, and its propensity to connect community agency with the more-than-human, has emerged not only from the context of neoliberalism but in resistance to the wider ideologies of capitalism that separate humans from *our* life worlds.

The separation of human from nature, however, is a false dichotomy. This is exemplified in industrial agriculture, where the product itself exists to be bought and sold as efficiently as possible, and the chemicals used to acquire that growth contaminate the crop, and whatever human and non-human communities live with it. Patel and Moore (2018) use example of industrialized chicken manufacture, describing how biological control over chickens as a species (cheap nature), is made possible on the backs of underpaid, and poorly cared for workers, who then rely on this low-cost chicken as food (Patel and Moore, 2018, 3). The same notion can be applied to industrial maize. The genetic modification of seeds to augment their short-term production, as well as the chemicals they are modified to work with and their pollution, would constitute cheap nature. The harms wrought by these chemicals, and the policies that make farming feasible only on industrial scales, cheapen human labour and life. And in the end, the imported and highly processed corn becomes the only affordable option for many people, inciting a crisis non-communicable disease in Mexico. In essence, capitalism cannot achieve cheap nature without cheap humans, or vice versa. Thus, even in a quest of domination, the interconnectedness of human and more-than-human is incontrovertible.

This understanding of the ways in which capitalism works to cheapen the web of life, and proliferate itself through exponential growth, has created a double bind for the movement towards 'sustainability' that our generation is grappling with. Economic sustainability under capitalism necessarily undermines the conditions necessary to reach other forms of sustainability, instead further augmenting social inequalities and environmental degradation (Eriksen, 2022). This is exemplified in the first chapter, in which the use of corn as a commodity allowed for companies and states to assert power *over* communities and ecosystems in the name of economic 'sustainability,' and the 'efficiency' in production it required. This is contrasted with community leveraging of the economic value of corn. Rather than rendering maize an extractable resource, campesinos were able to use this tool to support and share values supporting biocultural diversity, and a wider vision of food sovereignty as power *with* nature and community. The difference, I argue, is in the affect. For these small-scale native maize farmers, their crop was never simplified into a commodity, even when being bought or sold. It was held in relation.

In the search for a societal aspiration that dismantles capitalism's dominance thinking, many anthropologists and other scholars have argued that the term sustainability is, at best, inadequate both in describing and achieving the environmental and social transformations it *should* entail. Terms like Tsing's (2017) concept of Holocene resurgence or Dipesh Chakrabarty's (2021) idea of habitability, each embody a 'multispecies approach' wherein "the intrinsic value of diversity—whether cultural or biological—emerges as the foundation stone of hope for a liveable future earth." (Brightman and Lewis, 2017, 6). These argumentations are built off the backs of Indigenous cosmologies, wisdoms, and scholarly works, which would maintain that culture and environment actually cannot be separated into two categories of diversity upon which to base human-nature relations (Wilson, 2008; Kimmerer, 2013). The final line in the Mayan creation myth exemplifies this:

"These people of corn are the ones who were respectful and grateful for the world that sustained them -- and so they were the people who were sustained upon the earth." (Kimmerer 2013, 343) Sustainability in this sense, is a reciprocity between humans and the rest of nature.

In an effort to reinforce this connection many practitioners, including the organizations with whom this research was conducted, work toward the preservation of biocultural diversity, that is, the intrinsically interrelated eco-social systems that comprise the planet (Maffi and Woodley, 2010). For Semillas de Vida, this entailed the promotion and support of seed saving techniques, and the development of seed funds through which native varieties and the cultural practices around them are preserved in tandem. Like much of the food that we eat, corn has coevolved with humans, in what is now Mexico, and arguably continues to do so (Nerissa, 2007). The peoples who have preserved it for time immemorial, who have the skills and affect to care for maize as kin are cared for in return by this non-human being, in its unique form, as it sustains them. This is embodied by the campesinos with whom I spoke, in what Tsing would certainly consider resurgence: "the work of many organisms, negotiating across differences, to forge assemblages of multispecies livability in the midst of disturbance." (Tsing, 2017, 52) As these authors point to a propensity of industrialized agriculture and capitalism as a whole, to enter into reinforcing feedback loops of homogenization, the food sovereignty movement creates space adjacent to the dominant system in which this alternate affect can act as a leverage point through which to create change, not just in the food system, but in our ways of relating to the natural world (See: Meadows, 1999)

Sovereignty Reimagined Through the Commons

We arrived at the town center to set up the second monthly seed saving workshop in Coixtlahuaca. The room at the *Presidencia* (town hall) was a cool escape from the afternoon heat, with stone floors and a raised stage at one end. Through the tall stacks of plastic chairs at the other end, were two large murals of valiant looking men, and adjacent hung the town crest. The painted mountainous landscape with maguey cacti, was bordered with corn, wheat, and the moto "*Amor a la tierra por la vida,"* Love of the land, for life. The walls were adorned with archival photographs of the town, paint peeling on the walls behind them. We set up the projector and chairs, as the familiar faces trickled in and took their seats. The workshop this time, read more like a presentation, led by David on the topic of seed funds (*fondos de semillas*).

These communal or familial reserves of seeds not only work to preserve native varieties and protect farmers from poor harvests, but they also strengthen the cultural practices surrounding seeds, and the collective decision making capacity of communities. In essence, they frame seeds as a commons. Commons are often understood to be comprised of inalienable resources, those which belong to everyone, and cannot easily be siphoned off and owned. Even though seeds are not freely accessible in the way that commons like lands or waters have been, they have been shared and managed thorughout history as such because the "continuous recombination of genetic material… produced the agronomic resilience that is characteristic of farmer-developed crop varieties and landraces." (Kloppenburg, 2010, 371) Not only does this have implications for the environmental adaptability of native seeds, it also speaks to the unique way in which seeds are commons: their exchange and use fortifies them. Like with other commons, culturally specific and localized decision making processes necessarily accompany their proliferation (Kloppenburg, 2010).

With the rise of genetically modified seeds, the companies investing in these sciences sought to accrue a return (Ibid). However, the seed presented a uniquely difficult case for commodification because of its reproductive quality. By planting a crop, assuming that the season is kind, farmers are both growing their food source, and the seed for the next season. To require the purchase, year after year, of their product, intellectual property laws are now applied to seeds and their genetics, as a "juridical construct shaped to serve corporate interests." (Kloppenburg, 2010, 373) Along with the imposition of these seeds through the Green Revolution, this legal turn allowed for the enclosure of seeds as commons, through 'accumulation by dispossession' (Harvey, 2003). Extrapolated from its agrarian roots in 'primitive accumulation' (Marx, 1977), this concept articulates the continuation of capitalist economic and ideological strategy to dissolve commons at the expense of communities who use and manage them, divorcing "producer from the means of production." (Marx, 1977 in Kloppenburg, 2010, 372). Kloppenburg (2010) points out the irony that today, commons related to agriculture are also the newest frontier for enclosure, expanded to include the immaterial of what he terms 'the gene-scape.' Much like my interlocuters, he argues that this enclosure dispossesses farmers of their capacities to reproduce not only their crops, but their cultures.

David flipped through his Powerpoint presentation and displayed a dimly lit photograph of a dozen plastic bottles filled with seeds. "Does anyone recognize this?" He asked. Doña Isabela raised her hand, and said it was in her kitchen. "I wanted to show how simple a familial seed fund can be, but they can also be for whole communities." On the next slide were two photographs, one archival and one current, of a wooden silo, loosely sealed and filled to the brim with three colours of corn. In the meeting the month before, we had talked about the diverse seed saving methods in the community. This photo represented one that the community no longer used, but remembered. He explained

how this structure, called a *troje,* protected seeds from pests by working *with* the weather to eliminate them. It let the elements touch the seeds, and therefore any pests that would be inside, but its narrow form ensured that moisture wicked away quickly. "Maybe we can try to reconstruct this, I've seen similar techniques done in other communities."

In this way, the commons, contrary to private property, necessarily represent the biocultural entanglement of human and nature including not only the inalienable natural world, but also, and "more significantly, those results of social production that are necessary for social interaction and further production, such as knowledges, languages, codes, information, affects, and so forth." (Hardt and Negri, 2009, viii) In claiming the commons, thus, a relationship to the natural world *and* community must be forged. Through the lens of biocultural diversity this entails "collective rights…to carry out traditional stewardship roles vis-à-vis Nature, as conceived of by indigenous ontologies." (Bavikatte & Bennett, 2015, 7) Moving towards a reclamation of the commons, and the relationships necessary to manage them, challenges the very structures and philosophies upon which capitalism is built, and sovereignty is claimed.

The next photo displayed a warehouse, lined floor to ceiling with plastic boxes storing seeds. He used this image of the seed bank at the International Maize and Wheat Improvement Center (CIMMYT) to place in contention with seed funds. Although the term in English is often used interchangeably, to him, seed funds represented a communal reserve, and the goal of biocultural preservation. In contrast, he described seed banks as private entities, with immensely diverse stores of seed, all protected by law and often coopted from community. "They [CIMMYT] would be happy if campesinos stopped producing because they have the power of these seeds already." This posited seed funds as a maintenance of community agency and control. Monserrat, David's wife,

leaned over to me and whispered, "Imagine if *Cajete* maize had one owner." I responded that I imagined the whole community would change. As the meeting came to a close, the conversation shifted to the processes by which they would make decisions about these seed funds, hinting at an emergence of this community's unique way to manage their commons.

In this light, the preservation of seeds presents an opportunity to resist not only capitalist economic advancement, but also the 'evacuation of democracy.' (Muelebach, 2018) The use of 'democracy' in this term alludes to a collective decision-making capacity which, in whatever form this community chooses, is a reclamation of the sovereignty over their food system that they aspire to. Andrea Muelebach's (2018) ethnography of the reclamation of water in Italy through local and embodied democracies sheds light on the ways in which decision making becomes concentrated, or privatized by the state, or companies when commons are commodified. With seeds having a duality as both food and reproductive being, "who controls the seed gains a substantial measure of control over the shape of the entire food system" (Kloppenburg, 2010, 368). This is amplified when a food system represents not only a way of eating, but a way of relating to the natural world. In the workshop, reinforcing seeds as commons through seed funds was represented as something that supports exchange, sharing, community decision making, and resilience, while subverting the assertions of institutional sovereignties on the community. In this way "the commons meant refusing both the idea that the distribution of goods ought to be channelled through the market and that collective decision-making ought to be channelled exclusively through the state." (Muelebach, 2018, 350) Seeds as commons are then held in a fundamental opposition with seeds as a private good through the types of power, or the power for *whom* they represent.

The way that this power relates to sovereignty, is held in conversation with, but also reimagines the classical understanding of sovereignty developed in chapter 1. Though the state and corporations are understood to exercise sovereignty through biopower, control over the life force of the community and its corn, the claims underlying community sovereignty, in this case, have a different quality. Rather than violence, (bio)cultural continuity and thus the relationships held between seeds, corn, agroecosystems, and the community are described as the resistance through which they can claim their sovereignty. That is not to say that violence is not used by communities to (re)claim sovereignty after the social and ecological destruction of colonization, resource extraction, and other enclosures, especially by Indigenous peoples, campesinos, and other marginalized groups. Including in the very regions that some of these interlocuters came from, militant resistance to neoliberal agrarian reform was used successfully by the Zapatista movement to protect their lands and communities (Richard, 2016). However, I would argue that it is not the threat of violence, or their ability to assert violence on others that awards them sovereignty. Their sovereignty exists outside of their struggles against oppression. In this sense sovereignty is not claimed by 'using the master's tools to dismantle his house', but rather in the maintenance of an ontology that Escobar (2017) would describe as "the pluriverse or, to use the wise Zapatista formula, 'a world where many worlds fit'." (239) He argues that through this ideology of relationality, heterogeneity, and diversity, "the perseverance of communities, commons, and the struggles for their defense and reconstitution," necessarily go hand in hand (Ibid, 245).

Sovereignty as Habitability

In 2022, the year before this seed saving workshop was held, a devastating drought had hit the town of Coixtlahuaca. Many were unable to sustain themselves from the land that year and were left with fewer seeds to plant this season. Their reliance on other commodities intensified, staple foods bought from elsewhere necessitated wage labour, and sometimes migration and financial government support. As the community headed into planting season, they were left with a difficult decision of whether to plant, and possibly lose much of their reserve to another drought, or not to sow, foregoing the possibility that in that year they would have their own crop of corn. Neither being ideal, their breaths were held, wondering when or if their crops would receive the water they so desperately needed.

During the seed saving workshop, David positioned the proposed seed fund as an important step in augmenting familial or community reserves to protect the community from future climate events, like the past years' drought. Not only was this climate adaptation for the community, but also for the seeds themselves. Saving seeds in this way, "regenerates seeds in their own place, and creates resistant genes," in what David called "living systems." This would require the community to continue their cultures of seed saving, planting, and stewarding both land and seed, in order for the plants that they rely on to continue sustaining them through a changing climate. Indigenous scholar Kyle Whyte (2017) goes so far as to argue that sovereignty *with* the more-than-human world is accessed through a self-determination defined beyond decision-making, to encapsulate "a society's overall capacity to adapt to social and environmental changes, or resilience," alongside ecosystems (6). This would suggest that cultural continuity allowing the seed to adapt to the changes specific to that region, so that the community can too, constitutes a claim to sovereignty in itself.

That being said, communal decision-making remains an important way that seeds as commons imbue communities with a form of *relational* sovereignty. Bonilla (2018) argues that decolonized views of sovereignty can serve to reimagine this concept through "recognition of the non-sovereign nature of most social relationships." (333) That is, the interdependency of the human condition touches the political, intimate, and affective; an idea that is exemplified by campesino relationships to maize. Andrea Muelebach (2018) similarly argues that the relatedness expressed by her interlocutors to the commons, symbolized it "as an inalienable resource through which individuals are rendered profoundly non-sovereign; tied not only to water as a most intimate kin, but to each other in this shared need." (349) While kinning language was used explicitly by Muelebach's interlocutors, it was felt and acted upon sometimes implicitly by the campesinos I spoke to. However, in both cases, communal decision-making capacities, as one form of sovereignty, were claimed through the reclamation of these respective commons, and thus through their mutual dependency on community and 'resource.' Agency was formed in the management of the commons, a practice requiring relationship with and reliance on both human and non-human. In this way, as these campesinos preserve native maize and exercise their relationality to this plant, they are also imbued with the capacities to manage the reserves of its seeds collectively.

Doña Isabela and her family had decided to seed despite the drought. However, they were met with some criticism. "Many have said to us that we now only plant out of custom... that's what they tell us! But it is not custom, it is something part of us. Well, in our region, I say, it's part of our life… [even if it doesn't grow] I feed the Earth, right? That *maicito* (an affectionate term translating to 'little corn'), even if it is a millimeter, it nourished the Earth because it stayed there." This exemplified the intimate relationship she held with both corn, in using the familiar phrase, and her philosophy of

reciprocity with the Earth, which she would later call "the mother of all mothers." In claiming these relational identities, she is highlighting the importance of cultural continuity, beyond custom or practice, in supporting these agroecosystems. This interconnectedness solidified her family's decision to plant again the following year, as a responsibility.

The ability for seed saving to strengthen community and crop resilience, is a testament to the importance of this practice in fortifying the "rich repository of genetic resources on which future world food production must depend" (Kloppenburg, 2010, 371). That is, we need this agrobiodiversity, and in turn the cultures that steward it, to protect our food systems in a changing climate. Coixtlahuaca, and the example of the workshop further demonstrates how this genetic diversity cannot be divorced from the cultural and ecological diversity from which it emerges. This biocultural approach to sovereignty allows for a vision of sovereignty claimed through relationality, resisting the structures and ideologies of dispossession, and capitalism. The intertwining of human and more-than-human that emerges from food sovereignty works to dissolve the human-nature divide, and thus call to question the fundamental tenants of capitalism, power, and ownership. Rather than a question of "what life is or how it is managed in the interest of power," this frame asks "… what makes a planet friendly to the continuous existence of complex life." (Chakrabarty, 2021, 83) In this way, taking food sovereignty as a serious example of how sovereignty itself can be claimed, contributes to a perspective of habitability (Ibid), moving beyond the anthropocentric, human/nature divide.

Chapter 3. Knowledge, Power, and Alliance as Milpa

A mixture of corn, fava, and pinto beans, ready to be seeded in a milpa farming system. Tlalpan, Mexico City, March 26th, 2023.

David's mother, Rosa, walked us through her garden after breakfast. The sun trickled in through the apple trees, as Rosa showed us each section – one for maguey, hollowed out to make *pulque* from the sap, another for nopal, a consistent and generous friend, some rabbits in a pen. I was there with the Semillas de Vida team, to help launch the seed saving project that was beginning in Coixtlahuaca, David's hometown. He and his wife worked at a university and were excited to see this project finally come to fruition after years of relationship building with Ana and the organization. Finally, we arrived in a swath of plants, tangled, and intertwined even in the early spring. "Our *milpa*!" Rosa introduced us to its workings – some fava and black beans quietly fixing nitrogen to the soil, *Temporal* and *Cajete* corn, with tall, sturdy stalks allowing the bean vines to grasp the sunlight, and squash spreading its leaves like a blanket across the soil. Dotted throughout were chili, tomato, and wild edible greens, called *quelites*, that just appear with this farming system. Ana bent to harvest some tomatoes, smiling up at Rosa as she described how Ana could plant them in her own garden, taking a piece of the pueblo back to the city.

The *milpa* system is an ancient farming practice that is based on a symbiosis of corn, beans, and squash, to create an agroecosystem. It has been used across North America for time immemorial, often referred to as the three sisters. In Mexico, however, the *milpa* is unique in its agrobiodiversity, consisting of up to 60 species, both wild and cultivated. Each has their own unique role in the ecosystem, cuisine, and cosmology.

Each species is a gift and has a gift.

In one of our first conversations upon my arrival in Mexico City, about a month earlier, Ana had used the *milpa* to describe to me how civil society works towards the preservation of native corn.

Each element of the system supports one another, despite working towards different objectives. There is strength in their diversity and together they make something whole. A complete nutrition, ecosystem, culture. This farming system, she told me, "…is something that can teach us a lot about how we can work together." In this way, she brought attention to the diverse ways that organizations working in the defense of corn relate to one another, communities, the state and other actors, including academia and consumers. What are the roles and actions that these organizations take, and what type of information or knowledge do they transfer between the state and campesinos? How might these interactions serve to nourish this emerging food system as a whole? And what qualities does food sovereignty take on as a result?

The *milpa* works through the attributes of its physical form, with each plant having its own place and structure, but is also more deeply connected beneath the soil, thanks to fungal networks between their roots. It is these mycorrhizae that allow the *milpa* to support itself as a system, sharing nutrients and facilitating a flow of information (Simard, 2021). In her memoir, *Finding the Mother Tree: Uncovering the Wisdom and Intelligence of the Future,* Suzanne Simard (2021), who has dedicated her life to uncovering the mysteries of these fungal connections in forests, reveals that ecosystems do not o*nly* work in competition in the way that science has taken for truth since Darwin's 'survival of the fittest'. Cooperation is just as essential to their mutual flourishing. After planting the three sisters in her own backyard, Simard (2021) described,

> "…how the mycorrhizal network played a part in this dance, my garden's network shuttling nitrogen from the nitrogen-fixing beans to the corn and squash. And the tall, sunny corn transmitting carbon to the beans and squash it was shading. And the squash sending the water it had saved to the thirsty corn and beans." (179)

Throughout my months working with Semillas de Vida, I began to understand Ana's use of this metaphor, and the lessons she alluded to. The networks of civil society actors can work much like the plants in the *milpa* in their structures, and much like the mycorrhizae in their function. The organizations remain individual entities, but each is nourished by the other through the networks of information flow. Although there are often competing principles, overlapping projects, and conflicting goals, there is also a cooperation between these groups that allows them to access a more complete story, and attend to the connections between the parts. By facilitating the flows of information and knowledge between the state and communities, these networks offer insight into the importance of knowledge and information in creating systems change. As these actors often represent competing ideologies, ways of knowing, or guiding principles, this chapter asks how civil society networks foster a possibility for holding science and traditional knowledge together in the building of food sovereignty.

Corn cannot be divorced from its political, historical, economic, cultural nor environmental significance, and to this end, civil society groups have formed a system that works both within and between each of these themes, for its protection. The work of the alliance is thus to connect the elements, regrasping the holistic role of food in culture, health, and the environment. Organizations within these alliances operate over different spaces, times, and affiliation, moving through academia, government, and community, to pursue practical and ideological solutions in the creation of a better *future* food system. In this way, these organizations act as 'future-makers,' but between two distinct forms of managing the indeterminate future: conceptualized through Arjun Appadurai's (2013) concept of an *ethics of possibility* working against an *ethics of probability*. These organization do appeal to the hegemonic propensity to evaluate the future based on 'statistical' risk, which Appadurai (2013) argues is the ethos of *probability* that often underpins capitalist extractivism. However, they also work

to bring an alternative narrative to these spaces, and extend an *ethics of possibility*, guided by hope rather than fear, through food sovereignty. In a sense, these two ways of managing the future, also represent two ways of seeing the world. As such, organizations, in the type of knowledge they bring forth toward probability or possibility, are also translating between statistical analyses, sciences and traditional ways of knowing. This manipulation of knowledge brings policy closer to community, and community closer to scientific knowledge, in a way that merges distinct ways of knowing, in aspirational claims to sovereignty over what (hopefully) will be a just future food system. By placing these two ontologies in conversation with one another, they resist the hegemonic reduction of the lifeworld of maize to numbers and call to question whose knowledge is accepted as knowledge. What emerges is a potentiality; A suggestion for what we might achieve in our goals to live *with* the earth when our mindsets are transformed, and traditional knowledge is held alongside science.

"Los Buenos y Los Malos": Information Flow and Forging Alliance

The network of civil organizations working toward the preservation of native corn varieties are divided, much like the Mexican governmental institutions, into different foci. Just like there is a department of agriculture, and one for health and wellbeing, that work separately and sometimes in an overlapping manner to support sustainable (or industrial) food systems, there are civil organizations dedicated to the role of food systems in each of these themes, pushing for the former both institutionally and on the ground. Some of these organizations work on farming practices and economic support, like ANEC, others on health, or biodiversity conservation, and some, Semillas de Vida for instance, choose the seed. "The seed is where it all starts," Ana had told me during that introductory conversation, "without the seed there is no *milpa."* The seed, for Ana, represents a

leverage point through which to engage with all of these themes; an essential crux upon which the food systems, and control of food systems rests. This point of entry differs for each of the organizations, along with their strategies and arguments, the demographics of their teams, the scale of their projects, and the information they highlight. The ecosystem of civil society here is not just a diversity of themes, but also theories of change, as many of these projects or groups also envision and effect food systems transformation in different ways. With this diversity there are frictions between individuals and organizations, conflicting ideas for action, worries about potential harms, or differences in guiding principles. However, by aligning with one another across fields, they can advocating change on many levels, while simultaneously drawing attention to the holistic nature of the problems they aim to solve. Food systems can be broken down into any number of themes: farming and environment, campesino identity, Indigenous rights, land-use and privatization, non-communicable disease, economy and international trade. But, in reality, food is all of those things simultaneously. In this way, as they act as a tangled, intertwined *milpa*, alliances serve to reinforce the holism of food, and especially corn, within Mexican society.

The campaign Sin Maíz No Hay País (which translates to Without Corn There is No Country), is one of the most prevalent and diverse of these alliances. Originally meant only to be a temporary campaign in support of, La Demanda Colectiva, the class action lawsuit prohibiting transgenic corn from being planted, it has now been in existence since 2009. To this end, the prohibition of transgenic corn had been their main objective since its inception, with the diverse organizations bringing different knowledge together in this space about how this corn causes harm, upon whom and to what end. As an alliance, not all members are always aligned with the vision, but they all agree on the central tenant that Mexico should strive for a future without transgenic corn. In this case, separate entities find commonality in their propensity to act as one, as they push for government

reform. In an interview, one of the campaign's founding members, Fernanda told me that the initial purpose of the alliance was to "raise the matter," of transgenic corn and "make noise" regarding ongoing dispossession of small holders, both through media attention and influencing laws within the senate. She had been involved in drafting the "Law of Adequate and Sustainable Food" that I saw being presented, bringing it to different senators, and exploring allyship within the government and transnational organizations. Before the campaign came into existence, Fernanda had worked for an international NGO and, at the time of the interview, managed a governmental project working with campesinos to support their production of native agrobiodiversity. These organizations influence public awareness through media, while pursuing a quieter activism in the political sphere. However, they do not only channel information with words or campaigns, but also with the movement of people into different positions in academia, civil society, and the government. In this way the government is imbued with alternative ways of understanding its population, its food system, and in this case, the influence of corn.

On a bright afternoon, the terrace of the Semillas De Vida office bustled with 10 individuals who had been contributing to the organization. We sat under the shade of a shaky canopy tent, with sweets from a local shop spread in front of us. I explained that I hoped to visualize their group perspective of the complex systems surrounding native corn protection in Mexico. The participants wrote the names of organizations and institutions on sticky notes, colour coded to denote their categories: civil society, government sectors, academic institutions, corporations, communities and campesino organizations, as well as non-human members of the ecosystem surrounding corn. The group erupted into conversation at the task, each team of two vigorously writing down the names of organizations. I pinned the stickies up until the whiteboard overflowed. In the conversation that ensued, they would distinguish between actors that were aligned with their cause and others that

were not, with some confusion in how to represent this. There were so many grey areas between the "buenos" (good) and "malos" (bad) especially with respect to their temporality. "It's important to see this as a snapshot in time," one participant told me later, describing how relationships between the actors and their official stances would shift often. Some were cut and dry, Bayer-Monsanto was almost always considered bad, for example, but others took much more consideration, like Nestlé, who used transgenic corn for many products, but also funded projects through their foundation. The Mexican Department of Agriculture, SADER, was one of these difficult cases, their allyship tied heavily to the people within the institution, and the political influence of these individuals at a given moment.

The negotiation of allyship was exemplified by what I came to call 'the struggle between the two Victors.' Victor Suarez Carrera was not only an ally to the movement, but also deeply engrained in the inception of their work as a founder of both ANEC and Sin Maíz No Hay País. His boss, however, Victor Villalobos was notoriously known within the civil society network for being in favour of big agriculture and said to have links to the meat industry, which relies heavily on the transgenic corn imported from the U.S for livestock feed (Williams, 2023). This conflict between them represented much of the discursive contradiction surrounding the prohibition of transgenic corn. In a battle of whose science would be heard, Sin Maíz No Hay País, navigated their role in shaping the narrative. Suarez represented a movement towards policies based on biocultural diversity, agroecology and a space for both science and traditional knowledge to work together. Villalobos on the other hand, made a public comment denying any harms caused by transgenic corn, essentially going against the official stance of the presidency, and vying for the continuation of 'agrobusiness as usual'.

Working with the Unknown

During the Sin Maíz No Hay País meeting where they negotiated their response to the Corn Decrees and U.S intervention in Mexican food policy, this comment by Villalobos was the source of outrage from many activists within the campaign. We spent much of the meeting debating about whether the alliance should place onus on the government as a whole or denounce his actions as an individual. Not only had he 'betrayed' the administration, but he had also validated the U.S claim that there was not sufficient 'scientific evidence' to justify the prohibition put forth. In this way, he, along with the U.S were undermining any alternative ways of understanding the harms caused by GMOs, and ultimately what the campaign members argued constituted Mexican sovereignty (See Chapter 1). Under this positivist interpretation of knowledge, biodiversity loss and its effects, as well as the cultural importance of native corn and farming systems were not an adequate substitution for the type of health study that the opposition alluded to. For now, the argumentation for human health most used was extrapolated from studies about glyphosate, which was found to be carcinogenic (Myers et. al, 2016). The group argued that transgenic corn went hand in hand with the use of chemical pesticide, but they needed more to carry the weight of the dispute on an international stage.

As the Mexican government moved to respond to the U.S demand by presenting such evidence, Sin Maíz No Hay País had its own approach: The precautionary principle. This concept, borrowed from environmental law, is "often summarized as better safe than sorry" (Rechnitzer, 2022, 63) Stemming from histories of devastating harms wrought by industry, such as asbestos and cigarettes, the precautionary principle is used to contest contamination to the environment and human health as a preventative measure (ibid.) However, it is often cast by the opposition as unscientific, or

"paralyzing" to progress (ibid). Although La Demanda Colectiva had used this argumentation, Saíd, a member of the campaign whose focus was on agrochemicals, remained doubtful that this strategy would lead to success. He argued that despite their allies within the government, the campaign would "need to make an evaluation of risk in order to back up the precautionary principle" if their line of reasoning was to rest upon this claim. He was arguing that they needed to speak the language that this audience considered valid, even as they maintain lines of argumentation that subvert those ways of thinking.

Food sovereignty is a future-oriented goal of transforming the food system. This follows Arjun Appadurai's (2013) regard for humans as "future-makers," in that the actions taken in the present, are understood to influence and build the future, and in this case the future food system. Appadurai (2013) argues that there are two, often competing, political or ethical stances through which the future can be managed and worked towards: an ethics of probability, and an ethics of possibility. He argues that an ethics of probability, in its centering of risk and ultimately fear dominates over the ethics of possibility, and its propensity for hope and imagination. Using economic models and risk assessment, the ethics of probability not only relates to the unknown of the future, but also capitalizes off it. The strategies by which the U.S deemed 'scientific' evidence insufficient to uphold the Mexican prohibition of transgenic corn, exemplified the "cozy traffic between modeling risk and the practical business of exploiting risk for purposes of profit in the financial markets." (Ibid, 4) By appraising the risks of transgenic corn as low, or too uncertain, they force the hand of their trade partner in buying their product, continuing to profit off what civil society argues is harmful in myriad ways. To appeal to the state and international actors, Sin Maíz No Hay País positioned itself within this hegemonic "ethics of probability," using the precautionary principle. However, it was leveraged in this way to substantiate the alliance's promotion of *possibility*.

This propensity of the alliance to appeal to the state ethics of probability, and simultaneously promote an ethics of possibility was present during the senate hearing for the "Law for Adequate and Sustainable Food." During her presentation at the hearing, Julieta Ponce Sanchez a prominent lawyer involved with La Demanda Colectiva, Sin Maíz No Hay País, and another health focussed organization, described her argumentation for why the law was crucial. The first, in appealing to the financial risk of industrialized food systems, was "maximum impact with minimal cost." Food, she maintained, "not only has a great return on investment but also allows for other rights to flourish without spending more." She used the example of health as a positive outcome, but arguably the environment could also fit into this description. Within this same speech, however, she also widened the perspective to include an ethics of possibility. The ethics of possibility entails, "ways of thinking, feeling, and acting that increase the horizons of hope, that expand the field of the imagination, that produce greater equity in….the capacity to aspire." (Appadurai, 2013, 295) That is, they provide a pathway for change toward the better, and in this case a food system that is environmentally sound, localized and culturally significant. To this end, Julieta highlighted the requirement in the law for the Mexican government to have a '*canasta'* or reserve of food sufficient for the population. "This could be based in agroecology, Mexican products, grown in a just way, and available always for everyone in Mexico." This, she maintained, "is an opportunity for the senate to do these things *para ser feliz en este suelo* -- to be happy on this soil.

In this way, she brought not only an alternate ethic but also highlighted campesino knowledge in this political realm. The translation of community desires for agency, and aspirations for socially and environmentally just food systems is an important role that civil society organizations occupy. Bryant and Reeve's (2021) concept of *sovereign agency,* speaks to this future-oriented practice through

which community desires for control of the quotidian are made "politically legible." While this recognition of campesinos does not necessarily need to go through the state, the propensity of civil society to illuminate desires within these institutions, serves to "enable efficacious action," towards the future they yearn for politically, both for communities and the environment. The institutionalization of agroecology and community agriculture by the state, represents a path that organizations advocate for in implementing and spreading food sovereignty goals across the country.

Agroecology highlights the ethics of possibility, not only in the government, but also when implemented with campesino communities. This farming method focusses on working with natural systems to build biodiversity that allows for increased nutrients in the soil and decreased risk of pests. Accompaniment is an important way in which civil and governmental organizations offer support to campesinos transitioning to this farming method. This was a way in which scientific knowledge could be integrated with their embodied and traditional knowledges specific to their lands, the species they work with, and the things most important to their communities. Luis, a rural farmer working to spread agroecology, told me, "[I like] the support we receive where a technician arrives and the campesino accompanies him because the campesino also has knowledge. The knowledge of the technician and the campesino knowledge becomes a single knowledge." This exemplifies a widening of what Appadurai calls "capacity to aspire," of campesinos for their lands and communities, by changing the "'terms of recognition' within which they are generally trapped, terms which severely limit their capacity to exercise voice." (Appadurai, 2013 290) In this way, the alternatives in scientific knowledge that civil society has opened up, like agroecology, also opens pathway for campesino knowledge to be recognized and valued within scientific discourses, at the very least on the ground.

According to Luis, these ontologies do not just complement one another, but become a novel and unique way of understanding the land. "Many scientists and researchers told me [Luis] that we had to wait 200 years to bring back life to the soil. And we told them no! There are alternatives to bring back the life to the soil in 2, 3, 4 years. So, we entered [the organization ANEC] and started to do it [agroecology]." The hope created by a science grounded not in the dispossession, but empowerment of small-scale farmers contributes to civil society's capacity for fostering an ethics of possibility, against an ethics of probability.

Appadurai (2013) called the capacity to aspire a distinctly cultural capacity, in that aspirations are dictated by the culture within which they arise, be it language, ontology, or in the case of my interlocutors, their campesino identities and vocation. As I have argued in Chapter 2, the work of growing native corn, and building this alternate food system, is a culture of relation *with* the more than human, and an aspiration for a future food system in which biocultural diversity thrives. These knowledges of interconnection between humans and their environments are a conversation between traditional and embodied knowledges, and nature-based sciences which work to contest "what Michel Foucault saw as the capillary dangers of modern regimes of diagnosis, counting, and accounting." (Appadurai, 2013, 295) Appadurai (2013) argues that this characteristic of the 'ethics of probability' serves as a neutralization of the future, a removal of corporate or institutional actors from the affect and emotion felt by those upon whom these numerical values are projected and mobilized: the everyday Mexican citizen, the campesino. However, regardless of the statistics that can (or cannot) be gathered about the risks for communities using transgenic corn and glyphosate, there is a resistance based on affects of aspiration – hope, imagination, desire, and what I have argued is trust in their native agroecosystems.

For Luis, one of the driving forces for participating in these agroecology initiatives was the *feeling* of negative outcomes from industrial agriculture and food. This was shared by many of the campesinos with whom I spoke, who all work with civil society, but come from diverse regions and produce in diverse ways. For them, "scientific evidence" was not needed in order to extrapolate the health detriments of *maíz de bolsa,* and the future this entailed was certainly not neutral. They could see it in their communities, and feel it in their bodies, with certainty in *what* was happening, but not always *how*. In this way, the scientific knowledge born out of the ethics of probability and imported by civil society was also important in substantiating their embodied knowledge. In each community, whether urban, rural, subsistence or production focussed, the campesinos I spoke to would often speak to non-communicable diseases that they perceived as a relatively new threat to their communities. For them, this was not only related to the introduction and proliferation of non-traditional *comida chatarra* (junk food), but also to industrialized corn flour, made from transgenic corn. *Maíz de bolsa* perpetuated obesity and related disease because it failed to satisfy their hunger like native corn (often processed through nixtamalization) did.

On a community level, interlocutors related non-native corn to the cancers and other illnesses they saw proliferated at alarming rates. This embodied knowledge of the negative impacts associated with industrialized agriculture may not be categorized as 'truth' by state actors but is nonetheless mobilized in contestation. "The women of Chiapas are dying!" Luis told me, his voice rising. "There is a village, where the women don't use washing machines. They wash the clothes by hand, and the producer's clothes are bathed in liquid glyphosate. And what is happening to the women is suspicious, cancer." This is a driving force for him to find, work with, and share alternatives to industrial agriculture. "Today I do see that there is hope, that there is an alternative, because I am doing it and I am seeing it." In this way, his relationships with civil society and government

programmes were most valuable to them when they granted them access to scientific knowledge and importantly, opportunities to work in collaboration with technicians.

Knowledge, Power, Empowerment

Through these capacity-building projects and working with communities, information and knowledge is brought to campesinos through civil society groups. Many of the campesinos that I spoke to understood the support of civil society to be just that: a *support* for things that they already found important, or already did. Some told me that interaction with civil society allowed them to put words to the problems they felt, what I discussed as embodied knowledge, while others valued learning new skills and strategies to accompany the traditional knowledge about the land, cultivation, seed saving, and processing that they already had, passed down through generation. This was not only seen to happen through the direct transfer of knowledge by civil society or government to campesinos, but sometimes these projects also fostered a coming together within or between communities, that was valued as another benefit to working with civil society organizations. There was value in the information brought forth to community when it was seen not to eclipse but to illuminate the deep, and regionally specific knowledge already honed by campesinos. In other words, when it shed the air of 'epistemic colonialism' and moved towards a post-dualistic ontological diversity (Escobar, 2017).

This was not always the case. Interlocutors from Coixtlahuaca told me about some projects that they felt were corrupt, or tried to introduce crops that did not fit the ecosystem. Carlos, a younger member of the community who described himself as "sensitive" to the harms done to the more-

than-human world, was skeptical of the reforestation projects that were planting non-native trees, for example. He told me that it depended who was running the project, if it would ultimately be based on "sincere and good research towards a certain motive, then it goes well." On the other hand, Doña Isabela told me about a government project promoting the planting of fruit trees.

> "Sometimes the man himself (the technician) says no, you sow this (variety)… And there is a discussion, a dispute… not because you do not obey what the program sends you, but we know that we also have to make our own decisions….So, then we made that decision not to plant it because here it dries up… And that is part of that knowledge (about the land) that our parents gave us."

In other words, it is imperative that the campesino knowledge is truly held alongside science, and that the projects are implemented by individuals or organizations that value it.

Carlos's comment exemplifies the sentiment that science, information, and 'fact' do not remain untouched by the subjectivities of humankind. In the face of uncertainty, or a lack of 'scientific' evidence about the harms caused by transgenic corn, the knowledge mobilized by civil society and their partners in community serve to challenge dominant epistemologies and ontologies. Embodied knowledge and traditional wisdom offered by campesinos is placed in conversation with sciences of agroecology and biocultural diversity, in turn fortifying one another even as they are placed in contention with data and science informed by hegemonic worldviews. Knowledge is something that is constructed, both being fed by and feeding into cultural ideals. Latour (2014) discusses the ways in which science can either challenge or uphold social norms by relating contemporary climatology and its opposition, to the story of Galileo discovering the motion of the Earth. Galileo was publicly

ridiculed for going against the socially accepted understanding of the cosmos, just as climate science, in recognizing the dependency of Earth systems on human actions and vice versa, dismantles our socially imbedded idea that nature is separate from humans (ibid). Climate change is thus a catalyst for upending the domination-thinking that has allowed humankind to extract from humans and nature, but it has also deeply unsettled the common (dominant) vision of truth. The inclusion of non-western knowledge systems has effectually done the same. Especially interlocutors that worked within civil society reiterated to me time and again that the changes they sought were both systemic, and ontological; they wanted a change in perspective.

The fight for the preservation and reinvigoration of biocultural diversity encapsulated by the struggle for/against GMOs in Mexico, moves toward the recognition of multiplicitous interpretations of the world, against a homogenization of thought. In the field of epistemic decolonization, knowledge and imperialism are theorized not only to "emerge alongside one another, but instead serve as mutually reinforcing and causally interrelated forms of domination." (Wood and Wood, 2020, 31) The control over the production of knowledge, the way of acquiring knowledge, and what type of knowledge is considered viable is central to the subjugation of peoples, and arguably natures as well. Escobar and Heller (2003) in their evaluation of anti-GMO activism, frame the knowledge constructed by transnational organizations and companies, intellectual property, and Western paternalism, as "a form of bioimperialism." (158) In this way, the construction of knowledge about GMOs, or in this case the erasure of perceived harms, goes hand in hand with the proliferation of this biotechnology (Ibid). Through this lens, the story of the two Victors, battling between science in support or opposition of transgenic corn exemplifies the subjective quality of 'fact,' and the use of discourse in the exertion of power – whether power *over* or power *with*.

The construction of discourse is upheld by the acquisition of information, data, about populations, under the "politics of probability" (Appadurai, 2013) within which dominant society exists. Similarly, Escobar and Heller (2003) argue that a discourse about GMOs based solely on risk "mutes competing issues of local knowledge as well as cooperative and autonomous agricultural practice." (169). Civil society, in this example must speak the language of these ethics, through their use of the precautionary principle, in order to contest it. However, they also use this as a stage through which to amplify alternative ways of understanding the world, simultaneously using the using the master's tools, and building a new house. Foucault (1975) argues that it is not just storytelling, but the acquisition of information about people that turns them into "objects of knowledge" and allows for their subjugation. In this way, knowledge is an essential feature of biopower, and thus to the discussion of sovereignty. By basing the information off of statistics and risk analysis the U.S engages in a 'bioimperialism' (Heller and Escobar, 2003) through which the lack of 'sufficient evidence' provides grounds for which to exercise power, and claim sovereignty *over* the Mexican population, via control of the food system, which my interlocutors argue concerns *how* they live and die. Conversely, as civil society and communities build discourse based on agroecology and biocultural diversity, they not only resist these power structures and find ways to fight using their own language, but they also form a different type of power, and sovereignty, based on information or knowledge that does not reduce the body to a number, but expands it into the realm its connections with others. The knowledge here is not just an alternative to hegemonic ontologies, it is a marriage of science and Indigenous worldviews.

As we move forward into the uncertainty of climate change, with our shared realities and ideologies shaken, the civil society working toward the preservation of native corn shows exemplifies the opportunities we might have to construct "a world guided by a lens of stories rooted in the revelations of science and framed with an indigenous worldview – stories in which matter and spirit are both given voice." (Kimmerer, 2013, 346) This sentiment that the solutions we seek in reaching habitability, lies in this shift in the way that we produce and accept knowledge, is echoed by authors like Tsing (2017), Escobar (2017), Chakrabarty (2021), Latour (2014) and countless others. By acting as intermediaries, the civil organizations involved in this study allow for this plurality, offering a way in which these sciences and wisdoms can come together on the ground to push for a more inclusive vision of knowledge, and a sovereignty *with* the more than human.

Conclusion

This research has explored the ways in which civil society groups mediate claims to sovereignty made by campesino communities and the state. By looking at the distinct relationships formed to corn, as an economic and relational entity, sovereignty is explored as distinctive to each group, but interacting. Drawing from many theories within sovereignty, these interacting claims highlight that food, and especially a food as economically and culturally important as corn, constitutes a site through which (bio)power is exercised and sovereignty is claimed. Food is a great connector, between humans and the rest of nature, our bodies, cultures, and economics. In this way, decolonial views of sovereignty are supported, in the recognition of diverse ways of connecting to and asserting agency over the quotidian. Moreover, the inherent way in which food connects human to the natural world, makes way for a vision of food sovereignty as a claim not only toward community autonomy, but also to a future that subverts the extractivism of industrial farming, and ideologies of domination at large.

Beginning with corn as a commodity set the stage for contrasting the two faces of corn: non-native or transgenic as a purely economic entity, and native, as a relational one. The Corn Decree was an acute site of contestation, wherein the international relationships that constitute state sovereignty exemplified a continued neoliberal legacy of the U.S exerting power over Mexico. Control over food was not a question of state vs. community, but an indication of the transformations imbued by the larger industrialized and globalized system in the way we farm, distribute and access food. The ways in which civil society responded to this imposition by the U.S also spoke to their role within the state to bring forth arguments that speak the language of state sovereignty and law. Moreover, these

organizations have worked to bring an alternative discourse, as their responsibilities grew out of a receding neoliberal state. The community autonomy claimed through food sovereignty hinged on the fight against the corporate control of seeds, via the preservation of native ones. Sciences based in agroecology and biocultural diversity were then brought to the state and proliferated over time. The actions of civil society also worked to support the commercialization of campesino corn. However, this was seen as an important way to expand food sovereignty in the context of native corn by providing cultural continuity, spreading native varieties, and allowing a wider community to participate. Corn as commodity in this context allowed for these campesinos to claim sovereignty over their livelihoods, their community dynamics, and the proliferation of their cultures and traditions. In this way, corn was never *reduced* to a commodity, this became one of its characteristics amongst its position in campesinos' collective identities and hopes for their communities.

Sovereignty was being claimed by campesinos through these multifaceted relationships to corn. The second chapter aimed to explore how these affects ingrain campesino claims to sovereignty with an agency not *over* but *with* the more-than-human. By exploring native seeds and their genes as a commons, this chapter argued that relatedness can augment collective decision-making capacities in a way that challenges the ideologies underpinning capitalism and private ownership. Corn was understood by the campesinos involved in this study to be a part of their lives in the deepest sense, passed through generations and stewarded for the future as a part of the community and family. In this sense, to be an *hijo del maíz (*child of corn) is to extend love to this staple crop, and to the planetary systems that support it, and be cared for in return. This too represents an idea of sustainability that centers reciprocity. These forms of trust, connection, and kinship work to resist the expansion of the 'plantation form' both ideologically and biologically, through the representation of counter-hegemonic ontologies (Escobar, 2017). Ecosystems, non-human beings, and diverse

worldviews are centered in these claims to food sovereignty, and as such, the human/nature connection is reimagined alongside the food system. This form of resistance against the harmful practices of industrial agriculture thus both nurture and claim a future habitable for all creatures and cultures to share (Chakrabarty, 2021). That is, a future that brings humanity beyond the limitations of sustainability and towards a more holistic way of living as part of the Earth. In this way, questions of sovereignty as agency not only for communities but on behalf of the natural world extends contemporary understandings of sovereignty, inviting a vision for what it might entail to subvert state-centric understandings of the term.

This turn to the future is increasingly tenuous as the climate changes, and our place in the ecosystem highlighted. Climate change and the harms of industrial agriculture on the natural world were already affecting many of the campesinos I spoke to, with drought and soil degradation diminishing their communities' abilities to work the land. However, as civil society groups worked to imbue their traditional knowledges with science, their 'capacities to aspire' towards the culturally specific and environmentally sound food systems were widened (Appadurai, 2013). Through agroecology, and the accompaniment of technicians not only were their hopes for this future made possible through action, but their traditional knowledges were also valued and incorporated. This marriage of science and traditional knowledge is one of the ways that civil society networks move to shift discourse surrounding the regimes of knowledge that we accept in the world. In this way, they work to contrast the "politics of probability" so pervasive within societal perceptions of risk and the future, with a "politics of probability," that allows us to imagine and construct a bioculturally diverse future (Appadurai, 2013). While maintaining their propensity to speak the languages of both these ethics, civil society networks work to bring these arguments to state actors as well, moving both knowledge and experts between organizations, academic institutions, and the government. Working like the

biodiverse *milpa,* each with different angles, and types of information, civil society networks nurture a food sovereignty both on the ground and politically. In this way, they also help to bring these future-oriented and aspirational campesino claims to sovereignty into the political realm, in a form of *sovereign agency* (Bryant and Reeves, 2021). The 'defense of corn' thus offers an insight into how science and traditional knowledge systems might be placed in conversation with one another, towards a more environmentally sound and equitable future.

Learning how to live on this earth, is the challenge of our generation. The uncertainties of climate change have rocked the ideologies underlying capitalism, bringing to light the inherent connectedness of humans and our ecosystems (Latour, 2014). In this way, the preservation of the natural world must necessarily go hand in hand with supporting the diversity of cultures that have coevolved in reciprocity with it. Food sovereignty represents the ideological and practical overhaul of just one extractive system, but it is one that touches every human on Earth. Corn in the context of Mexico exemplifies the extent to which food permeates our economies, cultures, and communities, and the significance it holds in our relation to the natural world. As civil society works towards its defense, they highlight the potential that combining traditional and scientific knowledge can hold for solving the world's most wicked problems, in way that follows calls from Indigenous scholars to move forward in this way (Whyte, 2017; Kimmerer, 2013; Wilson, 2008). Following these appeals, this research invites further investigation for how frameworks of sovereignty might further explore the relationality of being human to facilitate resilience in the face of a changing climate, and all that this entails. It is through diversity that our earthly and societal systems are made truly abundant.

So, this study leaves us with a question, posed more beautifully by Indigenous ethnobotanist Robin Wall Kimmerer (2013):

> "That September pairing of purple and gold is lived reciprocity; its wisdom is that the beauty of one is illuminated by the radiance of the other. Science and art, matter and spirit, indigenous knowledge and Western science – can they be goldenrod and asters for each other? When I am in their presence, their beauty asks me for reciprocity, to be the complementary color, to make something beautiful in response." (47)

Bibliography

Appadurai, A. (2013) The Future as Cultural Fact: Essays on the Global Condition. Intro&ch14

Baker, L. E. (2012). *Corn meets maize : Food movements and markets in mexico*. Rowman & Littlefield Unlimited Model.

Bavikatte, K. S., & Bennett, T. (2015). Community Stewardship: The Foundation of Biocultural Rights. *Journal of Human Rights and the Environment*, *6*(1), 7–29. https://doi.org/10.4337/jhre.2015.01.01

Benton, Tim G, et al. (2021) "Food system impacts on biodiversity loss: Three levers for food system transformation in support of nature." Energy, Environment and Resources Programme. Report for The United Nations Environment Programme and Chatham House.

Bonilla, Yarimar (2017) *AnthroBites: Sovereignty*, https://culanth.org/fieldsights/anthrobites-sovereignty. Center for Cultural Anthropology.

Bonilla, Y. (2017). Unsettling sovereignty. *Cultural anthropology*, *32*(3), 330-339.

Brightman, M. and Lewis, J. (2017) 'Introduction' In *The anthropology of sustainability: beyond development and progress,* 1-34. New York, NY: Palgrave Macmillan.

Bryant, R. and Reeves, M., (2021.) 'Introduction' in *The Everyday Lives of Sovereignty: Political Imagination beyond the State* Ithaca: Cornell University Press. Accessed June 7, 2023. ProQuest Ebook Central.

Canfield, Matthew C. (2022) Translating Food Sovereignty : Cultivating Justice in an Age of Transnational Governance. ProQuest Ebook Central.

Carney, M. (2012). "Food security" and "food sovereignty": What frameworks are best suited for social equity in food systems? Journal of Agriculture, Food Systems, and Community Development, 2(2), 71–88. http://dx.doi.org/10.5304/jafscd.2012.022.004

Chakrabarty, D. (2021) Sustainability and Habitability: Distinguishing the Global from the Planetary. In: The Climate of History in a Planetary Age, 81-85. Chicago: The University of Chicago Press.

Chinh, Alexander. (2023) rep. Report Name: Mexico Issues 2023 Corn Decree to Substitute Gradually Biotech Corn Used for Human Consumption and for Animal Feed. United States Department of Agriculture . Retrieved from https://www.fas.usda.gov/data/mexico-mexico-issues-2023-corn-decree-substitute-gradually-biotech-corn-used-human-consumption

Diphoorn, T., & Wiegink, N. (2022). Corporate sovereignty: Negotiating permissive power for profit in Southern Africa. Anthropological Theory, 22(4), 422-442.

Edelman, Marc, et al. (2014) Introduction: critical perspectives on food sovereignty, Journal of Peasant Studies, 41:6, 911-931, DOI: 10.1080/03066150.2014.963568

Eriksen, Thomas Hylland (2022) 'The Sustainability of an Anthropology of the Anthropocene'. Sustainability 14 (6): 3674. https://doi.org/10.3390/su14063674.

Escobar, A. (2017) 'Sustaining the Pluriverse: The Political Ontology of Territorial Struggles in Latin America .' In *The anthropology of sustainability : beyond development and progress,* 237-256 New York, NY: Palgrave Macmillan.

Escobar, A and Heller, C. (2003). From pure genes to GMOs: Transnationalized gene landscapes in the biodiversity and transgenic food networks. *Genetic Nature/Culture: Anthropology and Science Beyond theTwo-Culture Divide. University of California Press, Berkley, CA, USA.*

Farmer, P. (2004) "An Anthropology of Structural Violence." *Current Anthropology* 45, 4 no. (3): 305-325.

Foucault, M. (1975). Discipline and punish. *A. Sheridan, Tr., Paris, FR, Gallimard*.

Foucault, M., Senellart, M., & Collège de France. (2008). *The birth of biopolitics : lectures at the collège de france, 1978-1979* (1st Picador pbk). Picador.

Ganti, T. (2014). Neoliberalism. *Annual Review of Anthropology*, *43*, 89-104.

Goldstein, Daniel (2010) "Toward a Critical Anthropology of Security." *Current Anthropology* 51, no. 4: 487-517.

Hansen, Thomas Blom and Finn Stepputat (2006) "Sovereignty Revisited." *Annual Review of Anthropology* 35: 295-315.

Hardt, Michael, and Antonio Negri (2009) *Commonwealth*. Cambridge, MA: Harvard University Press.

Harvey, D. (2007). *A brief history of neoliberalism*. Oxford University Press, USA.

Harvey, D., 2003. *The New Imperialism.* Oxford: Oxford University Press.

Hayden, C. (2006) "When Nature Goes Public: The Making and Unmaking of Bioprospecting in Mexico." *Journal of Latin American Anthropology* 11 (2): 449–51. https://doi.org/10.1525/jlca.2006.11.2.449.

Hurt, R. D. (2020) The Green Revolution in the Global South: Science, Politics, and Unintended Consequences. Nexus. Tuscaloosa: University of Alabama Press.

Kamal, A. G. (2015). A Recipe for Change: Reclamation of Indigenous Food Sovereignty in O-Pipon-Na-Piwin Cree Nation for Decolonization, Resource Sharing, and Cultural Restoration. *Globalizations,12*(4), 559-575.

Kimmerer, R. W. (2013) *Braiding Sweetgrass : Indigenous Wisdom, Scientific Knowledge, and the Teachings of Plants* (version First edition.) First ed. Minneapolis, Minnesota: Milkweed Editions.

Kinchy, A. (2012). *Seeds, science, and struggle : The global politics of transgenic crops*. MIT Press.

Kloppenburg, Jack (2010) "Impeding Dispossession, Enabling Repossession: Biological Open Source and the Recovery of Seed Sovereignty." *Journal of Agrarian Change* 10 (3): 367–88. https://doi.org/10.1111/j.1471-0366.2010.00275.x.

Langwick, S. A. (2018). A politics of habitability: plants, healing, and sovereignty in a toxic world. *Cultural Anthropology*, *33*(3), 415-443.

Latour, B. (2014). Agency at the Time of the Anthropocene. *New literary history*, *45*(1), 1-18.

Lemm, V., & Vatter, M. (Eds.). (2014). The government of life : Foucault, biopolitics, and neoliberalism. Fordham University Press.

MacRae, Graeme (2016) "Food Sovereignty and the Anthropology of Food: Ethnographic Approaches to Policy and Practice", Anthropological Forum, 26:3, 227-232, DOI: 10.1080/00664677.2016.1201456

Maffi, L., & Woodley, E. (2010). *Biocultural diversity conservation : A global sourcebook*. Taylor & Francis Group.

Marx, K., 1977. *Capital*, vol. 1. New York: Vintage.

Mathers, A. and Novelli, M. (2007) "Researching Resistance to Neoliberal Globalization: Engaged Ethnography as Solidarity and Praxis." *Globalizations*, 4:2, 229
249, DOI: 10.1080/14747730701345259

Meadows, D. (1999). Leverage points. *Places to Intervene in a System*, *19*.

Muehlebach, A. (2018) Commonwealth: On democracy and dispossession in *Italy*. *History and Anthropology* 29(3):342-358.

Myers, J. P., et al. (2016) Concerns over use of glyphosate-based herbicides and risks associated with exposures: A consensus statement. *Environmental Health*, *15*(1). https://doi.org/10.1186/s12940-016-0117-0

Nixon, R. (2011). *Slow Violence and the Environmentalism of the Poor*. Harvard University Press.Nyéléni. 2015. Declaration of Nyéléni. http://nyeleni.org/spip.php?page=forum&lang=en.

Patel, R. and Moore J.W. (2018) 'Introduction'. In A History of the World in Seven Cheap Things: A Guide to Capitalism, Nature, and the Future of the Planet, 1–43. London: Verso.

Petryna, A. (2013). "Chapter 1: Life Politics After Chernobyl." In *Life exposed: biological citizens after Chernobyl*. Princeton University Press.

Rechnitzer, T. (2022). Precautionary Principles. In: Applying Reflective Equilibrium. Logic, Argumentation & Reasoning, vol 27. Springer, Cham. https://doi-org.proxy.library.uu.nl/10.1007/978-3-031-04333-8_4

Richard, A. (2016). *The unsettled sector : Ngos and the cultivation of democratic citizenship in rural mexico*. Stanford University Press.

Russell, Nerissa. 2007. "The Domestication of Anthropology." In Where the Wild Things Are Now : Domestication Reconsidered., 27-48. Edited by Cassidy, Rebecca, and Mullin, Molly. London: Taylor & Francis Group.

Secretaria de Gobernacion. December 31, 2020. *Decreto por el que se establecen las acciones que deberán realizar las dependencias y entidades que integran La Administración Pública federal, en el ámbito de sus competencias, Para Sustituir gradualmente El Uso, adquisición, Distribución, promoción E importación de la sustancia química Denominada Glifosato y de los agroquímicos utilizados en Nuestro país que lo contienen como ingrediente activo, Por Alternativas sostenibles y culturalmente adecuadas, que permitan mantener La Producción y resulten Seguras para la Salud Humana, La diversidad biocultural del país y el ambiente.* Diario Oficial de la Federacion. Retrieved from https://www.dof.gob.mx/nota_detalle.php?codigo=5609365&fecha=31%2F12%2F2020#gsc.tab=0

Secretaria de Gobernacion. February 13, 2023. *Decreto por el que se establecen diversas acciones en materia de glifosato y maíz genéticamente modificado.* Diario Oficial de la Federacion. Retrieved from https://www.dof.gob.mx/nota_detalle.php?codigo=5679405&fecha=13/02/2023#gsc.tab=0

Simard, S. (2021). *Finding the mother tree: Uncovering the wisdom and intelligence of the forest*. Penguin UK.

Sonnenfeld, D. A. (1992). Mexico's" Green Revolution," 1940-1980: Towards an Environmental History. *Environmental History Review*, *16*(4), 29-52.

Tello, A. San Vicente (2021) 'La Defensa Legal Del Maíz' Processo a Los Alimentos Transgenicos. *Secretaria de Medio Ambiente y Recursos Naturales, México*, 299 – 315.

Tello, A. San Vicente and Morales-Hernández, J. (2015) *La demanda colectiva contra la siembra de maíz transgénico: ciudadanía y soberanía alimentaria*. In Del dicho al hecho: opacidad, autoritarismo y verdades a medias, 171-184. Instituto Tecnológico y de Estudios Superiores de Occidente (ITESO).

Tsing, Anna (2017) 'A Threat to Holocene Resurgence Is a Threat to Livability.' In *The anthropology of sustainability : beyond development and progress,* 51-66 New York, NY: Palgrave Macmillan.

Whyte, K.P. (2017) Food Sovereignty, Justice and Indigenous Peoples: An Essay on Settler Colonialism and Collective Continuance. Oxford Handbook on Food Ethics. Edited by A. Barnhill, T. Doggett, and A. Egan. Oxford University Press.

Williams, A. (2023). Feed Grains Sector at a Glance. United States Department of Agriculture. Retrieved from https://www.ers.usda.gov/topics/crops/corn-and-other-feed-grains/feed-grains-sector-at-a-glance/#:~:text=The%20United%20States%20is%20the%20world's%20largest%20corn%20exporter%20and,China%2C%20Japan%2C%20and%20Colombia.

Wilson, S. (2008). *Research Is Ceremony: Indigenous Research Methods*. Fernwood Publishing.

Wood, D. A., & Wood, D. A. (2020). An Epistemography of the Anticolonial Politics of Knowledge. *Epistemic Decolonization: A Critical Investigation into the Anticolonial Politics of Knowledge*, 27-53.