Pharmaceutical Territories: Contested Pharmacopoeias and Environmental Debates in Brazil

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PHARMACEUTICAL TERRITORIES:
CONTESTED PHARMACOPOEIAS
AND ENVIRONMENTAL
DEBATES IN BRAZIL

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PHARMACEUTICAL TERRITORIES:
CONTESTED PHARMACOPOEIAS
AND ENVIRONMENTAL
DEBATES IN BRAZIL

A Dissertation Presented to the Graduate Faculty of
Dedman College
Southern Methodist University
in
Partial Fulfillment of the Requirements
for the degree of
Doctor of Philosophy
with a
Major in Cultural Anthropology
by
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Over the past 30 years, emergent global health and trade policies have transformed "traditional medicine" into a contested biomedical endeavor. Brazil has been particularly affected by these policies due to its vast biodiversity and numerous labelled as traditional. As a result, the country has implemented strict intellectual property laws, has begun to invest in federal research on medicinal plants and other forms of traditional medicine, and in 2009 established its National Program of Medicinal Plants and Phytotherapeutics based on the World Health Organization's traditional medicine program, integrating medicinal plants into Brazil's national healthcare system. This multi-sited ethnographic project compares the effects of these recent policies on how two Afro-Brazilian communities (Afro-Brazilian religious groups and quilombola communities) in the states of Rio de Janeiro and Pará conceptualize their own uses of traditional medicine in general, and medicinal plants specifically. Research also includes a discursive analysis of international, national, and state policies pertaining to traditional medicine and medicinal plants (including environmental, pharmaceutical, trade, and health policies) as they relate specifically to these two communities. Research explores how differences such as religiosity, region, and historical relations affect how the Brazilian government approaches each
group’s use of plants as healing agents. Particular focus has been placed on women's institutional and political roles in negotiating citizenship in relation to activism around health and social inequality.
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CHAPTER 1
INTRODUCTION: INSERTING SPACE AND RACE INTO PHARMACEUTICAL CITIZENSHIP

1.1 Black Environmentality: Afro-Brazilian Religions, *Quilombos*, and Medicinal Plants

In 2009 Brazil’s Ministry of Health instituted its National Policy of Integral Health for the Black Population (*Política Nacional de Saúde Integral da População Negra*, or PNSIPN), which recognized racism and racial inequality as social determinants of health and outlined guidelines to better confront these issues within the country’s national healthcare system, SUS (*Sistema Único de Saúde*). The policy was monumental for a number of reasons. It not only represented the federal government’s acknowledgement of racism and its concrete social effects, but it also isolated race as a key variable in the health outcomes of individuals and communities.

This study takes as its analytical starting point one particular guideline of the PNSIPN: “[the] promotion of the recognition of folk knowledges and practices of health, including those preserved by religions of African origin.” In a country where an estimated 82% of the population uses traditional medicine in the form of medicinal plants for their healthcare needs (Ministério de Saúde 2012), it is notable that the use of traditional medicine by black Brazilian communities (as well as by indigenous groups in other policies) is separately mentioned within policy texts. Nearly all of the words of the guideline have been subject to unresolved discussions by community, national, and/or international actors: What does it mean to be “recognized” but not extended medical legitimacy? What does “folk” imply alongside “science”? What counts as
“knowledge” and how are various “knowledges” differentially given value? Through whom and by what means will this knowledge be “preserved” and how is it conceptualized as being at risk of being “lost”? How “African” are diasporic practices in the Americas? How can “origin” be proven after a population’s presence in a country for five centuries, and what is the concrete importance of “origin” in such a policy?

Such questions place the policy within a web of other national and international policies around intellectual property, health equity, biodiversity, and most central to this dissertation, medicinal plants. The guideline exists within the context of an increasing pharmaceuticalization of medicinal plants, and traditional medicine more generally, that focuses on potentially useful compounds of plants and the ownership of knowledges or practices around plants. This pharmaceutical model spans numerous political sectors, particularly health, the environment, trade, and technological development, and is rooted in a biomedical model of the body and the materials used to affect its functioning.

The two black populations specifically referred to most often within the PNSIPN are quilombola communities (groups of descendants of enslaved persons who have recently begun to gain territorial and political rights) and Afro-Brazilian religious groups. Both groups are guaranteed specific sets of rights by other federal policies based on race, African descent, historical oppression, and/or historical ties to slavery, and are legally considered to be "traditional" people groups alongside indigenous populations and riverine (ribeirinha) communities, among others. This label of “traditional,” which began to appear and be defined in public policies in Brazil in 2004, is applied to groups that occupy specific territories and use natural resources for the continuation of their social organization, meaning that they are politically defined, at least partially, by their relationship to the natural environment.
The main argument of this dissertation is that the global pharmaceuticalization of traditional medicine and medicinal plants affects quilombola communities and Afro-Brazilian religious groups through a characteristic black environmental politic that has often been strained and piecemeal. On the one hand, this dissertation is based on ethnographic research demonstrating how notions of these two types of black communities’ uses of traditional medicine and medicinal plants are conceptualized within national and international policies. On the other hand, it examines how these two types of communities not only use medicinal plants, but how the communities organize politically around medicinal plants, how they choose to organize their knowledge of medicinal plants in a public and inherently political way, and how that organization is linked to broader political rights.

What does it mean to be afforded separate environmental rights as a black community in a country that has a majority black population (54% as of 2016 [Instituto Brasileiro de Geografia e Estatistica 2016])? I conceptualize this politic in comparison to an indigenous environmentality that has been extensively elaborated politically through legislation around territorial, environmental, and intellectual property rights from the standpoint that such rights should be afforded to the original inhabitants of a colonized territory (Conklin 2006; Rahier 2014). I argue that this black politic differs from an indigenous environmentality both in its historical development and as a result of its current political stipulations. Policymakers have rarely considered or often doubted that black communities in the Americas could have a definable environmental politic, especially one that global political actors consider inherent and deserving of political recognition as has been the case with indigenous populations (Hooker 2005; Escobar 2008).
Ethnographic research took place among Afro-Brazilian religious communities in the Rio de Janeiro metropolitan area and quilombola communities throughout the Amazonian state of Pará (see Map 1, Map of Sites). In this dissertation, Rio de Janeiro acts as a site of entrance and introduction to larger questions of race, political rights, and environmentality in Brazil. In Rio de Janeiro, candomblé terreiros (religious houses) negotiated and defended their use of medicinal plants and the environment in general in various spaces of practice – public parks, areas of nature preservation, public markets, and urban peripheries – in ways that only at times fit within the ideals presented by policies. The quilombola communities in this study were affected by a nexus of institutions that were simultaneously and to varying degrees attempting to preserve quilombola environmental knowledge and benefit from it, always through the rubric of

Map 1 Map of Sites

quilombola
legislation around the political and territorial rights of quilombola communities. I argue in this dissertation, then, that the relationship of the communities to medicinal plants is multifaceted and is not solely based on using plants for healthcare purposes, pointing to the connection between medicinal plants and a sense of political subjectivity.

These two groups, Afro-Brazilian religious groups and quilombola communities, are the focus of this study for a number of reasons beyond the fact that they are highlighted in this policy. For one, both groups are well-known for their extensive use of medicinal plants not only with the goal of improving health, but in ways that are historically and socially rooted (Gomes 2009; Bledsoe 2017; Caroso and Bacelar 1999). Both groups are symbolic of black resistance and autonomy within Brazilian cultural imagination, an image to which their use and knowledge of the natural world is connected. I approach an analysis of the two communities by asking the following questions: What are some barriers to implementing these policies at the ground level? In what ways are these policies in conversation with one another? How do such policy intersections come together to support broader notions of racial equality? How does the pharmaceuticalization of medicinal plants affect communities who have relied on medicinal plants for their healthcare needs for centuries?

(De)legitimizing Knowledges and Constructing Spaces

This study is approached from a few salient and overlapping angles. The first is that of legitimacy. How legitimate are knowledges and practices held by these two communities considered to be both in political practice and in popular opinion? This is a particularly important question to be raised as international policies have granted other knowledge systems, particularly Ayurveda, Traditional Chinese Medicine, and knowledges held by indigenous groups in general, legitimacy as self-contained and geographically-bound bodies of knowledge in international
policies. However, quilombola communities and Afro-Brazilian religious groups are not necessarily indigenous (in a historical-geographical sense) and contend with a different set of rights and potential rights than indigenous groups in Brazil. I argue that the practices of Afro-Brazilian religious groups are currently and have historically been delegitimized by hegemonic political forces in Brazil, while in recent years the practices of quilombola communities may perhaps be best described as hyperlegitimized, where various institutions have given attention to and made investments in their environmental knowledge.

Much of this legitimization is textually coded within policies and strategically defended by communities themselves through such textuality. Yet terminology within policies around traditional medicine has, for the past century, shifted significantly. Terms such as the ones highlighted at this beginning of this chapter are both used in policies and by communities, and a recurring theme of this ethnography is the tension between different operationalizations of such terminology.

This notion of legitimacy is also applied to plants themselves in the language of efficacy, clinical trials, and evidence-based medicine. What is a medicinal plant, after all? If it is defined literally, a medicinal plant could be any plant or plant product that is viewed as being able to “heal,” and could include food, hallucinogens, seasonings, herbs, resins, smoke, clays, and other types of plants and plant products. But is a plant medicinal if a practitioner uses it solely to perform a prayer on an individual, an act which may benefit the individual’s mental health? I use as a starting point the broadest definition possible of medicinal plants, since in practice individuals and communities conceptualize plants as agents of health in a variety of ways, many of which are not biomedically recognized (Craig 2012; Arêda-Oshai 2017).
Another angle of this study is that of space, particularly in an ecological sense. This ethnography is concerned with space and scale as the result of both physical geography and human-created networks. This includes not just the physical spaces where ideas and materials are exchanged, such as markets, bus stations, boats, and fairs, but also digital spaces, such as Facebook and WhatsApp, which have led to the creation of less definite spaces of exchange. Low (2017) makes a critical distinction between “space” and “place,” the latter referring to how space (more specifically, social space) becomes socially relevant and meaningful to actors operating within it. In the case of the two types of communities in this study, the process of making a “place” is constantly under threat and being negotiated under policy-oriented logics.

In this sense this study is an analysis of the politics of healing practices within black spaces, which have historically been subject to harassment and surveillance by those in power in Brazilian society and have therefore transformed into separate kinds of places (Souto 2017; Kearney 2012; Harding 2003). I argue that it is not necessarily that black Brazilians hold a greater knowledge of medicinal plants than other groups in Brazilian society, but that the geographical conditions of blackness in Brazil have led these two groups to uphold extensive knowledge and use of medicinal plants. These black spaces are numerous, are both current and historical, and are both fixed and marked by movement. They include West, Central, and Southeast Africa, the routes through which knowledge and materials were carried since the 15th century until now, the physical spaces where plants have been cultivated, terreiros, quilombos, and urban peripheries, among several others. These spaces, particularly quilombos and terreiros, in addition to being surveilled, have become symbolic of resistance and autonomy and are often territorially demarcated by law or in practice. Importantly, such spaces are heterogeneous; that is, they have benefitted and included the participation of individuals and communities of various
ethnic and religious backgrounds (Florentino 2012). They have acted as spaces that possess alternative forms of sociality to white spaces, where black Brazilians are considered protagonists, and where black Brazilian history and African diasporic history are central to the structure of the community’s collective knowledge and history. They are spaces perceived to be outside of, and often times a threat to, whiteness and hegemonic power structures in Brazilian society.

The two groups in this study have a command not just of medicinal plants, but of ecological space and territory in general where medicinal plants exist and are cultivated, which often stands in contrast to how space is conceptualized within policies embedded in the pharmaceuticalization process of medicinal plants. In accordance with their labels as “traditional” communities, both groups have a professed reliance upon the environment based on their historical conditions of blackness — one because of their escape from oppressive conditions and the other because of religious cosmology — which they use to negotiate recognition of their use of medicinal plants.

This dissertation is, from another perspective, an ethnographic examination of notions of scale as they are presented through policies regarding medicinal plants and as they are practiced by communities. The postcolonial era has been marked by a reorganization of space-time, often fraught with inconsistencies in how spaces are defined as singular and connected units (e.g., a nation with a homogenous population versus a nation with various types of populations who hold different sets of rights). It is also marked by a reorganization of knowledge (specifically “science”) according to compressed, shortened, and quickened notions of space and scale (Harris 2011). In this work I reflect on Tsing’s assertion that “a theory of nonscalibility might begin in the work it takes to create scalability – and the messes it makes” (Tsing 2015: 38). I explore
these “messes” through a multi-sited approach, exploring where and how such spatial narratives around governance and the environment break down.

After several decades of legislation at national and international levels around medicinal plants, constructions of a global space and global spaces have shifted drastically, especially following the independence of former European colonies and the establishing of the United Nations (UN). Part of the pharmaceuticalization of medicinal plants is the geographical homogenization of them. The World Health Organization (WHO) sets guidelines on traditional medicine that are assumed to be applicable to and adaptable by all of its member states. The creation of phytotherapeutics from medicinal plants is a process regulated by pharmacological methods which would, in theory, render the resulting pharmaceutical product standard, regardless of where a plant originated. When the process of extracting a useful plant compound is patented, the process of extraction is assumed to be replicable in any laboratory regardless of where it was originally performed, and the intellectual property rights protecting the patent extend across national borders according to agreements such as that on Trade-Related Aspects of Intellectual Property Rights (TRIPS). Yet individual plant species themselves are not found in all parts of the world, and factors such as soil composition, growing conditions, and available materials and technologies all affect the composition of a final phytotherapeutic product in practice (Craig 2012; Ives 2014).

This critique of scale also extends to ideas around Brazilian nationalism and regionalism, particularly through the lens of race and ecology. In this dissertation, an analysis of regionalism is primarily divided between both the realities and the imaginaries of the Atlantic Forest and the Amazon Rainforest, the North and the Southeast of Brazil, which have two different historical trajectories, especially in terms of internationalism. Medicinal plants offer a productive lens
through which to analyze such tensions. The most extensive policies related to medicinal plants have been developed at the federal level, with some policies also developed by state and municipal governments. Yet Brazilian territory is highly hierarchical, and political economic power is concentrated in the South and Southeast regions of the country. Moreover, Brazilian territory is marked by six vastly differently biomes and racial and ethnic makeup varies significantly by region, so that it could be argued there are various Brazils (Goodman 2016; Hecht 2013; Campbell 2017) each of which has its own tradition of using medicinal plants.

In this sense, another aspect of this study in terms of “scale” is an analysis of regional blackness, and subsequently black political movements, in Brazil. Though monumental, one challenge in the implementation of the PNSIPN is that “blackness” in Brazil is neither monolithic nor easily defined, complicated by factors such as urban vs. rural residence, ethnicity, religion, and self-identification (Maio and Monteiro 2005; Gomes 2009). The labels of black, Afro-Brazilian, and African descendant, both when describing people and practices, all have shifting meanings depending on situation and geographical context.

_Consceptualizing Black Environmentality Through Citizenship and Territory_

These approaches intersect to form what I refer to as black environmentality throughout this dissertation. I use the term black environmentality to also describe black corporeality, referring to the ways in which black communities know their bodies and the natural environment around them to interact. It is the relationship of black communities and individuals to the natural world that has been one of the most strained strands of slavery and post-slavery societies throughout the Americas. The contrast between the violent and dire conditions present within monoculture plantations and the nutrient-providing biodiverse gardens that enslaved individuals maintained, for example, is stark (Haraway 2015). Slave owners and others that held power in
society used enslaved persons’ knowledge of medicinal plants for curative purposes while at the same time denying that they could legitimately hold complex ecological knowledge (Allewaert 2013; Gómez 2017). The discrepancy between the knowledge and capital gained from the exploitation and manipulation of black communities’ relationship to the natural environment, and the benefits that black communities have received from those gains, has been one of the tensest political matters throughout the African Diaspora. As the existence of the highlighted guideline in the PNSIPN and similar phrases in other policies suggest, the current realities of the two types of black communities in this study are a direct continuation of such exploitative systems.

While I am interested in governance of ecological knowledge and corporeality through policies and institutional structures, codified for example in policies that define quilombola communities and Afro-Brazilian religious groups as traditional communities, I focus more on how this knowledge and corporeality are politicized by communities themselves as practice. Black environmentality also refers to this politicization process. Importantly, this label implies that the significance of these communities’ uses of medicinal plants is not because it is medical knowledge per se, but because they are using elements in the environment and treating their own bodies in ways that are counterhegemonic, which also includes practices of nutrition, dance, horticulture, and trade, as other scholars of the African Diaspora have pointed out (Moret 2008; Seligman 2005; Gomes 2009; Copelotti 2015). In this dissertation, medicinal plants, embedded within the political nexus described above, are means through which black Brazilian populations labelled as traditional fight for a broader set of political rights.

I also approach this ethnography from the perspective of two salient theoretical concepts encountered during fieldwork, which also have resonance in academic literature: citizenship, and by extension, territory, without which a politicization of the use of medicinal plants would not be
possible. Together, I argue, these concepts form a notion of black environmentality through ideas around political recognition, health, and the environment, and the particular place of racialized subjects within those intersecting discussions.

When I refer to "citizenship" in this ethnography, I am referring to citizenship in two different senses. The first is that of *cidadania*, a political term and practice in Brazil. A crucial component of communities’ practices of *cidadania* is the careful operationalization of, as well as the careful creation of, language within policies. *Cidadania* in Brazil is inseparable from territory (Holston 2008; Sodré 1988; Carrill 2006; Almeida 2011), and is woven into politics around health and the environment (Biehl 2013; Biehl and Petryna 2013). Carrill (2006) uses the term *cidadania territorial*, or territorial citizenship, and states that black populations have been systematically excluded from the ability to practice or gain citizenship through territoriality. Carrill argues that *quilombos* constituted “new territoriality that permitted the reconstruction of physical survival and culture of slaves” (2006:61), pointing to the fact that black communities in Brazil have continually created their own territories as alternatives to the violent spaces they initially had and have been forced into.

*Cidadania* is inseparable from "nature" for the groups in this ethnography because of their labelling as “traditional” within policies (Castro 2012; Almeida 2011). The concept of “environmentality” is particularly helpful here. The terms “environmentality” and “corporeality” are in reference to Foucauldian approaches to governmentality (Cepek 2011; Agrawal 2005; Foucault 1978; Burchell et al. 1991). Foucault’s approach to the “corporeal” directly refers to governments’ interests in the control and surveillance of individual (and collective, in this case) bodies, as well as (in the case of this ethnography) how they operate, what they ingest, their differences, and how they move and settle throughout space. Although Agrawal (2005) originally
used the term environmentality to describe political subjectivities formed under governmental pressure in relation to the environmental politics, Hecht (2011) argues that it has often been the political work of Brazilian communities themselves, especially in the Amazon, that has provided the framework for policies at both the national and international levels. I use the term “environmentality” as a way to place in debate the political relationship between black subjects in Brazil (quilombola communities and practitioners of Afro-Brazilian religions) and their government.

The other helpful approach to citizenship for this ethnography is that which has been elaborated upon by medical anthropologists. The concepts of biological and pharmaceutical citizenships highlight the ways that individuals negotiate political rights through medical institutions, often when legal structures are compromised or ambiguous (Rose and Novas 2004; Biehl 2013; Petryna 2002; Nguyen 2005). In such situations, medical care becomes a currency through which other sets of rights are gained. Related to, and often underlying, this medical notion of citizenship is the concept of pharmaceutical personhood, where individuals at least partially self-identify based on the pharmaceuticals they rely on for survival (Hansen and Skinner 2012; Martin 2006). In this dissertation, I extend this notion of pharmaceutical personhood to the increasing pharmaceuticalization of medicinal plants and the subsequent political structures that have arisen around this pharmaceuticalization in the form of social development programs in communities labelled as “traditional.”

Citizenship, in its broadest sense, invokes the idea of political positioning, which has been fraught for African descendant peoples in the Atlantic world. For communities in the African Diaspora, citizenship and territory merge in ways that are often outside of policies, predicated on a discrepancy between the guaranteeing of rights and the realities of hierarchical
post-slavery societies (Hooker 2005; French 2009; Hale 2006; Rahier 2014; Gordon 1988). Territory implies space, or more specifically a black space, about which several other scholars have theorized, especially in relation to the black body. Previous scholars have sought to imagine, recognize, and analyze the forms of humanity that have arisen out of plantation and post-plantation spaces as full, rather than fragmented (Wynter 2003; Allewaert 2013; Weheliye 2014). Katherine McKittrick (2006) argues that black spaces are often “unknowable” spaces – spaces that are deemed unintelligible under a hegemonic gaze. But within those spaces, hidden from the purview of oppressive forces, new kinds of humanities are formed. My work responds to McKittrick’s (2016) call for a consideration not of the exploited black “bodies” that exist within what could be considered black spaces, but rather the humans that occupy those “bodies” and the humanity that they have formed both within and outside (but in relation to) plantation spaces.

**Political History of Black Environmentality**

The development of a black environmentality around medicinal plants in Brazil is situated within, I argue, a larger story of the creation of a transnational and transoceanic space that began with 15th century Portuguese exploration. This space has merged myriad sets of materials and knowledges exchanged through several kinds of actors, namely merchants, healers, scientists, religious leaders, and political leaders who were of indigenous American, African, European, and Asian descent. Within this story are multiple interconnected stories regarding medicinal plants that continue to the present: one around health and healthcare, another around the classification of plants, and a third around the cultivation and trade of plants deemed to be useful and valuable. This new space, its actors, its materials, and its knowledges both included and were superimposed upon what is now known as Brazil. Therefore, to narrate a history of the
politics around how black Brazilians use plants as medicine is also to narrate the history of these multiple actors, knowledges, and materials coming into contact with one another to create the space within which black Brazilians now exist.

The first part of this dissertation traces two stories around medicinal plants in Brazil — separated not inherently or in practice, but according to hegemonic historiographic, political, and cultural narratives — that become intertwined through a host of policies beginning in the second half of the 20th century. The first is that which has culminated into practices that are now called bioprospecting and biomedicine, which began to develop promptly upon Brazil's colonization. This history involves European colonists’ and explorers' initial unease with the perceived untamed spaces of the New World, and the important role of botanical gardens, medical spaces, and laboratories that have been constructed as places to transform knowledge gained from these untamed spaces into that which can be scientifically useful. Underlying this history is a capitalist approach to the environment and labor, which included trade routes established by colonial powers and the enslavement of indigenous Americans and Africans. The second, less studied, story is that of the medicinal plants that enslaved Africans and their descendants have used in Brazil. Africans taken to Brazil were agents in the exchange and cultivation of plants and maintained and augmented their existing knowledge of medicinal plants (Carney and Rosomoff 2009). Medicinal plants also played a key role in Africans' and African descendants' religious practices and practices of survival under the conditions of slavery, freedom, and marronage (Schiebinger 2017; Sweet 2011).

In actuality these two stories have, since their beginnings, been deeply intertwined, developing both in contention and in conversation with one another. Biomedical science had consistently been a central force in the corporeal violence enacted against African and African
diasporic populations, and black bodies were treated as "experimental" sites alongside "nature" from which scientific knowledge could be gleaned. The particular practices around medicinal plants used by African descendant peoples had been seen as unmodern by scientists, physicians, and governments, a sentiment that persists to this day. Yet still, African plants and crops, and Africans' knowledge of plants and crops were significant economic and medical contributions during the colonial and postcolonial periods (Hecht 2013; Miranda 2017; Gómez 2017).

Brazil's abolition of slavery in 1888 and its proclamation as a republic in 1889 represented a political shift for the nation marked by greater participation in international agreements and political discussions. By the middle of the 20th century, after the founding of the United Nations, a rising global concern around human rights, healthcare, and the environment created a political space to discuss traditional medicine, the rights of marginalized populations, and the social aspects of health and healthcare, which directly affected and continues to affect Brazil's black population. During this period, national and international policies around the environment, health, trade, and human rights began to intersect in a way that has increasingly regulated how medicinal plants are grown, traded, and used. “Traditional medicine,” as it has come to be called, became institutionalized and increasingly regulated in an attempt to integrate such practices into the biomedical healthcare system. By the 21st century such policies, particularly at the national level in Brazil, began to specifically mention black populations' uses of traditional medicine generally, and medicinal plants specifically. Brazil’s 1988 constitution, and later a set of policies implemented in the early 2000s, allowed communities (including quilombola and Afro-Brazilian religions) to self-declare as traditional and established institutional routes for some of them to gain territorial rights, which is the point where this dissertation's ethnography begins.
A discussion of bioprospecting, the practice of individuals or institutions searching for natural materials to be extracted and used for the common good, is unavoidable in this ethnography. However, the current study is not merely a tracing of bioprospecting activities in Brazil, but rather an ethnography of the systems that have always existed around it, in opposition to it, and as a result of it since the 15th century. The project of bioprospecting, by no means acting alone but alongside health and environmental political projects, has been at the center of the politicization of medicinal plants and the subsequent politicization of certain groups’ uses and knowledges of medicinal plants. In this sense, this ethnography falls directly within a lineage of scholarship around bioprospecting and the political economic journeys of natural resources within anthropology and science and technology studies.

This dissertation’s focus on plants is in line with the work of other scholars (Mitman 2007; Tsing 2015; Myers 2017; Mintz 1985) who examine how plants, as widely varied living beings, not only shape human worlds in drastic ways, but are often at the very center of human worlds. Pharmaceutically-oriented policies around plants further shape such human worlds, promoting a particular type of social organization steeped in notions of “modernity” which has forced traditional communities to imagine their relationship to the environment in terms of ownership, government bureaucracy, productivity, and legitimacy (Craig 2012; Adams 2005; Acevedo 2006). This research builds on and is informed by previous scholars’ work on the effects of bioprospecting and its related policies on traditional communities, especially in postcolonial contexts such as Mexico, India, South Africa, and Vietnam (Laveaga 2009; Hayden 2004; Ganguly 2012; Morris 2016; Wahlberg 2014). These scholars describe how traditional communities in the Global South often exist as an extension of laboratory and clinical spaces in
that they are sources of knowledge for scientists, but are perceived as being too imbedded in “nature” and lacking the scientific control necessary to be sole producers of knowledge.

But by limiting studies of medicinal plants to such approaches, I argue, we struggle to go beyond the Western scientific framework that postcolonial theorists denounce (Santos 2014). I adopt an ecological approach in this dissertation by considering how various knowledges, power, and factors within the environment all interact in a way that implicates that health of communities themselves. Sienna Craig’s (2012) description of the practice of Sowa Rigpa in Tibet is particularly informative for this perspective. She discusses how the medical pluralism that many medical anthropologists study exists within an ever-shifting hierarchical field of knowledge production. Such knowledge production, especially in the case of medicinal plants, is influenced by the movement and trade of plants, the subjectivities of healers, those being healed, plants and materia themselves, laws around scientific legitimacy, and ultimately the adaptations of what are considered to be bound sets of practices. In her ethnography, Craig’s approach is that of a multiplication of knowledge as opposed to a reduction that describes social ecological practices through the lens of a biomedical framework.

Gendered and racialized power dynamics also characterize the ecology of traditional medicine (Wayland 2001; Wayland 2003; Murrieta and WinklerPrins 2003). Throughout Africa specifically, traditional medicine became the target of colonial powers, who either restricted or outlawed its practice and the trade of materials, which has resulted in a host of present-day policies meant to standardize who is considered a healer and how one heals (Osseo-Asare 2014; Langwick 2011). Moreover, women are overwhelmingly the (recognized) holders of knowledge around traditional medicine. This leads to them being the ones most often exploited and/or
targeted for their knowledge, but also the ones who are at the forefront of grassroots organizing around traditional medicine (Sundberg 2004).

In this ethnography, I focus on a third postcolonial space in anthropological dialogue around medicinal plants – that of future imagining at the hands of subaltern groups (Weheliye 2014; McKittrick 2016; Nelson 2002). I use the term black environmentality to refer to how individuals and communities choose to heal their bodies, and relate their bodies to the environment around them, becomes a political matter (Scheper-Hughes and Lock 1987). The response of the Afro-Brazilian religious groups and the quilombola communities in this study take on another character, in that the political organizing around medicinal plants by these groups is part of a more comprehensive imagining of medical, environmental, and technological futures. It includes an overhauling and reimagining of the relationship between blackness and the natural environment. It also includes a shift in academic approach, which includes treating activists, academics, and activist-academics who live in Brazil as legitimate knowledge-producers. This approach at times runs counter to the direction of North American and Western European social science (Ribeiro and Escobar 2006). It is from this standpoint that this ethnography is developed and builds upon previous scholarship.

1.2 Chapter Organization

In the chapter that follows, Chapter Two, I offer an in-depth discussion of the sites of focus in this dissertation and the methodological approach that I used in each site. In each of the five subsequent chapters, I begin with a broad historical discussion of the politics that shape the spaces in this study – transnational routes, Brazil, candomblé terreiros and networks, and quilombola territories and networks – to frame the political significance of medicinal plants in each space. I then narrow down my analysis to explore localized renderings the significance of
medicinal plants in each space. In the following two chapters, Chapter Three, “The Politics of Medicinal Plants, Race, and the ‘Traditional’ in Brazil” and Chapter Four, “Constructing and Dismantling Black Ecologies” I offer a temporal narrative of how the idea and practice of black environmentality has been constructed within the Brazilian context, particularly through the lens of laws and policies that span back to the beginning of colonization. By tracing the evolution of politics around medicinal plants, I argue that the use of medicinal plants by African descendant populations in Brazil has always been a political matter, from the outlawing of Afro-Brazilian religious practitioners calling themselves healers, to the labelling of liturgical plants traded between Brazil and Africa as contraband, to violent political attacks on the autonomy of quilombos. In Chapter Four I weave in a current, ethnographic analysis of blackness and environmentality in Rio de Janeiro.

The next three chapters offer ethnographic accounts of communities in Santa Luzia do Pará, Baião, and Oriximiná. As I will argue in Chapter Three, medicinal plants have been approached from a few key politically discursive angles: intellectual property, health, environment, and human rights. Although all of these angles have become prominent within policy discussions, albeit at different points in history for different locations and populations, during ethnographic fieldwork participants themselves overwhelmingly placed medicinal plants within a health narrative in a way that was not necessarily political in their everyday uses of them. Discourse around intellectual property (or trade in general) and the environment stemmed from the political economic recognition of medicinal plants as useful and valuable objects. In a combination of these discourses, and as an indication of the global political moment at which ethnographic fieldwork took place, within my ethnographic sites I observed that an umbrella discourse around human rights came to underlie these other three perspectives.
In this ethnography I lean towards this health perspective not only because of its centrality in the narratives of participants, but also because it sheds light on what is most directly at stake for communities in relation to their use of medicinal plants – the use and maintenance of an autonomous working toolbox to address health needs. When the communities in the study used and negotiated medicinal plants as commodities, they were less concerned with medicinal plants as healing agents for the community itself, but more as they may be sources of monetary and social capital for the community (either as a whole or for individual members). Similarly, when the communities negotiate their use of medicinal plants in terms of their rights as citizens (in this case predicated on territorial and environmental rights), they are more focused on their significance (both symbolic and tangible) rather than their specific uses.

Chapters Five, Six, and Seven are organized as separate ethnographic vignettes, each with its own contained story and timeline, but ultimately connected by networks and patterns of lived realities. I begin by describing what is at stake for communities most broadly, which in all three cases is territorial and environmental rights. I then discuss institutional initiatives around medicinal plants in the communities, all of which approach medicinal plants as valuable goods. Finally, I explore how actors themselves, most of whom were women, within the communities place value on medicinal plants as healing objects and have organized around using medicinal plants in the context of these broader political shifts.

In Chapter Five, “Santa Luzia: Prospecting in Cooperation,” I discuss the experiences of the quilombola community of Pimenteira, which has worked closely with a local cooperative to create two phytotherapeutic pharmacies and has held an ambivalent relationship with the Brazilian cosmetics giant Natura in the absence of land rights. In Chapter Six, “Baião: Ecological Proximity and Political Distance,” I recount my research with the quilombola...
community of Campo Grande, which was in the process of establishing a cooperative structure within the community also in the absence of land rights, and had hopes of creating a phytotherapeutic pharmacy. In Chapter Seven, “Oriximiná: Laboratory of Politics,” I tell the story of several quilombola communities that had secured land rights and had maintained a relationship with ethnopharmaceutical researchers and NGO workers from outside of the region, and the municipality’s efforts to integrate medicinal plants into its public healthcare system. In the concluding chapter, “Phytotherapeutic Futures and Pasts” I close the dissertation with an analytical comparison of the sites and revisit recurrent themes throughout the study, particularly those of internationalisms, contested notions of territoriality, and constructions of blackness in relation to the environment.
CHAPTER 2
METHODS AND SITES

2.1 Methods

This dissertation is the result of fieldwork that I conducted over a period of seven years (2010-2017) in the Rio de Janeiro metropolitan area among candomblé terreiros, NGOs, and activists, and in traditional communities throughout the state of Pará. In order to analyze the politics around a notion of black environmentality, research was two-fold, including ethnographic analysis focused on the political activities of the communities in question and textual policy analysis. Ethnographic research took place in a number of different types of spaces, including public events, street and open-air markets, private meetings, home gardens, forested areas, terreiros, and inside participants’ homes. Research included participant observation, semi-structured one-on-one interviews, and unstructured group interviews. Recruitment of participants started in Rio de Janeiro during my participation in social justice workshops at Criola, an NGO focused broadly on the rights of black Brazilian women, and spread to other small organizations throughout the metropolitan area of Rio de Janeiro as participants introduced me to additional potential participants. The multi-sited nature of this ethnographic research, which I will describe later in this chapter, was a product of such recruitment methods, which eventually led me to Pará in 2014.

For the policy analysis portion of this research, I analyzed policy texts (both international and Brazilian) that mentioned medicinal plants and/or traditional populations dating back to the
late 19th century, starting with the most recent policies and going backwards as previous policies were referenced within texts. I also specifically analyzed policies mentioned by interlocuters in interviews and during meetings and public events. Although most of these policy texts were freely available online, some required additional research in libraries. For this policy research, I spent four months in Geneva, Switzerland (September-December 2017), where I benefitted from resources at the World Health Organization library and the library of the Graduate Institute of International and Development Studies, as well as three months in Belém, Pará (January-March 2018), where I used resources at the library of the Federal University of Pará.

I began ethnographic research from the perspective that policy texts, political realities, and the political struggles of communities are all mutually constituent. A pairing of critical discourse analysis with ethnography offered a fruitful framing for this perspective. As Johnson (2011) argues, critical discourse analysis approaches policy texts as in conversation with one another in layers, and ethnography can be used to analyze how agents recontextualize language within such layers. I first analyzed language used in policies around intellectual property, health, the environment, and the rights of marginalized peoples, with particular focus on how such policies referenced one another, how ideas of power and order were framed, how terminologies evolved, and which communities and people groups they specifically referred to and involved (Fairclough 2013).

Critical discourse analysis and ethnography were easily paired, since clauses in policy texts were constantly referred to in meetings between governmental and nongovernmental organizations and communities, as well as in meetings within communities and community organizations themselves. As my research populations became more defined, I refined the list of which policies would be of focus to this study based on which policies communities most often
mentioned, and which policies most specifically mentioned the populations of interest. Allowing my ethnographic research and policy analysis mutually inform one another was crucial for this study and resulted in a more accurate portrait of how policies arrive in communities, how communities operationalize policy texts in their fights for rights, and how the political realities described in policies differ from on-the-ground political realities.

*Interviews*

I conducted semi-structured interviews following the walk-in-the-woods method commonly employed in ethnobotany, where I walked with participants in gardens, forested areas, markets, or their neighborhoods and asked them to talk about how they use the plants encountered along the walk (Albuquerque et al. 2014). I used this method mostly as an ethnographic tool, rather than a means to collect data about plants, as this was the way that many participants seemed to be the most accustomed to talking about their experiences with and knowledge of plants. In fact, when I told participants that I was interested in medicinal plants, the first thing they often did was introduce me to their gardens or a nearby space with plants. For each plant that I saw, I simply asked the participant its name, its use, and how it was prepared.

However in these moments, I not only learned the names and usages of plants, but also stories around the plants: that a plant was given to a person from an out-of-state visitor, that a plant was in vogue and sought out by a company, that some people believe the plant does not actually work, that the use of abortive plants are common but not explicitly discussed, that a person used to have more medicinal plants in their gardens but stopped caring for them, or that a plant provides nutrients for children who have difficulty eating because of gastrointestinal conditions, which are common in rural communities. In all sites, people were eager to
demonstrate their knowledge not only of medicinal plants, but of other plants and the environment in general.

But more often than not, the richest and most indicative conversations around plants were those which were incidental. Such conversations occurred without my prompting around the dinner table, on the bus, and while walking down the street. Some of these conversations easily became life history interviews, where informants told about their childhoods and how their cities and lifestyles used to be, as well as how they imagined their futures and their families’ futures to be. The intensity and the value of these conversations demonstrated the centrality of medicinal plants both as agents of healing and agents of exchange in the everyday lives of people.

As I began to talk to more people about plants, my participants began to introduce me to other individuals who also knew about plants. I repeated the same walk-in-the-woods methodology with these new participants when possible, and simply asked people to list plants that they knew about when a walk-in-the-woods interview was not feasible. Eventually, as I will discuss later in this chapter and in the subsequent ethnographic chapters, people began to suggest communities and/or spaces where individuals were working with medicinal plants at an organizational level, which introduced me to a world of politics around medicinal plants.

Asking about the politics around medicinal plants proved to be more difficult than conducting walk-in-the-woods interviews. In Rio de Janeiro, there was a general perception that Brazil lacked policies around medicinal plants, whereas in Pará communities were unequivocally (and at times painfully) aware of the politics around bioprospecting and the preservation of “traditional knowledge,” as such language was present in the daily lives of many. Yet, perhaps accordingly in Pará, it was a sensitive topic that individuals were apprehensive to talk about. Meetings with governmental, nongovernmental, and community actors were therefore crucial.
spaces in this ethnography. In these meetings, community members felt more at ease to discuss their concerns as a collective, and debates were carried out, allowing me to hear multiple stances in relation to political questions. During workshops organized among community members (i.e., without the presence of outside researchers or organizations/institutions), such conversations also occurred, and in these moments I asked a series of questions to community members around their experiences with politics related to traditional medicine.

As fieldwork progressed, particularly in Pará, open-ended interviews took the form of extended (i.e., over weeks and months, both in person and over the internet) conversations and included me continually organizing and leaving the data I had collected with communities (including maps, lists of plants, research on policies, and translations). As the cases later in this ethnography demonstrate, communities were concerned about where information around plants gained from them would end up, as many were victims of exploitation and were in the process of trying to establish some kind of autonomy over their cultural patrimony. In this dissertation, the lack of an explicit discussion or divulgation of the specific plants encountered during fieldwork, as well as the use of pseudonyms for informants and certain communities, is a result of such tensions, which were very much still in progress by the time I left each site.

Selection of Sites

In this study, “sites” encompassed political units, biomes, and communities. The logic in the choice of sites was that they were through created networks that were suggested to me over the course of seven years, which as a whole tell a more complete story of Brazil and the sites’ respective regions. Each space in this study was connected to at least one another space in the study by means of key actors. Such networks were both institutional and non-institutional, and there was often not much separation between the professional and the familial. Other sites,
although not the focus of fieldwork, make appearances in this ethnography. “Africa” as both place and imagined place cannot be ignored, nor can Europe as a site of political economic negotiation.

This ethnography was rooted in the idea of relationality — that one space cannot be understood without understanding another. I wanted to understand one type of black space, candomblé terreiros, in relation to another type, quilombos. I also wanted to understand the idealized urban spaces of Rio de Janeiro in relation to idealized rural spaces of the Amazon. I was concerned with this relationality because it is mostly absent within policies around medicinal plants that conceptualize space in terms of unified nations, a geopolitical project that began with colonization. Instead, I sought out to explore how analyzing the use of medicinal plants in Pará and Rio de Janeiro might indicate pluralities of the concepts central to policies around medicinal plants and traditional medicine: various health statuses, various natures, various Brazils, and various blacknesses. In order to analyze the relationality between spaces, I traced social networks as a way to explore both similarities and differences: similarities in that all of the actors in the study are involved in an extended network of the black movement throughout Brazil, and were overtly connected to one another as such; and differences in that each community faced a different set of challenges within a national fabric of political movements and public policies.

Whereas the sites were connected by the ethnographic networks that I actively followed, they were also connected in unexpected ways. I learned that one quilombola woman working in a phytotherapeutic pharmacy in Pará, for example, was the sister of a woman who worked in the network of phytotherapeutic pharmacies that I visited while in Rio de Janeiro. Her sister talked about taking plants native to the Amazon region to Rio de Janeiro to make remedies for people.
More than once in Belém I encountered activists from Rio de Janeiro and other municipalities in Pará after meeting them in their home communities, and healers in communities in Pará knew of healers that I had worked with in other communities. Therefore, as fieldwork progressed, networks began to “fill in” rather than be discovered.

Ultimately, terreiros in Rio de Janeiro became a portal into conversations around blackness in Brazil for my research, and quilombola communities in three municipalities Pará (Santa Luzia do Pará, Baião, and Oriximiná) became the heart of my research, a relationship that is reflected throughout this ethnography. I was first introduced to Afro-Brazilian politics through my participation in an undergraduate African Diasporic study abroad program jointly organized by the University of Texas at Austin, Criola, and the State University of Rio de Janeiro in 2010. By that time Rio de Janeiro had established itself as a diasporic space that had a history of international conversation. There was never a lack of North American, European, and African researchers and students, both black and non-black, in Rio de Janeiro, nor was there ever a lack of translators and interpreters. The city’s black history was imprinted everywhere – museums, cultural heritage sites, public lectures, and perhaps most obviously, its favelas, mostly situated on hills throughout the city as to not be ignored. My research in Pará, where blackness exists in more hushed and less discrete tones, would have been difficult, if not impossible, to form without Rio de Janeiro acting as a kind of gateway into blackness in Brazil, especially as it is articulated to an international audience.

Ultimately, as a result of such political and ethnographic realities, I experienced and approached Rio de Janeiro as a political and ideological basis for my research, and Pará became the ethnographic basis for this study. At Criola, I worked alongside several politically active healthcare professionals and researchers, many of whom were practitioners of Afro-Brazilian
religions, particularly candomblé. I worked through this network from 2010-2017 (in 2010, 2013, 2014, 2016, and 2017) during a total of 18 months of fieldwork in six different municipalities in the Rio de Janeiro metropolitan area (Rio de Janeiro, São João de Meriti, Itaguaí, Magé, Belford Roxo, and Nova Iguaçu; see Map 2.1). Fieldwork took place at public and private events (mainly lectures, protests, religious ceremonies, and workshops), and among the everyday occurrences of various NGOs, cultural spaces, religious spaces, and universities. In total, I visited a total of four terreiros, and followed two mães de santo (or mothers of the saint, female religious leaders of candomblé who practice alongside pais de santo, or fathers of the saint) who became key interlocutors in my research.

*Map 2.1 Metropolitan Region of Rio de Janeiro*
Rio de Janeiro became a significant site of this study for two reasons. The first is because of the political prominence of Afro-Brazilian religions there, and the second is because it is the site of the creation and discussion of federal policies around medicinal plants. I had no trouble locating people who relied on medicinal plants for their healthcare needs, nor did I encounter problems locating organizational efforts to uphold the use of medicinal plants. Yet there, a common but casual response to my interest in medicinal plants was that I should focus more on the Amazon region, which is perceived to have a larger amount of biodiversity than in Rio de Janeiro and more traditional populations that utilize protect that biodiversity (in reality, the Atlantic Forest region holds proportionally more biodiversity than the Amazon region [Colombo and Joly 2010]). The multi-sited aspect of this ethnography stems from such comments. These comments echo the perceived and actual cultural histories of the two regions, which are often framed as opposites. Rio de Janeiro is tropical civilization, whereas the Amazon region is tropical wilderness. Rio de Janeiro represents Brazil’s mixture of peoples and ideas, whereas the Amazon represents indigeneity and “purity.”

While conducting fieldwork in Rio de Janeiro in 2013, the opportunity to visit the Amazon region presented itself to me and continued to present itself to me through my network in Rio de Janeiro through 2016. I was introduced to Pará both through black activists and through a network of medical researchers interested in medicinal plants and racial justice that were based in Rio de Janeiro. As I will explain in more depth in Chapter Seven, in 2013 I first met a pharmacist (part of the family with whom I had always lived in Rio de Janeiro) born, raised, and educated in Rio de Janeiro but living and working in Oriximiná, Pará, who had helped establish a traditional medicine pharmacy with assistance from various institutions in Rio de Janeiro (Universidade Federal Fluminense, Universidade Federal do Rio de Janeiro, and
Fundação Oswaldo Cruz). Upon learning about my research interests while visiting family in Rio de Janeiro, she invited me to accompany her in Oriximiná. After becoming familiar with the region, and after returning to Rio de Janeiro, a mãe de santo, Mãe Lúcia in Rio de Janeiro who was born and raised in Belém, also working closely with the NGO Criola, invited me to more extensively explore her home state in 2016 after pointing out that Afro-Brazilian religions in the Amazon region held different traditions than those in Rio de Janeiro. She had left Pará at age 18, but was still involved in networks throughout the state through family and her political activism around religion and health. Mãe Lúcia quickly became one of my most important interlocutors, working with me in both Rio de Janeiro and in Pará. One other black woman activist, a medical doctor involved with Criola was also in contact with black women activists in Pará, and put me into contact with activists within CEDENPA (o Centro de Estudos de Defesa do Negro do Pará, or Center of Studies and Defense of Blacks of Pará, in English), the most influential organization of black activists in the state. Through these networks, I became acquainted with various quilombola communities and other traditional communities throughout Pará, as well as various other organizations working with issues around traditional medicine and racial equality.

Ethnography focused on Pará is based on an analysis of quilombola communities in three municipalities (see Map 2.2, Map of Sites in Pará) within which I most extensively worked. Ethnographic fieldwork occurred in 2014, 2017, and 2018 and I spent a total of 10 months in the state of Pará. Upon my arrival in Pará, I quickly learned that quilombola communities were at the forefront of black activism in the region, and that narratives around traditional medicine in the state are commonly paired with the politicism of quilombola and other traditional communities. After visiting a total of 23 traditional communities in Pará (three ribeirinha, four indigenous, four family farming communities, and 12 quilombola) in nine different municipalities (Belém,
Salvaterra, Soure, Santa Luzia do Pará, Oriximiná, Primavera, Baião, Marapanim, and Viseu), I noticed that the model of grassroots (i.e., not initially established as a governmental project) medicinal plant pharmacies was common throughout the state, and began to conduct research on such organizations, as they mirrored the kind of social organization around medicinal plants that I encountered in among Afro-Brazilian religious communities in Rio de Janeiro: the importance of markets, the prominence of women, connection to political activism, rhetoric of traditionalism, and the providing of healthcare in the absence of state-provided healthcare services. Ultimately, the quilombola communities in Pará that became the focus of this ethnography were those that held some presence — whether existent, anticipated, or remnant — of medicinal plant pharmacies.
In each of the municipalities where I conducted fieldwork I had a different level of engagement, partially based on the situation of the communities within the municipalities. For example, in Oriximiná my focus was more institutional. I followed the city’s secretary of sanitation, as well as the quilombola communities’ now secretary of education in meetings with stakeholders, as opposed to collecting ethnobotanical data or collecting the life histories of individuals. In Baião my research was more personal and less institutional, and I collected both ethnobotanical data and life histories of the women in quilombola communities. Additionally, data gathered for this project was used to help establish a new medicinal plant pharmacy, which made my involvement much more participatory and involved the organizing of workshops. In Santa Luzia, my research was also participatory but very much entrenched in the city’s web of institutions, and I worked alongside individuals who participated in the city’s cooperative and schools, in addition to collecting ethnobotanical data, but few life histories. In Baião and Santa Luzia, I visited communities multiple times over several months, staying one to two weeks at a time, and kept in contact with individuals via social media. In Oriximiná I visited the city just once, but stayed for a month and a half and continued to keep in contact with individuals via social media as well. Therefore, the quality of data collected in each municipality varied, and in this ethnography I hope to present a composite view of how policies arrive (or do not arrive) and are applied in communities depending on a range of contextual factors.

2.2 Terreiros in Rio de Janeiro: the periphery of the center of Brazil

Afro-Brazilian religions in the Rio de Janeiro metropolitan area exist within a stratified landscape. Terreiros in the Rio de Janeiro metropolitan area almost exclusively exist in the periferia, or the periphery, which includes zona norte (the northern region of the municipality’s limits), Baixada Fluminense (see Map 2.1), zone oeste (the western region of the municipality’s
limits), and the region eastward and across the Bay of Guanabara from the city of Rio de Janeiro. In fact, according to a mapping project conducted by the Pontifical Catholic University of Rio de Janeiro, only an estimated nine terreiros exist in the center of the municipality of Rio de Janeiro. Comparatively, there are a total of 847 candomblé and umbanda terreiros within the entire metropolitan area of Rio de Janeiro (NIMA/PUC-Rio 2014). (In comparison, 1165 terreiros have been mapped in Salvador, Bahia, where candomblé is said to have originated [Mapeamento dos Terreiros de Salvador 2018]).

The periferia itself can be conceptualized as a politically and historically separate space from the center of Rio de Janeiro, and was often referred to as such by participants. The periferia, which is often conceived of as included the city’s sprawling favelas, is a significant social and historical region of the metropolitan area, with nearly one half of the area’s population living outside of the city’s center and wealthy southern region (a number which is skewed due to inaccurate census data from favelas) (Instituto Brasileiro de Geográfıca e Estatística 2014). In this study, the periferia was represented by the region of Baixada Fluminense, which is home to an estimated 274 terreiros. Over one quarter of the Rio de Janeiro metropolitan area’s 12 million inhabitants live within the region of Baixada Fluminense, which spans across the north of the city of Rio de Janeiro. It currently includes 13 different municipalities, some of which have one recently been incorporated as municipalities after a period of population growth and migration to the region. Beginning in the middle of the 20th century, the city of Rio de Janeiro began to build up Baixada Fluminense as a region for the lower classes and recent migrants (Alvez 1999; Rocha 2013). The region has, historically, been regarded as dangerous, and the name itself held a pejorative meaning, synonymous with violence and poverty (Alvez 1999; Rocha 2013).
Whereas in the first half of the 19th century, the region was primarily the home to agricultural activity, after the abolition of slavery the region experienced an economic downturn. Approaching the middle of the 20th century, in the context of Brazil’s modernization efforts, the country began to establish industrialized areas outside of urban centers, and Baixada Fluminense became one such site (Figuerêdo 2004; Xavier and Magalhães 2003). In order to attract more workers to the region the government built affordable housing units. Migrants from the country’s northeast region, including Bahia, flocked to Baixada Fluminense. Today many of these migrants live in Baixada Fluminense, but work in the center of Rio de Janeiro, commuting daily. The municipalities of Baixada Fluminense, therefore, are often referred to as “dormitory towns,” since residents primarily live there to sleep while much of the rest of their time is spent commuting to and working in the city of Rio de Janeiro. Various infrastructural and economic developments in the middle of the 20th century led to the growth of Baixada Fluminense. Two highways and a railway system spurred population growth, and industries such as telecommunications, textile, pharmaceuticals, plastic, and metal persist as key industries to this day (Figuereïdo 2004).

The large migration of northeastern Brazilians also changed the demographics of the region. The Northeast has the highest percentage of black Brazilians, and Baixada Fluminense came to have a higher proportion of blacks, especially in comparison to the center and zona sul of Rio de Janeiro (Bezerra 2012; Costa 2015; Rios and Costa 2008). Today, Baixada Fluminense is an important space for Afro-Brazilian activism focused on health, education, identity formation, and cultural rights, among other issues. Beginning in the 1970s, candomblé terreiros began to be founded in Baixada Fluminense, eventually outnumbering the number of terreiros in
zona norte, which had held the majority of terreiros beginning with the founding of early terreiros in the city in the late 19th century (NIMA/PUC-Rio 2014).

For example, one organization I conducted research in, the Grupo de Mulheres Yepondá (or Group of Yepondá Women, a reference to the orixá Oxum, a deity tied to fertility, femininity, and vanity), maintained a library with a collection of the magazines geared towards the national candomblé community. Members of the group included both practitioners of Afro-Brazilian religions and non-practitioners, but the group itself regularly educated the public about Afro-Brazilian religions and the religions’ symbolisms. The group held its activities in the municipality of São João de Meriti in Baixada Fluminense, where it held its headquarters in a public school of music and art, often organizing workshops, lectures, and presentations around women’s rights, cultural rights, and Afro-Brazilian culture. The group, therefore, began to make a name for itself in the Baixada Fluminense region, and the library became a reference for students and those who attended the group’s events. Several organizations and groups such as the Grupo de Mulheres Yepondá existed throughout Baixada Fluminense, frequently organizing lectures and workshops that acted as meeting spaces for activists and students. These spaces became the basis of my research network in the metropolitan area of Rio de Janeiro.

2.3 Quilombola Communities in Pará: the interior of the periphery of Brazil

Pará is a state with many particularities in comparison to other states in Brazil. It is the most populous state in the Amazon region, and the site of violent political economic conversations around traditional populations, the environment, and the use and extraction of natural resources (Arregui 2015; Cardoso 2011). A fellow researcher from southern Brazil once commented to me that it is often referred to as the terra de ninguém, the land of no one, echoing the idea that the Amazon region is a mostly empty, uninhabited space (Garfield 2013; Hecht
2013). There are, indeed, vast spreads of spaces without human inhabitation in Pará, but those spaces, often full of natural resources, are still used by people and are often times the territory of someone, some community, or some company (Campbell 2015). In terms of territorial area, the state of Pará is nearly twice as large as France, and land ownership and territorial rights are particularly strained issues in the state. A commonly uttered statistic in the state is that there are land titles for four times as much land signed by the notary offices than there is actual land in the state, pointing to both the difficulty of government offices to manage land claims and to the competition that exists around claiming lands.

The idea of living and surviving in rural and relatively remote areas, often referred to as the interior, most literally used to refer to locations that are not directly on the coast, is a persistent undercurrent in discussions around healthcare and survival in general in the state. Not only are small towns throughout the state considered to be the interior (i.e., the interior of the state of Pará), Pará and Belém (the state’s capital) themselves are often considered to be the interior of Brazil. The word interior has the connotation of being marginal, and out of the way of access to resources and capital. Socioeconomically, Pará and Belém indeed fall into this connotation of marginality. Pará’s human development index ranks 24 out of 27 Brazilian state (Atlas of Human Development in Brazil 2010), which takes into account income level, life expectancy, and level of education. In terms of economics, Pará being interior also implies that it does not control its own capital, but in fact is controlled by the geographic holders of capital in the southeast region of the country, particularly Rio de Janeiro and São Paulo.

It is also notoriously difficult for public policies written at the federal level (i.e., in Rio de Janeiro, São Paulo, and Brasilia) to be implemented and negotiated in Pará. For example, INCRA (o Instituto Nacional de Colonização e Reforma Agrária, or the National Institute of
Colonization and Agrarian Reform) the federal agency responsible for the issuing of land titles to *quilombola* communities, is infamous for bureaucratic delays in the verifying and processing of *quilombola* claims, which only exacerbates the already delayed process of rural communities having to produce documentation with limited human and technical resources in the first place. Representatives of *quilombola* communities often must travel to Brasilia to negotiate such claims, another logistical difficulty. Another example is federal protections of the lands of traditional communities, which are very often easily violated by ranchers with social capital, corrupt mayors, hired hitmen, and multinational corporations. One environmental accident, perhaps a result of an overlooked federal regulation, can affect an entire ecosystem within which a traditional community lives for decades. The label of *interior*, then, implies such difficulties that arise as the result of the people of Pará being out of the purview of national concern.

Demographically and geographically, the Paraense municipalities in this study differed greatly. Pará is a varied geographical space, with salt water, fresh water, farms, swamps, and savannahs all shaping how communities have developed and have historically interacted with one another. Oriximiná has a population of 71,078, Baião a population of 46,110, and Santa Luzia do Pará a population of 19,316 (Instituto Brasileiro de Geografia e Estatística 2017). Oriximiná is divided over nearly 107,603 km² (and is the fourth largest city territorially in Brazil), and includes indigenous, *quilombola*, and *ribeirinha* territories. Baião is divided over 3,758 km² and includes *quilombola* and *ribeirinha* communities. Santa Luzia is divided over 1,356 km², and includes small-scale agricultural communities, *quilombola* communities, and indigenous communities. Belém, in comparison, has a population of 1.4 million people and a territorial area of 1,059 km², and the city of Rio de Janeiro has a territorial area of 1,200 km² (Instituto Brasileiro de Geografia e Estatística 2017).
Oriximiná and the communities within the city’s boundaries were significantly more difficult to arrive to than the other two cities. From Belém, one must take a one-hour plane to Santarém, and a four- to eight-hour boat ride to the urban area of Oriximiná. It is then between a two- to eight-hour boat ride to the quilombola communities. In comparison, to arrive in the quilombola community in this study in Santa Luzia, it is around a five-hour bus ride (two separate buses, one of which is the daily school bus) from Belém. And to arrive in the quilombola community in this study located in Baião, it is a five-hour bus ride from Belém and an additional two-hour boat ride to the community. The logistics of arriving to the municipalities, and to a larger extent communities, are directly related to the government and research programs that have historically arrived and been successful (or not) in each. Much of this is a direct result of the history of quilombos in general, the members of which purposely settled in difficult to reach areas in order to stay hidden and free from exploitation. Often, in the most practical sense possible, it is simply difficult for federal programs to arrive and be monitored sufficiently in certain communities.

As stated previously, although the communities have distinct histories, they are all part of a larger network. Leaders from quilombola communities in Oriximiná, for example, helped leaders in Campo Grande in Baião in the process of applying for territorial rights. Two activists in CEDENPA, based in Belém, work with quilombola communities in both Baião and Santa Luzia do Pará in matters surrounding economic development and territorial rights. Therefore, although large spatially, the state of Pará was made small in this ethnography through the strong networks that communities and organizations had created.
2.4 Comparing Rio de Janeiro to Pará

I focus my research on social and political organization around medicinal plants, which ultimately manifested themselves in different ways in Rio de Janeiro and Pará, and led to my research unfolding in different types of spaces in the two sites. In Afro-Brazilian religious spaces, the use and growth of plants occur in spaces predetermined by the structure of the religion itself independent of the current political moment. These spaces include not only terreiros, but also public parks and other public natural spaces. However, in many quilombola communities, especially in the Amazon region, an increasingly popular model is grassroots medicinal plant pharmacies, which have been supported by government programs, NGOs, and university researchers over the past 20 years. These pharmacies include the use of plants from community or personal gardens.

More generally, I argue that it is impossible to discuss one city or region in Brazil without discussing the other cities and regions that exist in contrast to that city or region. Salvador, Bahia, for example, is often referred to as the center of Afro-Brazilian culture, and it is thought that some of the "purest" elements of African culture and religion are present in the city (Romo 2010). This implies that African descendant practices in Rio de Janeiro and Pará, for example, do not have as strong a linkage to Africa. Rio de Janeiro's sprawl into hills and around bays, lakes, and oceans, and its improvised urban livelihood can be placed in direct contrast to the construction of its successor as Brazil's capital, Brasilia, in 1960. While Brasilia was intentionally built to be “modern” and future-oriented, far from a coast and close to what may be considered a tamer nature, the more organic Rio de Janeiro is the holder of the nation's heritage in all of its beauty and discomfort.
Both sites in this study exist within highly biodiverse biomes. While the Amazon region receives the most global attention for its biodiversity, Rio de Janeiro and the southeastern, southern, and eastern regions of the country exist within the also highly biodiverse Atlantic Forest. Still, the Amazon region is viewed as the mysterious and infinitely impermeable heart of the country in part because of the “nature” that it contains. Whereas the southern part of the country is seen as “modern” and more connected to the rest of the world, the Amazon is seen as more isolated. Demographic patterns no doubt contribute to this imagery of modernity vs. non-modernity. The whiteness of the southern region of the country (which is around 80% white) is contrasted to the Amazon's non-whiteness (around 20% white), and more generally the Amazon comprises 60% of Brazil’s national territory but is home to just 13% of its population (compared to 70% of the country’s population that lives within the Atlantic forest region) (Instituto Brasileiro de Geografia e Estatística 2016; Pádua 2015).

On the surface, the two sites of this study appear to be opposites in terms of both scale and the lived realities of the populations. As of 2016, the metropolitan area of Rio de Janeiro had a population of 12,330,186 individuals, around half of which live in Rio de Janeiro itself (Instituto Brasileiro de Geografia e Estatística 2016). Comparatively, the entire state of Pará has fewer residents than the Rio de Janeiro metropolitan area – 8,272,724 as of 2016. Rio de Janeiro is a metropolis, and travel from the peripheral region of Baixada Fluminense to the center of the city of Rio de Janeiro often takes two hours (or more, with traffic and/or street events).

In comparison, individuals in the study from rural communities in Pará take frequent trips (i.e., once every week or two weeks) to the state capital of Belém to sell goods, visit family, and run errands. Two of the Paraense communities of focus in this study, for example, are around four to five hours by bus from Belém, and there are multiple buses per day available. Individuals
from rural communities often have family members who live in the Belém metropolitan area or Santarém, the state’s third largest city, with whom they can stay with. Oppositely, participants residing in the Rio de Janeiro metropolitan area did not have the same connections to other areas throughout the state of Rio de Janeiro, and their everyday networks were within the Rio de Janeiro metropolitan area itself. Therefore, in this study, regions were defined by the everyday experiences of participants and the personal geographical spaces formed by those experiences. Much of my research involved travelling alone and alongside my participants along these routes, which ultimately formed the spatial limits of this ethnography.

Whereas the ethnography of this study started out in this vein of comparison, the palpable power relations between the two spaces complicated what might have been considered merely a multi-sited study. If Brazil is conceptualized as a singular space, as it is in both national and international policies around medicinal plants, then Pará and Rio de Janeiro must be looked at as spaces that are inextricably tied to one another within the singular space of Brazil. But that linkage is fraught with a violently hierarchical conversation that made this study less of a comparison and more a tale of two elements within a larger narrative. The political occurrences of the Amazon region have, since the beginning of colonization, controversially been controlled by those from outside of the region itself, and have in turn affected political decisions made in the outside, making it impossible to discuss the region without discussing a slew of other places. Such politics have led to regional tensions. For example, much of the deforestation that took place in the Amazon occurred between 1970-1990 at the hands of loggers and farmers who migrated from the South and Southeast of Brazil (Pádua 2015). Another example, Pádua (2013) argues, is that preservation efforts of the Amazon Rainforest, undoubtedly spurred by a global cultural fascination with the region, led to the cerrado biome being turned into a "sacrificial
zone" where agribusiness expanded beginning in the 1970s. From the 1970s until now, the *cerrado* has lost 50% of its native vegetation.

Beginning in 1966, the northern region of the country (which includes Pará) has been separated in policy by its distinction as *Amazônia Legal*, or Legal Amazon, precisely as a way to differentiate the region from the rest of Brazil in accordance with the development projects that would occur in the region (Cardoso 2011). Much of the country's pride in its nature revolves around the Amazon region, as does its disputes over how resources should be controlled, capitalized on, and shared (or not shared) with the rest of the world. In this study, the research units and policy makers working on national issues of biodiversity and health are concentrated in Rio de Janeiro, rather than São Paulo or Brasília. Many of the federal policies developed in Rio de Janeiro are directly aimed at rural and traditional communities, which the state of Pará possesses in numbers significantly greater than Rio de Janeiro. However, as São Paulo is the financial center of the country, with most of the country's wealth being held and controlled there, the capital (both monetary and social) that goes into and comes out of the Amazon region is often managed in São Paulo by investors, researchers, and NGOs.

The multi-sited nature of this research, then, points to a couple of key reflections around approaching space relationally. For one, it steers the focus of research to the spaces through which people communicate and form networks in practice, and away from fixed notions of region. It also highlights the power relations that exist between different spaces in Brazil, and how those power relations reify notions of regional difference. Placing this ethnography in conversation with scholars within Science and Technology Studies, I used this methodology to demonstrate the individual and community actors, policies, knowledge of plants, and, above all, the plants themselves do not and have never existed as isolated in time or space, but rather are
the results of constant exchange and dis- and relocation (Tsing 2015; Falzon 2009; Hine 2007). As a matter of ethnographic analysis, this stands in contrast to nationally and globally-oriented policies, which approach geopolitical spaces statically. In reality, the use of medicinal plants, and the exchange of knowledge around medicinal plants, do not happen along the lines of programs that the government may suggest. Instead, the networks through which this information travels are dependent on factors such as geography, migrations, family linkages, colonial histories, and the everyday practicalities of using and cultivating medicinal plants, making following the geographical networks of people as a basis for site selection crucial.

In the following chapter, I present a history of these national and international policies, paying particular attention to the geographical spaces that they debated and imagined. The chapter acts as a grounding and reference to compare the lived political realities of the communities in this ethnography to the stories that policy texts paint. In order to further explore the concept of black environmentality, I juxtapose policies around intellectual property, the environment, health, and racial and ethnic equality in order to analyze the rubrics according to which the communities come to imagine their rights.
CHAPTER 3
THE POLITICS OF MEDICINAL PLANTS, RACE, AND THE “TRADITIONAL” IN BRAZIL

3.1 The Colonial Bioprospecting Project

The first recognized Portuguese voyage to Brazil in 1500 resulted in a record of plants encountered, as settlers and travelers in Brazil had the immediate need of healthcare upon arrival (Hecht 2013). But the systematic search for, and recording of, medicinal plants in Brazil by Europeans began as early as the middle of the 16th century and was from the beginning a global enterprise. Brazil quickly became an experimental space for a variety of global actors in terms of medicinal plants, including those from the Netherlands, France, Great Britain, Germany, the United States, and Portugal (Hecht 2013; Harris et al. 2016). Various types of actors existed in these spaces — colonists, visiting explorers, sailors, enslaved persons (both African and indigenous), and non-enslaved indigenous populations — each of whom held a different role in the use and exchange of medicinal plants between parties. The plants used during the colonial period were absolutely crucial, as they were used for often critical and fatal conditions and diseases both in Brazil and in other parts of the world. Beginning in the 16th century, Portuguese traders incorporated Brazilian plants such as cinchona (to treat malaria), cocoa (to treat skin ailments), *copaiba* (to treat gonorrhea), *salsaparilha* (to treat syphilis), *ingá* (to treat liver problems), and passion fruit (to treat fevers) into their trade routes and the *de facto* pharmacopoeia of their empire (Walker 2013).
Colonial interest in medicinal plants followed much of the same pattern that interest in medicinal plants follows today. Botanical gardens, first located in metropoles and later in the capitals of colonies, were established as spaces where plants were exchanged and studied, especially those from colonial holdings. Researchers were interested in producing a body of scientific knowledge, treating conditions of local populations (especially those exploited for their labor), and trade, all of which were made possible by information from gathered indigenous groups and enslaved Africans. The early Portuguese model of colonization affected how medicinal plants were sought out in Brazil. The Portuguese initially did not set out to occupy territories, but instead to establish supply ports and spaces for merchant activity (Pimentel 2000). In comparison to Spanish colonies, where universities supported the building of a scientific enterprise as early as the first half of the 16th century, Portuguese colonies were more militarized and did not establish a formal scientific structure until much later (Pimentel 2000). In this context, the role of knowledge gained from indigenous and African peoples in Brazil, as well as their descendants, cannot be understated. For three centuries, this knowledge was the primary source of medical information, as there were no medical teaching institutions in Brazil until the beginning of the 19th century (when the Portuguese monarchy stationed itself in Brazil), when surgery became the primary focus of instruction in Rio de Janeiro, São Paulo, and Bahia (Saldaña 2006). Before this, Brazilian physicians studied in Portugal but partook in research and the collection of specimens in Brazil, writing books geared towards a popular audience and focused on homemade, plant-based medicines (Dean 1991; Furtado 2008). Missionaries also played a role in the gathering of knowledge around medicinal plants. They established apothecaries which produced pharmaceuticals that were created from ingredients gathered through Portuguese trading routes (in Asia, Europe, Africa, and South America), and by the mid-
18th century had established around 30 of such pharmacies in Brazil (Walker 2013). These efforts by missionaries were the beginnings of a hybrid tradition of biomedically oriented pharmaceutical spaces and practices centered around medicinal plants in Brazil.

In the colonial bioprospecting model, from the perspective of explorers and settlers, there was a distinct hierarchy of knowledges regardless of this inevitable hybridity. Indigenous peoples were providers of knowledge and labor, but aside from that, lesser-than humans and by all means non-citizens that were merely occupying spaces with natural resources. Furtado (2008) argues that while early European researchers ignored the “intellectual framework provided by their indigenous counterparts” (128), they nonetheless enthusiastically used such knowledge in the development of colonial medicine. Still, the knowledge of indigenous peoples was approached with an apprehension, yet seen as being translatable to European medicine. Blacks were seen as having a knowledge, but not one that was compatible with medical science because of its perceived spiritual foundations (Miranda 2017).

There was also a significant gendered aspect of plant research, expertise, and application. Nearly all of the initial explorers to Brazil were men. It was thought that the tropics was not an appropriate environment for women, and that living there led to infertility, excessive menstruation, and the birth of children resembling natives of the given region (Schiebinger 2004). Many of the plants that eventually were incorporated into European Pharmacopoeias were gathered from women healers (indigenous and African descendant) in colonial territories, and subsequently held a wide range of uses for women’s reproductive health. There were several abortifacients used, and most were left out of medical and botanical research conducted by European men. Midwives were not considered to have medical or scientific knowledge, and
abortifacients and contraceptives often were excluded from colonial pharmacopoeias, or regarded as poisons (Schiebinger 2004).

The Atlantic and the Amazon

The two sites in this study, Rio de Janeiro and Pará, are located in two of the most biodiverse ecological regions of Brazil, the Atlantic Forest and the Amazon Rainforest respectively. But the practice of hybridization of traditions was influenced by these differences in resource extraction and settlement, and was also characterized by a hierarchy on a national level. Each region served a different purpose for colonizers in Brazil in terms of capital accumulation and the extraction of natural resources. By the end of the 18th century, plants were being transferred from the Amazon to Rio de Janeiro and Salvador for trade and medical practice. Soon after, the Botanical Garden (Jardim Botânico) in Rio de Janeiro opened in 1808. The directors initially proposed to solely cultivate plants that were of economic value, such as cinchona as a treatment for malaria. But the Garden became a pan-Brazilian space that held and featured plants from all regions of the country, particularly the Amazon region (Furtado 2008).

The Amazon region, in fact, could be conceptualized as an entirely different political unit, if not nearly a different country in and of itself because of its separate political history in comparison to the rest of Brazil. As Pádua (2015) notes, during the colonial period it was as difficult to travel from the southern part of Brazil to the Amazon as it was from the Amazon to Europe. From the perspective of Brazilian administrators, the Amazon was an empty but pristine space, devoid of a significant (both in quality and quantity) human population and therefore particularly beckoning (Pádua 2015; Hecht 2011). Oppositely, urban settlements, infrastructural development, plantations (of cotton, coffee, and sugarcane), mines, and farms have overwhelming been established in the Atlantic forest region of Brazil. Whereas the Atlantic
Forest region had been the site of European settlement, the focus of exploration in the Amazon region has always been more on resource extraction than settlement, particularly because it was difficult for explorers to physically reach most of the region, much less settle in it. Indicative of this difference are the comparative rates of deforestation in each region. Upon the arrival of the Portuguese, the Atlantic Forest (currently composed of 17 states) had an area of approximately 1.3 million km², over 90% of which has been deforested until now. In comparison, the Brazilian Amazon Rainforest (currently composed of eight states, covering 60% of Brazil’s territory) had an area of approximately four million km², 20% of which has been deforested until now (Pádua 2013).

The Amazon region’s Rubber Boom from 1850-1915 changed the social landscape of the region. Initiated by the infamous piracy of some 70,000 rubber seeds by the Englishman Henry Wickham to the Royal Gardens at Kew in England, the Rubber Boom was characterized by an intensification of inter- and intranational interest in the Amazon region. Droughts and the lure of the rubber economy brought migrants from Brazil’s Northeast to the Amazon region, and indigenous, campesino, and other peoples were forced into enslavement to work latex extraction. The extraction of rubber did not require deforestation, and the growth of rubber trees depends on a supportive ecosystem of plants. Rubber extraction was therefore not directly destructive towards biodiversity in the region. However, the steep valuation of rubber drastically changed social conditions in the region, which led to destructive infrastructural developments. Later, the development of the rubber economy in Asia led to the abrupt crash of the rubber economy in the Amazon (Hecht 2013; Pádua 2015). The impact and repercussions of the Rubber Boom in the Amazon raised questions about how the region should be developed, and how its relationship with other countries and Brazil as a nation-state should proceed. Efforts to conceptualize the
region as a separate political unit began as early as 1953, when Lei Nº 1.806 outlined a development plan for what now includes nine Brazilian states. This political unit has been referred to as Legal Amazon, or Amazônia Legal, a label which continues to be used to this day.

Colonial Narratives Around Plants

There are several elements from colonial bioprospecting efforts that have continued into the current era. The rhetoric of “discovery,” the idea that there may be hidden magic bullets for the world’s most pressing health problems within Brazil’s biodiversity, still prevails around research on and policies around medicinal plants, especially in the Amazon region (Davidov 2013). The anticipation and urgency that accompanies the rhetoric of “discovery” is apparent in statistical estimates that surround political arguments supporting research around medicinal plants. One 2006 Brazilian Ministry of Health document, for instance, cites that out of a maximum of 550,000 potential existing plant species in Brazil, only 55,000 (10%) have been catalogued (Ministério da Saúde 2006). A commonly-cited statistic (often accredited to WHO) is that 80% of the population in “developing” countries relies on traditional medicinal for their primary healthcare needs (Ministério de Saúde 2006; Torri and Herrmann 2011). This statistic raises (and answers) the question of who holds expertise around the medicinal plants that are not yet catalogued.

The conceptualization of “discovery” in this sense includes the idea that nature (i.e., certain stretches of nature) should be approached politically without regard for the communities that live among it the most and what would be the role of various actors within the territory. Beginning in the 16th century, Brazil was regarded as a paradise in the writings of early explorers because of its diversity of plants and wildlife. This image was largely constructed with indigenous peoples as nonexistent or in the background. Indeed, “discovery” implies that actors
from the outside, or more specifically, an outside (i.e., outside of a defined of limits), must enter into contact with people who are “inside” in order to communicate information back to the outside. It is telling, for example, that the most groundbreaking bioprospecting research (both Brazil and elsewhere) more often than not occurs in direct conversation with people groups, rather than researchers seeking out plants without any human reference at all. This early perspective of explorers, bioprospectors, and settlers in the forests of Brazil, has continued until recently in Brazil, when beginning in 2007 federal environmental policies adopted a conservationist approach to the environment, which not only acknowledged the existence of people groups living within areas of nature preservation, but also that those people have a key role in the preservation of biodiversity.

Another element is the idea that plants could and should exist, and be used, independently of the places from which they originally come. This deterritorialization and reterritorialization of plants occurs at multiple levels. One example is the transfer of plants from colonial territories to European botanical gardens. By as late as the middle of the 18th century, for instance, many Brazilian naturalists were trained on the uses of medicinal plants at the University of Coimbra in Portugal instead of in Brazil itself (Dean 1991). Another is the replication of active compounds that originated in plants for the production of synthetic pharmaceuticals. In the early years of bioprospecting, efforts of displacement and replacement of medicinal plants were organized according to empire, and later by nation-state. National and regional pharmacopoeias became commonplace late in the colonial era as a way for countries to make official a body of scientific and environmental knowledge, and plants from colonies began to make their ways into the pharmacopoeias of colonial powers, particularly those of the French, British, and Dutch (Harris 2011).
The classification of and systemization of political structures around plants according to nationalism is one product of colonialism, and is especially marked in relation to medicinal plants, which have high trade value. In reality, the intercontinental borders across which plants have travelled (long before the beginning of colonization) have always been fluid, if not non-existent. Beginning in the 16th century, this movement of plants reached new velocities and distances, especially within the tropical latitudes. American varieties of peanut, sweet potato, and maize were all present in China by the early 16th century, and American pineapple, avocado, and guava were present in India before the 18th century. East Asian and American varieties of cashew, papaya, orange, and cassava were in West Africa by the 18th century, as was pineapple in Mozambique by the 17th century. African crops in the Americas included melons, beans, coffee, varieties of squash (Carney and Rosomoff 2009; Voeks and Rashford 2013). Yet still, different varieties with different properties emerged in each location. Oppositely, European researchers and explorers viewed the transport of seeds as sufficient for the replication of species away from their origins, ignoring ecological factors (such as climate, interactions with other plant and animal species, and soil composition) that affect how plants grow and the properties they assume (Harris 2011).

This colonial and postcolonial political project of homogenizing the occurrence of plants within political spaces has often been prefaced with the argument that such homogenization would benefit the world’s population (Crosby 1986). In the current era, this formulation has presented itself in debates around the ownership of natural resources, as well as the spaces within which they are found. The Amazon region specifically, because of its biodiversity, has been conceptualized as a common good of the entire world. Since the Amazon rainforest is the world’s largest, and it might contain plants that have medicinal value that would help humanity
as a whole, should it be considered property of the entire world? Or, alternatively, should it be considered property of Brazil, or the property of the communities within such areas, who have Brazilian citizenship? These questions elicit complex responses, since actors within the Brazilian federal government and within Brazilian state governments sometimes act in opposition of the interest of local communities.

A final aspect of colonial bioprospecting that is present in current efforts is the competitive nature of knowledge production and management. There had always been fears, suspicions, and fierce competition surrounding the exchange of knowledge around medicinal plants in the colonial system (Paton and Forde 2012; Sweet 2011). White slave owners feared that their slaves would use their knowledge of medicinal plants to poison them, while simultaneously having to rely on them for certain cures (both spiritual and physical). The Portuguese attempted to withhold information about the wildlife of the region, especially from the Dutch. One prominent 17th-century explorer, Willem Piso, after failing to gain information about plants from European settlers because of this competition, turned to gaining information from indigenous groups, who were not his preferred source. The Dutch had been allies with indigenous populations far from the coasts, particularly in the states of Rio Grande do Norte and Ceará. The Portuguese, on the other hand, held close ties with Tupi-speaking indigenous groups on the coast who had worked in the sugar industry and were considered to be Brazilian by the Dutch (Furtado 2008). The practice of creating alliances between governments, institutions, and local communities continues to characterize how information is communicated (or not communicated), and continues the be the source of tensions between local communities, national governments, and international organizations.
3.2 Early Political Makings of the Environment, Health, and Rights

Colonial interest in medicinal plants accompanied a particular type of internationalism that, through the developing of routes of trade and knowledge exchange, intensified tensions around sovereignty, borders, and national identity. Beginning at the end of the 19th century, independent nation-states began to attempt to formally resolve these tensions through international treaties and conventions. These conventions set the ideological foundation for the world’s current multi-sector global governance structure, solidified by the founding of the UN in 1945. In the first half of the 20th century the resulting texts of these treaties conventions and organizations tended to be compartmentalized and focused on singular issues, and pre-UN international agreements tended to be regional and/or along colonial power relations.

The early years of the UN involved the founding of several specialized agencies and programs, tasked with establishing order and dialogue around the most pressing global issues of the time (namely health, postcolonial social and economic development, education, trade, and human rights). By the second half of the 20th century, greater dialogue formed between sets of policies that held more comprehensive, explicitly social goals. It was in this time period that traditional knowledge, traditional medicine, and medicinal plants began to be mentioned in policies. Throughout the rest of this chapter, in order to trace the historical development of current discourses around medicinal plants and the populations that use them, I make a distinction between four particularly relevant categories of policy-oriented texts: intellectual property, health, environment, and human rights. Considered together, these policy categories represent an increased anxiety around questions around the idea of “ownership” along national lines, cultural and ethnic plurality within nation-states, and what “globality” might look like, conversations in which Brazil was actively involved.
Early Stances on Intellectual Property Rights, the Environment, and Minority Populations

Some of the earliest formal transnational conversations around global governance pertained to what would now be considered copyright and intellectual property rights. The 1883 Paris Convention for the Protection of Industrial Property set a precedent for international regulation around intellectual property. In addition to setting standards regarding “industrial property,” which included patents, designs, and trademarks, it also referenced products made from natural sources — tobacco, fruit, wine, beer, cattle, minerals, and flour, among others. The Convention’s 11 original signatories in 1883 were from Europe and the Americas, and Brazil was one of three non-European countries (the others were El Salvador and Guatemala). The original Convention, therefore, was international but not yet “global” in the way that UN agencies convened.

The Paris Convention was important for several reasons. For one, it introduced the idea of authenticity and ownership based on a product’s geographical origin, which would later be referred to as “geographical indications” and become crucial components in treaties by the World Trade Organization and the World Intellectual Property Organization. The Paris Convention also introduced the idea that the notion of ownership could be applied to the natural world. This referred not only to raw materials and other items from nature, but also the methods through which such materials are processed to become useful or sellable “products.” This viewpoint has been adopted by more recent policies around intellectual property, and is often one of the most controversial elements of such policies. Finally, the Paris Convention introduced the idea that these legal structures could be controlled at the national level, and recognized at the international level, making national governments the key actors in such conversations.
The Paris Convention was followed by several other treaties related to intellectual property, and was incorporated into the World Intellectual Property Organization Convention in 1967, which established the current UN specialized agency by the same name. The Convention, however, remains active and continues to be ratified by new members, its last amendment negotiated in 1979.

Global environmental governance also began to take form in the first half of the 20th century, albeit later than governance around intellectual property. Before the founding of the UN’s Environment Programme in 1972, international environmental governance was mediated by private nongovernmental organizations and by agreements among regional governmental organizations (for example, the Organization of American States). The various international treaties existing before 1972 relating to the environment concerned specific issues such as whaling, animal protection, fisheries, and hydraulic power (Paavola 2005). The World Wildlife Fund (WWF) and the International Union for the Conservation of Nature (IUCN) are two examples of nongovernmental organizations that acted in governmental roles around environmental issues. Whereas the WWF, established in 1961, had taken the role of supporting conservation projects around the world, the IUCN (originally established as International Union for the Protection of Nature in 1948) took on a more governmental structure. The IUCN’s founding constitution’s signatories included 18 national governments, half of which were non-European (Argentina, Brazil, the Dominican Republic, Egypt, India, Panama, Thailand, Syria, and Venezuela), private organizations within these signing countries, UNESCO, and the Organization of American States.

Notable in the IUCN’s constitution is its globalist approach to the environment, i.e. the idea that preservation of the environment is both the responsibility and for the benefit of the
entire world. The Union’s original stated focus was the “preservation of the entire world biotic community” and its role has been to facilitate cooperation between governments, international governance organizations, and nongovernmental organizations. The constitution specifically mentioned the protection of soils, water, forests, objects and fauna and flora “having scientific, historic, or aesthetic significance” by pushing its members to pass legislation establishing national parks, nature reserves, monuments, and wildlife refuges. Its tone is urgent, declaring that “the time has come when human standards of living are being depressed because natural resources are becoming inadequate for their maintenance,” and recognizing that “soils, water, forests, wild life and wilderness areas are of vital importance for economic, social, educational and cultural reasons.”

Another pre-1972 example of international environmental governance was the Pan-American Union’s 1940 Convention on Nature Protection and Wild Life Preservation in the Western Hemisphere. Unlike the IUCN’s constitution, the Convention did not focus on the role of humans in the environment and conservationist efforts. It mentioned protecting and preserving “scenery of extraordinary beauty” within nature and “natural objects of aesthetic, historic or scientific value.” It made the distinction between national parks (for the general public to enjoy), national reserves (regions for animal and/or plant conservation under government control), and national monuments (specific area, object, or species set aside and protected only for scientific investigations or governmental inspection).

These agreements were for the most part focused on the preservation of nature itself, and did not, like later policies, assign “stewards” to the environment or acknowledge the populations most directly affected by environmental changes and threats. Moreover, there was often an emphasis on the general public’s enjoyment of nature and the value of nature for scientific
purposes. In other words, there were no particular groups that were more associated with the natural world than others, and especially alongside any notion of ownership of or reliance on nature.

Whereas early international policies around intellectual property rights and the environment were more or less narrowly focused on those sectors themselves, it was especially within human rights and health policies that broader global societal goals began to be articulated. Although the language of “rights” was not widely used until UN-style global governance began to be established, international agreements around the general social conditions of populations became increasingly of interest to international governance organizations in the early 20th century. The League of Nations, for example, established “minority treaties,” a series of mandates meant to protect the rights of minority groups in member states (Wippman 1997). One of the tensions in the League of Nations’ formal discussions around minority rights was whether minority populations should be assimilated into their respective nations’ majority populations, or if protecting their rights meant allowing them to preserve their culture, religion, language, and other defining factors. The League of Nations minority treaties tended to favor an individual view of minority rights, in that they did not seek to guarantee separate, collective rights for minority groups. The founding of the UN in 1945 marked the beginning of a focus on a global concept of “rights.” The UN’s approach to rights, first outlined in its 1948 Universal Declaration of Human Rights, similar to the League of Nations minority treaties, began as individualistic, focused on the relationship between individuals and their respective nations. Subsequent founding documents of UN agencies such as UNESCO (1945) and WHO (1948) also adopted this framework of rights.
Health and Pharmaceutical Policy in the Early 20th Century

Health policies and policies around the general social conditions of populations, in fact, often had early intersections. The International Labor Organization, established in 1919, focused on the protections of workers against injury and illness. It supported maternity leave both before and after birth and made steps to encourage the banning of harmful chemicals in workplaces (Weindling 1995). The International Labor Organization’s health initiatives were passed over to the League of Nations in 1921 upon the founding of the League of Nations Health Organization (LNHO). The LNHO had expressly social and political goals. After the first World War, public health reform was seen as a way to reduce social conflicts and prevent future global warfare. The LNHO’s focus was on “health in the widest sense of the word,” considering health issues with roots in social conditions such as malnutrition and occupational health alongside a concern about medical innovation and epidemiology.

WHO’s founding constitution, drafted in 1946, continued the LNHO’s sociopolitical perspective. It declared that health would be defined as not just “the absence of disease or infirmity,” but as “a state of complete physical, mental, and social well-being” to be enjoyed by “every human being without distinction of race, religion, political belief, economic or social condition” (phrasing which was later echoed in the 1978 Declaration of Alma Ata). It also linked the development of a healthcare infrastructure to the overall social development of countries, stating that “the achievement of any State in the promotion and protection of health is of value to all,” and that “unequal development in different countries in the promotion of health and control of disease…is a common danger.”

In addition to globalized efforts around the health of populations, there were also several early globalizing efforts around classification and regulation related to health. Disease
classification was a concern both for the LNHO (under the International List of Causes of Death, first developed in 1893) and for the World Health Organization (beginning in 1948 under the International Classification of Diseases, which was the Sixth edition of the International List of Causes of Death). Early policies and agreements pertaining to pharmaceuticals were concerned with creating international regulations and standards for the identification, production, and use of pharmaceutical products. Pharmacopoeias, usually legally-binding national or regional texts that describe the uses and preparations of medicinal agents, have existed at national and regional levels for centuries, but colonial science particularly catalyzed attempts to create an international register of pharmaceutical agents (Dunlop and Denston 1958). Medicinal plants have maintained their place within pharmacopoeias alongside synthetic pharmaceuticals, and the large number of synthetic pharmaceuticals that are derived from plant compounds has spurred increased international regulation and research on medicinal plants (Cragg and Newman 2013).

The 1906 Agreement for the Unification of the Formulae of Potent Drugs is an early example of such regulation. This agreement was similar to other early attempts at pharmaceutical regulation in that it discussed the use of medicinal plants at length. It became a precursor to WHO’s International Pharmacopoeia, whose first edition was published in 1951. Like subsequent efforts to create an international pharmacopoeia that integrated medicinal plants, the 1906 Agreement is marked by an aregionalism, i.e., the plants are mentioned without regard to where they are natively found, and the concentration of native European plants chosen is a reflection of top-down global governance that continues until today. The Agreement, stating that its preceding conference was “composed of delegates from nearly every civilized country,” had 20 signatories that were all European, except for the United States.
Notably, in these regulatory texts, medicinal plants weren’t necessarily considered to be “traditional medicine” in the sense that they were not framed as tied to the knowledge of a particular group or cultural tradition. They were treated as pharmaceutical substances equal to synthetic ones, and their preparations were treated as open, common knowledge.

Global Governance and Brazil

There was considerable tension among nations within these early efforts of globalization, particularly in relation to postcolonial societies and nation-states that had recently gained independence. It is important to highlight in the context of this European-centered power that in the Americas, there were efforts at international governance between American states, particularly around health, by the end of the 19th century. The Pan American Union (which later became the Organization of American States) was founded in 1890 by 18 American nations and established a UN-like framework throughout the Americas. It included an Inter-American Juridical Committee (1906), the Inter-American Children’s Institute (1927), the Inter-American Commission of Women (1928), the Inter-American Indian Institute (1940), and the Division on Agricultural Cooperation (1942), agencies with goals similar to those of later UN agencies. In 1902, it established the Pan American Sanitary Bureau (PASB), now the oldest international health agency, which focused primarily on preventing epidemics. In comparison to the LNHO’s progressive scientific and social aims, the goals of the PASB were swayed by the United States’ isolationist position. The PASB began to work closely with the LNHO upon its founding, but the United States’ influence in the Bureau coupled with its isolationist policies caused many Latin American countries to form their own ties with the LNHO outside of the PASB (Weindling 2006).
Brazil was an important actor these early in international political conversations. Its large territorial area, diverse geography, wealth of natural resources, social and racial inequality, immigration, and already existent scientific activity placed it in a position to be a powerful force internationally. During the League of Nations’ discussions around its minority treaties in 1925, for example, Brazil’s delegate infamously and controversially argued that the treaties should not put minority populations in a state where they were “constantly alien,” but that “complete national unity” should be the goal of the mandates (Mazower 2012). This assimilationist standpoint continues to be one side of debates around protected groups in Brazil and around the world, particularly those now labelled as “traditional.” The state of marginalized populations in Brazil and the nation’s heterogeneity continued to be of concern and spectacle to international governance bodies throughout the middle of the 20th century. One well-known result of such attention was UNESCO’s sponsoring of research on race relations in multiple regions in Brazil by American anthropologists Charles Wagley, Marvin Harris, and Ben Zimmerman in the late 1940s (Wagley 1952). The text reiterated Brazil’s doctrine of “racial democracy” among three “racial stocks” in Brazil (described as American Indian, Negro, and European Caucasoid) arguing that the Portuguese, unlike other colonial powers, lacked racial prejudice. The text also compared race relations in Brazil to that of other post-slavery societies in the Americas, such as the United States and the British West Indies. Moreover, it rooted the conversation of racial inequality within a broader conversation of modernization and social and economic development, topics which were at the core of the nascent UN-style governance.

Brazil also began to develop its own national public healthcare structure early, well before international efforts at health governance and regulation. Fundação Oswaldo Cruz, Brazil’s federal health research and education institute, was founded in 1900 and to this day is
one of the largest public health institutes in Latin America and the world. The renowned Brazilian bacteriologist, Carlos Chagas and at one time the General Director of Brazil’s National Department of Public Health, served on the League of Nations Health Committee from 1922-1934 and led several initiatives within the LNHO, including around leprosy, malaria, and public health education. Brazil also was involved in the LNHO’s efforts around infant mortality, rural health, and yellow fever.

Brazil made early efforts to regulate pharmaceuticals as well, releasing the first edition of its pharmacopoeia in 1926. Before the release of its own pharmacopoeia, Brazil had, since 1851, been using the Codex Frances, which in the first edition of the Brazilian Pharmacopoeia is referred to by the comment: “For a country so different from ours, such as France, the ‘Codex medicamentarias gallicus’ could not satisfy our necessities.” Before its Independence in 1822, Brazil had used the General Pharmacopoeia for the Kingdom and Dominion of Portugal, which was first published in 1794. This first edition of the Brazilian Pharmacopoeia presented a comparison of guidelines outlined at the 1906 Agreement for the Unification of the Formulae of Potent Drugs and what would become the basis of the Brazilian Pharmacopoeia namely: that substances would be designated by their Portuguese names first, followed by their Latin names; that medicinal wines could be used; and the Brazilian Pharmacopoeia’s own recommended preparations for each one of the plants and other pharmaceutical substances listed in the 1906 Agreement. This first edition, at over 1100 pages, included dozens of both native and non-native plants by both their Latin names and popular names, such as the leaves of avocado trees, saffron, jambu, almond, garlic, rosemary, cotton, plum, tamarind, and aloe, as well as chemicals such as citric acid, alcohol, and stearic acid. The second edition of the Brazilian Pharmacopoeia was published in 1959, eight years following the first edition of the International Pharmacopoeia.
This edition directly cited the influences of the International Pharmacopoeia and the North American Pharmacopoeia on its development and had excluded a large number of the plants and preparations mentioned in the first edition. The introduction to this second edition discussed Brazil’s relationship to other country’s pharmaceutical codes, stating that “Brazil, however, which has always known how to cope with other civilized nations in all branches of the sciences, arts, etc., could not continue to be governed by the practice of pharmacy of a foreign code, that while appropriate for [one] country, did not satisfy [our] new necessities at all.” This edition of the Pharmacopoeia marked Brazil’s focus on modernizing its medical sciences through the strengthening of a national political approach. Subsequent editions began to cite the World Health Organization, and drastically reduced the number of plants recognized. By the third edition, released in 1977, there were just 26 “phytotherapeutics” listed, and exponentially more “chemotherapeutics” and “products of biological origin.”

Brazil’s efforts to establish a national tradition of and/or approach to medicinal plants are not unlike those of several other nation-states, namely China (Farquhar 1996), India (Ganguly 2012), Tibet (Craig 2012; Adams 2001), Vietnam (Walhberg 2014), Mexico (Laveaga 2009; Hayden 2004), Ghana (Osseo-Asare 2014), Madagascar (Osseo-Asare 2014), and South Africa (Ives 2014). Importantly, it was not until the third edition of the Pharmacopoeia that the input of researchers from the North and Northeast regions of the country was included, again reflecting intranational hierarchies of capital and influence. Still, plants from all regions of Brazil were included and prepared according to pharmaceutical methods.

Brazil also implemented policies around environmental conservation as early as 1930 with its Forest Code (Código Florestal), which continues to be revised. The original version of the code, overseen by the Ministry of Agriculture, focused on the classification of different types
of forests (protectors, remnant, models, and for profit), the establishing of government-protected parks, the use of natural areas by the public, and the conservation of rare plant and animal species, emphasizing that forested areas are “goods of common interest for all inhabitants of the country.” It also defined penalties and fines for those charged with destructing protected areas or species. Brazil’s legislation around the rights of indigenous peoples was, at first, starkly separate from that around the environment. In a 1910 decree (Decreto No. 8.072), the Service for the Protection of Indians and Localization of National Workers was created under the Ministry of Agriculture, Industry and Commerce. The goal of the Service was to offer assistance to indigenous groups, oversee the punishing of crimes committed against indigenous peoples, and to guarantee that they could occupy their respective lands without threat. Another concern of the Service was not just that indigenous territories might be invaded, but that indigenous peoples might invade surrounding territories. It also sought to set up strategically-positioned central areas for indigenous peoples and farmers with medical and educational services, as well tools and seeds for agriculture. At this time, indigenous populations were the only groups that were mentioned separately in policies, and the Brazilian government took on a segregationist approach to the development and its involvement with indigenous groups, which would be complicated by later policies around traditional communities in the country.

Setting the Stage for Post-1950 Global Governance

Most of the existing international agencies mentioned above (the International Labor Organization, the World Health Organization, UNESCO, the World Intellectual Property Organization, in addition to others such as the World Trade Organization) would become key in policies that began to fall at the intersection of medicinal plants and citizenship. An important development within these early international policies and agreements was that individuals could
now appeal to a governance system above (or at least outside of) that of their respective nations to demand political recognition, in a general sense. The agreements and policies that have come from the meetings of these international agencies and organizations began to divide the world into discourses and sectors — in this case: rights, conservation, origin, and nature, within the sectors of the environment, trade, human rights, and health — which has become the language through which individuals, and now people groups, begin to communicate their needs to governmental bodies.

One understated issue in the goals of international policies into the middle of the 20th century was the hierarchy of power and influence that existed both among and within nations. How might the regulatory measures set forth by these international agreements favor wealthier nations? And could historically marginalized populations within nations achieve rights in the same ways as other populations, as described by UN agreements? The 1960 UN Declaration on the Granting of Independence to Colonial Countries and People highlighted one of the UN’s attempts to remedy such hierarchal relations between nations and acknowledge the position that postcolonial societies found themselves in. It called for an end to colonialism and its resultant practices of segregation and discrimination, favoring “liberation” and “non-interference,” and emphasized “respect for the sovereign rights of all peoples and their territorial integrity.” It declared that nations should be able to use their natural wealth and resources “without prejudice to any obligations arising out of international economic cooperation, based upon the principle of mutual benefit, and international law.” The UN Declaration of Human Rights also attempted to confront discrepancies between national status and individual rights, stating that individual rights should be granted regardless of any limitations of sovereignty of a person’s respective nation.
Human rights discourses also wrote inequality based on race, color, sex, language, religion, and political opinion into international discussions, which acted as a basis for a host of more specific policies and agreements around each of those axes. Notable within these early policies was unease over how to define and approach the rights of the populations most affected by colonialism, labelled in the first half of the 20th century as “minority” groups, “Indians,” and “Negros.” The 1940 text of the Pan American Union’s Inter-American Indian Institute agreement, for example, did not define indigeneity, nor did it outline any specific protections for or concerns in relation indigenous populations. Instead, its goal was to support its signatories’ efforts to “exercise absolute liberty in solving the ‘Indian Problem’ in America” through supporting research, legal efforts, and the management of funds regarding indigenous groups. Broader social goals aimed at more well-defined marginalized populations did not begin to be written into international policies and agreements until the second half of the 20th century, when the four policy sectors described above began to intersect and come into conversation with one another. Defining “nature” and “traditional populations” for example, became as much of a concern for the World Intellectual Property Organization as it did for the UN Environment Programme and the World Health Organization, an important feat for the rights of marginalized groups throughout the world.

3.3 Late 20th Century Policy Intersections

The mid-20th century was a transformative period both globally and in Brazil that, within a 20-year period, included the end of the Amazon’s second Rubber Boom, the expansion of the United Nations, and the beginning of Brazil’s military dictatorship. Although the four policy categories described above (intellectual property, health, environment, and human rights) are still relevant in that they are governed by agencies specifically focused on each sector, beginning in
the mid-20th century these categories began to merge and overlap, and policy texts within those categories increasingly entered in conversation with one another. In the case of the political creation of a black traditionalism in Brazil, three policy shifts began to develop. First, the notion of “traditional” — both in reference to populations and practices — had to be acknowledged and defined within policies. Second, the issues of race and racism were approached as significant challenges in the modern era. Third, the regulation of medicinal plants began to be approached using pharmaceutical and biodiversity-oriented models, which introduced a framework around the ownership of natural resources and knowledge about them.

During this time period, Brazil began to frame its national policies in reference to these increasingly overlapping international policies, and many current policies in Brazil continue to reference policies first drafted during this time period. The reverse is also true: starting in the middle of the 20th century, Brazil became such an important global actor within these four policy sectors that it significantly shaped the trajectory of many international policies and agreements.

**Labor, Race, and Indigenous Rights**

One of the first examples of policies pertaining to traditional populations that had broader social goals was the International Labor Organization’s Indigenous and Tribal Populations Convention, which occurred in 1957 and has since acted as a basis for the rights of indigenous populations and populations labelled as “traditional” or “local.” The convention’s founding document specifically discussed the rights of “indigenous and other tribal and semi-tribal populations,” whose “social, economic or cultural situation hinders them from benefitting fully from the rights and advantages enjoyed by other elements of the population.”

This document has played an important role in the intersecting of international policies for a number of reasons. It not only mentioned the working conditions of these groups, but also
their health, socioeconomic development, and land rights, and called for the cooperation of various UN agencies, including the UN’s Food and Agriculture Organization, UNESCO, and WHO. The document was also one of the first international documents to explicitly mention “citizenship” alongside “rights,” and stated that these populations should be allowed to practice their own customs even when they are not congruent with the laws of their respective nations. This policy development, along with a statement about individual and collective land rights, introduced a notion of collective political rights that subsequent policy texts in Brazil have repeatedly referenced that attempted to provide an expanded definition of protected groups: both indigenous and non-indigenous populations that could be categorized as tribal and semi-tribal. The most important defining factor of such groups, according to the text, was that they lived in social and economic conditions at a “less advanced stage…than other sections of the national community.” Ultimately however, the language used by the Convention echoed assimilationist sentiments found in earlier political discussions around minority rights and recognition, defining these groups by the extent to which they were “integrated” into a nation’s social and economic fabric.

The Convention represented one of the first global attempts to differentiate populations by the historical conditions that have been the results of colonization. The convention’s 1989 amended version, is most often cited by policies regarding the rights of traditional peoples and marginalized populations in Brazil. By no longer using the label “semi-tribal,” which was applied to populations described as being in the process of “losing their tribal characteristics,” the people groups to which the Convention could apply expanded significantly. Another addition to the 1989 version was a focus on the autonomy of such people groups to control their own institutions and socioeconomic development, as well as the ability to self-identify.
Another way that marginalized populations began to be protected through UN and other global policy texts in the second half of the 20th century was through the language of “race” and “racism.” The UN’s first attempt at confronting race and racism was at the International Convention on the Elimination of All Forms of Racial Discrimination in 1965. The language of the Convention was, again, assimilationist, encouraging signatories to adopt “integrationist multiracial organizations and movements,” but condemned the racial segregation and apartheid. The convention employed a widely cast rights-oriented framework and included an urge to provide the right to safe labor conditions, health, education, freedom of speech, freedom of religion, and access to public spaces, among several others, regardless of race, ethnicity, and/or color. UNESCO, following suit, also released a Declaration of Race and Racial Prejudice in 1978, which mirrored the rights-based framework of the UN’s 1965 convention.

These race-focused policies, together with the ILO’s Indigenous and Tribal Populations Convention, acknowledged that certain groups were more prone to social and economic marginalization, specifically within postcolonial contexts, and argued that separate rights should be granted to these groups. Moreover, these conventions distinguished such groups along racial and/or ethnic lines, including factors such as language, tribalism, and religion. They set a standard linguistic and conceptual framework for subsequent multi-sector policies around the rights of marginalized populations, particularly those later considered to be traditional. Yet still, race, traditionalism, and traditional practices were, and mostly continue to be, placed within separate policy categories.

*Traditional Medicine and the Rise of Global Health Governance*

The World Health Organization’s first official policy position on traditional medicine was made at the World Health Assembly in 1969 under a resolution called the “Establishment of
Pharmaceutical Production in Developing Countries” (WHA22.54). It not only acknowledged that “traditional medicines” were widely used throughout the world, but also that because of this use there needed to be greater pharmaceutical production in “developing” countries. It was one of the first international documents that used the term “traditional medicine,” which continues to be a much-debated term. In fact, it did not actually define traditional medicine, which could range from the use of medicinal plants, to the use of animal parts, to religious practices. But the 1978 Declaration of Alma-Ata was the first major declaration to explicitly mention not only the importance of traditional medicine, but the actual actors that use traditional medicine and hold expertise around traditional medicine. Whereas WHO’s founding constitution declared that access to healthcare should be universal, the Declaration of Alma-Ata gave more specific recommendations and focused specifically on primary healthcare. Importantly, with regard to traditional medicine policies, the Declaration attempted to connect local realities with global goals. It argued that primary health care relies on the participation of health workers and trained “traditional practitioners as needed” who would work alongside physicians, nurses, and other biomedical healthcare practitioners.

In the same year of the Declaration of Alma-Ata, WHO released a resolution (WHA31.33) that urged the Director-General to create a list of medicinal plants used in various countries and organize a therapeutic classification of medicinal plants. This resolution also expressed the goal of developing international standards for the identification, purity, and strength of medicinal plants. A crucial and salient discourse around the “safety” and “efficacy” of medicinal plants and traditional medicine was introduced within these two WHO resolutions (in 1969 and 1978).
Following these two seminal documents, WHO began to publish several types of documents — recommendations, programs, resolutions, and monographs — related to traditional medicine. Eventually, it defined traditional medicine as “the sum total of the knowledge, skill, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness.” The organization also made a distinction between traditional medicine, and alternative or complementary medicine, which refers to healthcare practices not part of a country’s “own tradition” and that “are not fully integrated into the dominant health-care system.” WHO also distinguished traditional medicine from the term “herbal medicine,” which simply refers to materials themselves, and not the practices or knowledge surrounding them. These conceptual separations also imply a separation of actors, in that WHO is that the use of medicinal plants is to be labelled according to what individuals and/or institutions are using them, and in what ways.

Beginning in 1991, WHO began to make a more concerted effort to regulate traditional medicine in its member states, initially publishing guidelines on establishing standards for research on medicinal plants. WHO’s Traditional Medicine Strategy, first published in 2002 and developed in collaboration with the World Intellectual Property Organization, the World Trade Organization, and the UN’s Food and Agriculture Organization, has sought to provide support and a structure for member states to develop national policies around traditional medicine. WHO’s 2008 Beijing Declaration, which affirmed WHO’s commitment to recognizing traditional medicine as an important practice in primary care, its push to have its member states integrate traditional medicine policy into their general healthcare structure, and its position that traditional medicine practitioners should be trained according to national policies.
In 1999, the organization began to publish monographs on the most commonly used medicinal plants around the world, its most recent volume (the fourth) published in 2009. The monographs are an incredible feat in the attempt to globalize traditional medicine policy. The 118 monographs (over the four volumes) include the Latin names, popular names, notes about odor, taste, and appearance, instructions on conducting purity tests, major chemical constituents, and medical uses supported by clinical trials (e.g., antioxidant activity, hormonal activity, neurological effects, etc.). Examples of plants covered include pomegranate, blueberry, red clover, onion, garlic, ginger, and aloe vera.

The structure of the monographs represents a radical shift in how medicinal plants are approached that marks the current stage of how medicinal plants are conceptualized in policies and governmental programs. I refer to this shift as the “pharmaceuticalization” of medicinal plants, in that plants are reduced to the chemical compounds shown to make them effective as healing agents within clinical trials, and are approached less as natural resources (which would imply some kind of ecological context) and more as pharmaceutical agents. This pharmaceuticalization includes a common discourse around medicinal plants shared by pharmaceutical researchers, pharmacists, individuals and organizations looking secure patents, and healthcare providers. Most importantly, this pharmaceuticalization is ageographic and acultural; it does not take into consideration the significance of where the plants are grown or used, nor the various ways that individuals may use medicinal plants that may alter their effectiveness (e.g., during religious rituals, in food, alongside other plants, infused in alcohol, etc.). The monographs, for example, include the general regions (such as “Mediterranean” and “Asia”) in which plants are found, which obscures the geographical diversity found within regions and countries, as well as the significance of the movement of plants across regions. They
also don’t take into consideration factors such as soil composition, climate, and growing conditions, all of which are affected by geographical factors.

*Medicinal Plants, the Environment, and Brazil*

During this time period, Brazil was experiencing its own major political changes that led to an overhaul in policies around health, the environment, and social inequality. The military dictatorship ended in 1985, and the new democratic constitution was drafted in 1988, which guaranteed a broad set of rights for society as a whole. The establishment of Brazil’s new democracy in 1988 marked a turning point in socially-oriented policies, specifically those aimed at the right to healthcare. Brazil’s universal healthcare system (SUS) came into effect in 1990 and, among other guarantees, placed emphasis on its population’s access to medications. Although the first edition of its pharmacopoeia in 1926 included medicinal plants, the Brazilian federal government did not begin to actively invest in research on medicinal plants until the early 1980s, and from this time period consistently referenced WHO’s guidelines on medicinal plants and traditional medicine. Over a 14-year period (1983-1997), Brazil invested over seven million USD in research on medicinal plants (Sant’Ana and Assad 2004). In 1983 the Center of Medications (Central de Medicamentos, or CEME), launched its Program of Research of Medicinal Plants (Programa de Pesquisa de Plantas Medicinais, or PPPM) and compiled a list of 65 medicinal plants to research with the goal of developing phytotherapeutics. The PPPM was primarily a research and technology program; i.e., its main objective was not knowledge preservation or environmental conservation, nor focus on the role of traditional populations. Its focus was on gleaning “popular” knowledge from the general population, not necessarily particular people groups. However, many of the plants of interest to the PPPM continue to be of focus to subsequent policies and programs related to medicinal plants in Brazil.
Around the same time period, in 1985, the pharmacist Francisco José de Abreu Matos initiated the program *Farmácia Viva*, or Living Pharmacy, which continues to be the model used nationally for a more socially-oriented approach to medicinal plants and phytotherapeutics. Matos’ goal was to set up the program in low-income communities, where access to synthetic medications was limited. The pharmacies would include community gardens (which would be under the direction of an agronomist), a laboratory where a trained pharmacist would create phytotherapeutics made from plants grown in community gardens, and the cooperation of a medical doctor, who would be able to diagnosis conditions and prescribe the appropriate plant-based pharmaceuticals (Ministério da Saúde 2006). The plants grown are those that have been shown to be effective in clinical trials, and those mentioned in WHO and Brazilian policy texts. Pharmacists and community workers create tinctures, liquid soap, syrups, creams, and other phytotherapeutic products. The model encouraged by Farmácia Viva stood, and continues to stand, in contrast to private manipulation pharmacies, which operate similarly to pharmacies that distribute synthetic pharmaceuticals.

The implementation of a pharmaceutical model of medicinal plants was accompanied by a shift in global environmental governance. The 1972 UN Conference on the Human Environment in Stockholm, which established the UN’s Environment Programme, signified a refocus in global environment policy. Whereas previous policies and agreements were focused on the preservation of the environment and the demarcation of protected spaces, the 1972 Conference, like other agreements in the middle of the 20th century, established principles that took into consideration power relations among and within the world’s nation-states. It declared that environmental projects designed for “colonialist and racist domination must be abandoned,” for example, mentioning the connection between the environment and “underdevelopment.” It
also condemned “foreign domination” and “oppression” in environmental policy-making, and
cited race in the form of “racial segregation” and “racial domination.” It designated roles for
what was described as industrialized nations versus developing nations — developing nations
should focus their efforts on development itself, and industrialized nations should work to close
the social inequality gap both in their own nations and in developing nations.

Another development of the UN Conference on the Human Environment is that it
introduced a framing of the environment in terms of the “resources” found within it. That is, it
described the environment as potentially useful rather than just essential for human life, or as
primarily existing for human pleasure. The word “resources” also implies that products of the
environment can be treated, at least to some extent, as commodities that can be produced,
regulated, and traded. This increased focus on the “resources” found within the environment
opened the conversation to the question of who would own and control such resources,
especially in relation to the power dynamics alluded to by the Conference.

Brazil had, since the beginning of the 20th century, implemented its own set of
environmental conservation policies. Its first Código Florestal, or Forest Code, written in 1934,
established the concept of Areas of Permanent Preservation and focused on the protection of soil,
water, and forest resources. While Brazil’s second Código Florestal in 1965 had much of the
same focus, it also included the people groups especially affected by such protections,
specifically mentioning extractivist communities and small-scale rural farmers. By 2012, the
Código had began to mention the land rights of “traditional peoples and communities” and
extractivist communities, as well as their reliance on natural resources several times, calling for a
“cultural valorization of traditional ecosystemic knowledge.”

*Approaching and Protecting the “Traditional”*
It is at the intersection of policies around traditional medicine and the environment that “traditional” populations became of interest in these policies. Until the 1990s, there was no clear definition of what “traditional” might mean. In ILO’s 1957 Convention, indigenous and tribal groups were defined socially and historically by their precolonial occupation of spaces and their “development” as compared to other groups within their respective national borders. Within its texts pertaining to medicinal plants specifically, the Brazilian government adopted much of the same terminology adopted by international policy texts, with some key modifications. One major difference is that while international agreements and policy texts generally use the term “traditional” to refer to knowledges and practices, Brazil has used the term “traditional” to also describe people groups. This differs from international texts, such as a 1998 WIPO Fact-Finding Mission on Intellectual Property and Traditional Knowledge that used the term ‘traditional knowledge holder” to describe “all persons who create, originate, develop and practice traditional knowledge in a traditional setting and context,” and stated that “indigenous communities, peoples and nations are traditional knowledge holders, but not all traditional knowledge holder are indigenous” (WIPO 2000:26).

These discursive shifts, again, frame certain populations as having closer relationships to the environment than the majority population. But approaching the 21st century, policies began to define “traditional” populations and ways of life as inherently connected to nature and natural resources. Brazil came to be at the center of some of these talks, and it was the site of two of the initial major meetings and agreements regarding the environment and traditional populations. The first was the 1988 Declaration of Belém, bridging the ideas of conservation, biodiversity, and indigenous stewardship of the environment, arguing that “there is an inextricable link between cultural and biological diversity.” The Declaration asserted that development, human
rights, education, and health programs should recognize and work within this framework of linking cultural and biological diversity. Importantly, indigenous and native peoples are the focus of the Declaration, with “rural peoples” being mentioned just once. It stated that “native people have been the stewards of 95% of the world’s genetic resources,” making an argument that authority should be given to such groups in conservation efforts.

The second was the 1992 United Nations Conference on Environment and Development, also known as the Earth Summit, held in Rio de Janeiro. It was the first major international meeting around the environment since the 1972 Conference in Stockholm. The Earth Summit led to the enacting of the UN Environment Programme’s Convention of Biological Diversity (CBD), also in 1992, arguably the most important and most often cited policy document pertaining to conservation and the rights of marginalized populations. The CBD was monumental in that it provided (and continues to provide) a framework for resource management in terms of maintaining what the Convention defined as “biological diversity.” It united and centered many concepts discussed in previous environmental, development, human rights, and intellectual property policies, such as “origin,” protected areas, international cooperation, and the rights of nations to control their own natural resources. It also introduced new concepts to the conversation, namely “biotechnology,” “genetic resources,” and “sustainable use.”

In addition to the CBD, an impactful policy text in the development of legislation around traditional medicine and medicinal plants was TRIPS (Trade-Related Aspects of Intellectual Property Rights), which entered into effect in 1995 (just three years after the CBD) and was primarily organized between the WTO and WIPO. The primary goal of TRIPS was to establish global intellectual property rights standards, which would in theory also make it easier for low and middle-income countries to gain patent protections. One of the most important elements of
TRIPS is that it allows countries some flexibility in how member states enact their own intellectual property laws at a national level, which many low-income countries have utilized as wealthier countries began to take advantage of their relative ease in patenting pharmaceuticals and setting high prices (Bass 2002).

When paired with the CBD, TRIPS ushered in a new era of intellectual property rights with respect to the relationship between low and middle-income countries and high-income countries. Together they more clearly defined and redefined many concepts found in previous policy texts, such as geographical indications and natural resources. The two policy texts also introduced concepts of individual and collective ownership of knowledge and natural resources that were accompanied by a reorganization of how marginalized people groups around the world were to be classified. The CBD elaborated on the roles of particular actors in efforts around biological diversity, such as women and indigenous communities. It was the first UN document that specifically mentioned the agential role of and protections of “traditional” communities (broadly defined) in conservation efforts. An important contribution of the CBD was the introduction of the concept of “local communities” alongside indigenous communities, a pairing that continues to be common throughout policies around traditional practices (to the point where now, it is common to simply see the phrase “indigenous and local communities”). The term “local communities” expands the concern beyond communities who had precolonial residence on particular land to include communities who may live in rural areas and are vulnerable to many of the same oppressive forces that indigenous groups face.

In a 2004 clarification of the term “local communities” (the phrase was not defined within the original text of the CBD), UNEP stated that the terms “local communities” and “traditional communities” may at times be used interchangeably, and that local communities may also
encompass indigenous communities, but that there is “no set definition of ‘local or traditional communities’.” However, part of the UNEP’s description of local communities is that they have “accumulated knowledge, innovations and practices regarding sustainable management and development of these territories including useful environmental knowledge.” The CBD argued that it should be ensured that indigenous and local communities benefit fairly from profits gained from traditional knowledge, and that the traditional knowledge and lifestyles held by these groups should be preserved and promoted, especially in relation to the conservation of biodiversity and sustainability efforts.

_Brazil’s Rising Impact_

It is important here to reiterate the role that Brazil has played in shaping many of these international policies, especially with regard to how marginalized communities should be treated and healthcare rights. In response to such international treaties, the Brazilian federal government refined its own policies around biodiversity and traditional populations. One example is in UNEP’s 2004 clarification of the term “local communities,” the example of _quilombola_ communities was specifically given to illustrate what local, but not necessarily indigenous, groups would look like within legislation and cultural constructions. Another, and one of the most controversial moves in the aftermath of TRIPS, was Brazil’s decision to allow foreign patents to be used without the permission of the patent owner, which was implemented as part of Brazil’s effort against the AIDS epidemic with the goal of making generic antiretrovirals widely accessible (Greco and Simão 2007). This move led to the price of antiretrovirals worldwide dropping, and Brazil began to assist countries in similar economic positions in producing their own generic version of antiretrovirals (’t Hoen 2003; Guennif and Ramani 2011). A resulting text of this move was the 2001 Doha Declaration, which stated that TRIPS should not
overshadow individual member states’ right to take care of their populations’ public health needs. The Doha Declaration also stated that more attention should be given to overlap between TRIPS and the CBD.

Since then, Brazil has maintained its position on patents and freely providing generics to its population through its nationalized health system, SUS. The 2004 program *Farmácia Popular*, an extensive project which included the building of pharmacies that distribute generic forms of essential medications, especially in previously underserved areas, is an extension of this standpoint on generics. Part of this position has also been making it increasingly difficult for foreign researchers and companies to file patents on compounds encountered within Brazil’s borders (Moreira et al. 2006). In fact, before ratifying the CBD’s 2010 Nagoya Protocol, Brazil sought to update and strengthen its policies around intellectual property and biodiversity with its 2015 Biodiversity Law.

This approach has extended to research on and the production of phytotherapeutics (Nogueira et al. 2010). One of the most impactful and extensive policies concerning medicinal plants in Brazil is the 2006 National Policy of Medicinal Plants and Phytotherapeutics (PNPMF), which was developed in direct conversation with WHO guidelines and the CBD. The text explicitly and comprehensively married policies and political stances around biodiversity, access to healthcare, and the rights of traditional populations in a way that previous texts (both Brazilian and international) had not done before. The PNPMF distinguishes between different types of knowledges and practices, especially according to the people groups that hold those knowledges and practices. It describes three different types of “knowledges”: *popular* (“developed through daily life, based only in lived experience”), *traditional* (“knowledge, innovation or practice of traditional communities related to components of biological diversity”), and *associated*
traditional ("individual or collective information or practice from an indigenous or local community, with real or potential value” and “associated with genetic patrimony”). Another crucial definition in the Policy is that of traditional medicine, which refers to “systems” of medicine, such as Traditional Chinese Medicine, Ayurveda, and Unani, “and the diverse forms of indigenous medicine.”

Such distinctions, especially those taking into account biodiversity and value, are shaped by an intellectual property framework, where the knowledge of certain kinds of groups is given more protection than that of others. These definitions are in clear resonance with those of WIPO, which distinguishes between “codified” (which would include the traditional medicine ”systems” named above) and “non-codified” (which is described as unsystematic, unstructured, and unclassified). Such discriminatory language and sentiment have concrete effects on how governments approach the healing practices of their populations, and shape how healing elements are classified by policies as well.

The PNPMF, for example, provides a number of labels for medicinal plant products at various stages of their production, including: phytotherapeutic, vegetal drug, vegetal drug derivative, raw vegetal material, medication, remedy, drug, and medicinal plant, all of which have different definitions. A phytotherapeutic, for instance, must be “exclusively [obtained] from active prime vegetable materials” and has its “efficacy and security [validated] through ethnopharmaceutical studies.” Phytotherapeutics, however, cannot solely be made of isolated active substances. A vegetable drug is a prepared (i.e., into a powder) medicinal plant, and a vegetable drug derivative is a product made from that preparation (i.e., a tincture, oil, or extract). A medicinal plant, meanwhile, is any plant that can be used for “therapeutic means,” and a “raw vegetable material” is the fresh version of that plant. A drug is any substance or raw
materials that has “medicinal or sanitary aims,” and similarly, a “remedy” is a “cure that is used to care for or alleviate symptoms of diseases,” such as baths, massages, and medications.

The gold standard for policies around medicinal plants are phytotherapeutics, since their effects are most easily controlled. Yet, research on phytotherapeutics and the plants that compose them is relatively uncommon and notoriously difficult given the variation of plant characteristics. Still, the PNPMF uses pharmaceutical language to discuss the legitimacy of medicinal plants, particularly the terms efficacy, quality control, manipulation, and security.

Although tedious, these definitions are crucial because they fall in line with pharmaceutical industry definitions, which are heavily geared towards intellectual property rights and pharmaceutical sales. It is also along these definitions that standards of pharmaceuticals are evaluated, and how pharmaceuticals derived from medicinal plants are proven to be effective or not. For this study, these definitions are important because they are not the basis by which many communities themselves make plant-based healing agents, and they represent a particular way of relating one’s body to plants, and by extension, the natural environment.

In addition to its delineation of how medicinal plants should be approached by various sectors and agencies, the PNPMF is notable for its detailed social goals. The Policy’s subsequent Program, which explains how the Policy should be implemented, in addition to topics mentioned in international texts such as biodiversity, technological development, and the preservation of traditional knowledge, also included “orienting principles” that have much broader social goals, including: the strengthening of family agriculture, generation of work and income, reduction of regional inequalities, social inclusion, and the reduction of social inequalities. It repeatedly mentions a focus on “traditional and local communities,” naming indigenous and quilombola communities specifically.
The PNPMF led to other policy texts in Brazil that seek to regulate medicinal plants and update how the Brazilian Pharmacopoeia is approached. A 2009 resolution stated that foreign pharmacopoeias would be used as references for the Brazilian Pharmacopoeia, specifically the German, American, Argentinian, British, European, French, Japanese, Mexican, Portuguese, and International (governed by WHO) pharmacopoeias, many of which also include medicinal plants. Three documents in particular have sought to standardize how medicinal plants are prepared within SUS, all of which present lists of medicinal plants officially recognized to be effective that overlap to a large extent. In 2009 the Ministry of Health released RENISUS, National List of Medicinal Plants of Interest to SUS (Relação Nacional de Plantas Medicinais de Interesse ao SUS) which included 71 plants already used in state and municipal health services and/or traditional or folk practices, and have been shown to be effective by clinical studies. Two texts were added to the 2010 fifth edition of the Brazilian Pharmacopoeia. The first was the 2011 Formulário Fitoterápico (47 plants), which was followed by the 2016 the Memento de Fitoterápicos (28 plants). Before these texts, there were few other attempts to highlight a specific group of plants. ANVISA, the National Agency for Sanitary Vigilance, (Agência Nacional de Vigilância Sanitária), has overseen and been highly involved in the development and implementation of these three documents, which makes them related, but part of a different sector that that of the PNPMF.

The PNPMF represents an attempt at an inversion of colonial bioprospecting practices, in that it recognizes that medicinal plants have held a broad and central place in Brazilian political history. Instead of medicinal plants being at the center of a story of exploitation, the PNPMF attempts to reframe medicinal plants as potential agents of social equality. However in many ways, this renewed attention represents a comeback from several decades of attempting to
modernize Brazilian society, much of which was through science, medicine, and demographics reimagining that cannot be ignored, and in that way, it is a direct continuation of Brazil’s colonial bioprospecting. There are many plants that were mentioned in the first Brazilian Pharmacopoeia that are just recently regaining attention after they had been excluded from policies over several decades, and others that no longer appear in any policies at all.

Medicinal plants, if approached from a perspective that cumulatively takes into consideration the policies discussed in this chapter, can perhaps be considered as a chain, with each link having different implications for the rights of traditional and local communities particularly. Medicinal plants are at first and foremost raw materials. Preservationist policies had governed how such raw materials are recognized, conserved, and used, and later conservationist (and, by extension, biodiversity) policies began to associate traditional and local communities with such raw materials. Next, when there is some kind of “useful” knowledge of medicinal plants, they become an asset. The CBD and TRIPS govern medicinal plants at this stage. Traditional and local communities are described as being the owners and/or stewards of such knowledge and practices, and are protected by policies as such. Medicinal plants can then become phytotherapeutics, which requires some kind of manipulation process. At this stage, medicinal plants are considered to be useful in a way that can be measured and regulated, and can be utilized to confront general social issues (such as income inequality, access to healthcare, technological development, and environmental preservation). Finally, compounds in medicinal plants can be isolated and used to make synthetic pharmaceuticals. A large concern at this stage is that traditional and local communities benefit from any compounds developed from plants about which they provided information. National governments, and the Brazilian federal government in particular, are also particularly active at this stage. Pharmaceutical developments
have historically mirrored inequalities among countries, and the Brazilian federal government has for years invested in the discovery of novel medications to be produced nationally (Nogueira et al. 2010). As will be described in the following sections and chapters, the two Afro-Brazilian populations in this study are present at each link of this political chain.
Absent within many analyses of both colonial and current bioprospecting are narratives of black populations in Brazil, especially narratives that explore their agency as knowledge producers and preservers. Africans arrived in Brazil with plants in tow, and arrived encountering plants that were already familiar to them. However, in both early accounts of bioprospecting and early accounts and analyses of Africans and their descendants in Brazil, black knowledge and use of plants is focused on spiritual or “magical” qualities, rather than actual plants and their medical uses (many of which were used by non-practitioners of Afro-Brazilian religions both within and outside of the context of the religions themselves)(Miranda 2017). The labelling of this knowledge as magico-religious has persisted as a way to delegitimize how practitioners of Afro-Brazilian religions use medicinal plants, as well as has obscured perception of the uses and effects of medicinal plants within the context of Afro-Brazilian religions (Albuquerque 1997).

In reality, the use of plants for medicine, food, and religious purposes under the rubric of “health” overlap greatly. Practices included empirical use of plants, animals, and other substances alongside spiritual practices. They were used both for the health of users, as well as to hurt and evoke fear in users, specifically the elite and slave owners. This overlap can be seen in many African Diasporic communities and spaces, such as religious spaces, maroon communities, plantations, and slave ships. But this was, and is, not much different from other populations present in Brazil. There had always been a tradition of Spiritism in Portuguese medicine and
religious practice, which included the belief in spells, astrology, and superstitious, which persists until today (Miranda 2017). One of the consequences of the differentiation of industries, sectors, and knowledge by UN-style governance is that this reality, and the importance of this reality, has been blurred.

4.1 Diasporic Ecologies, Knowledges, and Health

The pharmacopoeia of African descendant practices in Brazil, and especially that of the first enslaved Africans taken to Brazil, was the result of a complex history of trade and transport of plants that began before the arrival of Africans to the South American continent. As previously stated, plants from the Americas had already been introduced to the Asian continent and to the African continent by the beginning of the 16th century through colonial trading routes, and Brazil had continually brought enslaved Africans to the country over a period of four centuries. By the time many enslaved persons arrived in Brazil, the West African pharmacopoeia had already incorporated plants that were native to Asia and the Americas, apparent in religious, medicinal, and nutritional practices (Voeks 2012).

The introduction of many plants to Brazil were a direct result of the slave trade, slavery, and the subsequent conditions of blackness in Brazil, and plants moved alongside enslaved persons in ships. The oil of African oil palm (called dendê), which is used extensively in the cuisine of Afro-Brazilian religious, was part of Portuguese trade between West Africa and Brazil. Okra (native to Africa and used as both food and an abortifacient) and American peanuts (which had been introduced to West Africa before the 17th century) were used as provisions on slave ships. African tamarind was used by enslaved persons on slave ships to make putrid water more palatable, as well as for its medicinal properties for combatting scurvy (Voeks 2012).
These transferences were linguistic as well as operational. In Brazil, for example, okra is still referred to by its Bantu name, *quiabo*, as is *dendê*.

*The Creation of Black Spaces of Plant Use*

The particularities around the agency of enslaved Africans in the transfer of seeds and plants to the Americas are difficult to decipher, particularly around the question of whether enslaved persons transported seeds from Africa with the intention of planting them in their destination. However, it is clear that a strong relationship between plants and enslaved Africans remained consistent and continued to develop following their arrival in Brazil. An example is in the north and northeast parts of Brazil, where there is a folk story among various *quilombola* communities about a mother who, after accepting the fact that her child would be sold into slavery, places or braids grains of rice into the child’s hair in order ensure that the child will have food upon her arrival. In another version of the story, a white slaveowner discovers the rice in the young child’s hair and asks what it is. After the child explains that it is rice from Africa, the slaveowner takes the rice for himself and plants it. There are various versions of this story in other maroon communities in Suriname and French Guiana, all including hiding grains of rice in hair, grains of which came from West Africa (Carney 2004; Carney and Rosomoff 2009). The potency of the symbolism and the sense of command over the crops brought to the Americas by enslaved Africans, as well as the resilience and geographical range of such stories, becomes perhaps more pertinent than a geographical tracing of the crops or any “proof” of the extent to which enslaved Africans and their descendants were agents in development of New World landscapes.

Still, the connection between the maintenance of black geographical and corporeal space, and knowledge of plants, is clear among historical evidence (Carney and Voeks 2003). Some
African crops, such as sesame, okra, cassava, and certain bean and squash varieties, were only first encountered by slave owners in slaves’ subsistence plots on plantations. In addition to containing a different group of species, these plots were constructed around a different ecological philosophy than the plantations on which slaves worked. Whereas plantations were monocultural, these subsistence plots were what would now be considered biodiverse. The system of enslaved communities being permitted to maintain subsistence plots by slave owners was, in fact, called the Pernambuco system (named after the state in which it started, in Pernambuco, Brazil) and spread to other parts of the African Diaspora (Carney and Rosomoff 2009). Within this system, there was a clear demarcation of black spaces, with different customs of conceptualizing plants. Enslaved individuals were, for example, permitted to sell crops, which yielded little profit but resulted in establishing a market and network of goods, people, and above all, knowledge.

It is also clear in historical records that there were, in fact, several markets and routes of trade in addition to that which was controlled by the Portuguese. It is helpful here to conceptualize slavery in Brazil as a process rather than a single occurrence, which created a large and heterogeneous black population. Free blacks, working as merchants, traded plants between West Africa and Brazil, some of which were outlawed well after the abolition of slavery (most notably cola seeds, or obí, which are essential to candomblé)(Caroso and Bacelar 1999). It was also illegal to participate in trade with quilombos, especially the largest and most prominent quilombos, which posed a threat to colonial order (Moura 1959).

There had always been dialogue and overlap between the botanical experiences of indigenous peoples and Africans and African descendants in Brazil, and it is known that Africans in Brazil shared their knowledge of African plants with indigenous peoples, including sesame,
eggplant, and okra (Voeks 2004). For example, a common stew-like dish in Brazil, *caruru*, is now currently made primarily with plant ingredients that are native to West Africa (including okra and *dendê*). However, the dish itself was originally made by indigenous groups in present-day Brazil with American grain, which was introduced to West African by the Portuguese. West African people groups Africanized the dish using okra instead of grain, and enslaved Africans later took this new dish to Brazil, where it is still referred to as *caruru* (Voeks 2012).

The development of this knowledge and these practices has required a certain set of botanical spaces, particularly ships, plantations, and markets. But perhaps more commonly, this knowledge has been cultivated, in a sense, under a condition of spacelessness — covert spaces, ephemeral spaces, and oral spaces that have been criminalized and delegitimized by the Brazilian state. These kinds of spaces, pervasive throughout the history of blacks in Brazil, are often spaces of autonomy and resistance that have existed peripherally to the hegemonic spaces within which black Brazilians were subjected to various types of violences (Campos 2005; Carrill 2006). These spaces were both separate from and in conversation with hegemonic spaces, and hegemonic spaces and these black spaces were co-constructed. From the perspective of white Brazilian society, there existed a fear of the sentiments cultivated in black spaces, which led to extensive measures to surveil and persecute such spaces and the practices that occurred within them. Medicinal plants served as forms of resistance and struggle for various reasons. Political autonomy requires corporeal autonomy, which requires medical autonomy: Bodies cannot survive without being treated. Such spaces stand in stark contrast to hegemonic colonial spaces, where the average enslaved African survived just six years after his or her arrival in Brazil (Mattoso 1982. Therefore, on the one hand these spaces provided healthcare that was more liberating than the slavocratic system that was violent towards enslaved bodies, and on the other
hand they served as the basis for more direct forms of resistance, such as spells and poisonings. At best, practitioners of Afro-Brazilian religions offering healthcare services were regarded as mere “charlatans,” and at worst they were regarded as criminals (Lühning 1995; Miranda 2017; Pagano 2012).

Although various spaces could be considered as falling into this category, this study focuses on two types of spaces: candomblé *terreiros* and *quilombos*, which both have long histories of being criminalized spaces and spaces of refuge for black Brazilians. Both groups are of interest because their spaces, and the practices and knowledges that have been cultivated within their spaces, have only begun to be recognized within Brazilian law in the past 30 years, but with more attention over the past 20 years due to efforts by activists. Importantly, these early black spaces of medicinal plant knowledge and practice looked much different from how early European naturalists, physicians, and explorers both sought to identify plants, and how they sought to cultivate them. This is true in terms of terminology, epistemologies of use, spaces of collection, and spaces of practice. Barros and Napoleão (1999), for example, argue that within candomblé, plants (or *folhas* [leaves] and *ervas* [herbs], as they are often referred) used for religious purposes should be those in nature (in “*espaço-mato*” or forest space) and not cultivated. He also notes that there has always been a connection between the *terreiro* and public markets. Public markets have historically been where medicinal plants, and knowledge of medicinal plants, were traded and exchanged by practitioners of candomblé to the general public. Barros and Napoleão argue that the very presence of medicinal plants in these public market spaces “can be perceived as a form of struggle against the hegemony of an eliticized and official medicine” (1999:21). The market space, however, is also a neutralizing space, where candomblé’s presentation of medicinal plants is placed alongside “folk medicine” (*medicina*)
popular). Particularly in the context of Brazil attempting to present a “modern” and whiter image of itself to the rest of the world, part of which included a commitment to a rational, scientific approach to medicine and public health, Caroso and Bacelar (1999) argue that various newspapers launched a “campaign” against sellers of medicinal plants, under the guise of “philanthropic worry over protecting the population against the allegedly unauthorized use of leaves…and supposed charlatans that were deceiving the public” (1999:311).

**Legality, Criminality, and Authority in Black Spaces**

Specifically, by the end of the 19th century, following the abolition of slavery, the Brazilian penal code outlawed the practice of any kind of medicine without legal certification, as well as “the practice of Spiritism, magic and its sorceries, the use of talismans and cartomancy to arouse sentiments of love or hate, the promise to remedy curable or incurable illnesses; in some to fascinate and subjugate public credulity,” and “administering or prescribing any natural or prepared substance as a curative for integral or external use, thus performing or exercising the office denominated as curandeiro” (Maggie 1992: 21-22). In the middle of the 20th century, under Getúlio Vargas’ regime, Afro-Brazilian religions (and other non-Christian religious and social groups such as spiritists and Fressmasons) were placed under the jurisdiction of the Brazilian Police’s Department of Narcotics and Fraud, and terreiros had to register with police (Capone 2010). References to magic remained in the Brazilian Penal code until 1985 (Capone 2010; Maggie 1992: 47-48).

The relationship between blackness, knowledge, and criminality could also be seen in the birth of Umbanda in the 1920s in Rio de Janeiro, which presented itself as a less African version of candomblé, banning animal sacrifice and simplifying initiation rituals. Whereas candomblé continued to be criminalized throughout the middle of the 20th century, practitioners of
Umbanda worked to brand themselves under two images: one that was “white” and more closely associated with Kardecian spiritism, and the other that was “African” and more closely associated with other Afro-Brazilian religions. During the military dictatorship, which began in 1964, Umbanda was protected by the military government in an effort to protect against the then leftist influence of the Roman Catholic Church.

Notions of legality and questions of legitimacy circled around Afro-Brazilian religions’ uses of medicinal plants since the beginning of slavery. The perception of the religions as those of resistance led to the religions being labelled as “demonic” by white society, and terreiros and their activities were surveilled and persecuted by colonial authorities and the police until the 1970s (Capone 2010). However, those who utilized healing services from Afro-Brazilian religions were not just blacks or the lower socioeconomic classes. On the contrary, clients were often from the upper classes (Capone 2010). Brazilian law at the time outlawed the “practice of magic” and “illegal practice of medicine,” referred to as curandeirismo (Capone 2010: 85). Police often invaded terreiros and confiscated religious objects, including plants. Therefore, since the beginning of slavery, terreiros have typically been established in the periphery of cities, out of the purview of the police.

Quilombos represent another kind of black space, also criminalized, that possessed the development of certain knowledges, particularly geographical knowledge needed to maintain a refuged position separate from slave owners. As Hecht (2013) notes, quilombos had always been perceived as a threat to societal order and were not only forced to exist in secrecy, but also to create geographically extensive clandestine economic and political networks that countered the dominant economic systems of the time.
Brazilian anthropologists during the early 20th century helped to frame how blackness and black knowledge was to be seen by the Brazilian public. Nina Rodrigues, for example, argued that while practitioners of Afro-Brazilian religions should not be persecuted by police, that they were practiced by the “inferior race” of blacks and that they would (Rodrigues 1932). Rodrigues, and his student Arthur Ramos, both worked to stop police harassment of Afro-Brazilian religions, but still propagated racist narratives of the inferiority of blacks by arguing that Afro-Brazilian religions were “prelogical” and unmodern, belonging to an inferior race (Capone 2010; Ramos 1939). Ramos and psychiatrists adopting the same perspective as him pathologized participation in Afro-Brazilian religions, specifically because of spirit possession (Capone 2010). Ramos argued that blacks would become more assimilated, echoing prevailing notions of a national Brazilian culture at the time, and would eventually stop practicing such religions. He distinguished curandeirismo from charlatanism, the latter he argued was a “conscious and responsible transgressor of a class code.”

In these early dealings of Afro-Brazilian religions by Brazilian hegemonic actors in power, medical discourse was almost always present as a way to approach and describe Afro-Brazilian religions. However, the application of that discourse was shrouded in discomfort around how exactly it was medical. Medical discourse was and continues to be one way in which to approach the body — its operations, its sustenance, its death, etc. The medical discourse applied to Afro-Brazilian religions was, in addition to the medical discourse applied to all enslaved peoples, one that sought to completely erase the agency of the bodies it referred to. Agency, in this case, I argue includes individuals’ own knowledges about their bodies and the relationship of their bodies to the world around them (the natural and social worlds), precluding
the idea that black Brazilians even could possess medical knowledge, let alone effectively heal themselves or other people with that knowledge.

4.2 Candomblé Healthcare and Activism

In this ethnography, the situation of Afro-Brazilian religious groups differed from that of quilombola communities, as their medical authority existed outside of the sphere of biomedical institutions. Therefore, much of their fight for legitimacy involved creating spaces of communication and exchange. I conducted fieldwork in Rio de Janeiro during a particularly politically strained period (in 2013, 2014, 2016, and 2017), marked by waves of protests in response to abrupt political shifts. In 2013, the rising of bus ticket prices sparked protests against the deterioration of public services in general, including healthcare and public transportation. Such tensions only grew approaching the World Cup (2014) and the Olympics (2016), which were accompanied by an increased investment in the games’ facilities, an increased militarization of favelas, and a near halt in investments for public services for the average Brazilian. Protests during this time period were nearly weekly, and expanded to issues as broad as women’s rights and anti-racism. Carnaval during those years began to resemble these protests, taking on an explicitly political character and becoming a space where such conversations solidified.

Practitioners of candomblé placed themselves at the center of these political manifestations, often appearing in the streets in their religious clothing. Yet practitioners in Rio de Janeiro had always been politically active, occupying powerful roles in NGOs and participating in the defending of political rights on a public stage. Candomblé’s political activism has been fine-tuned to represent the needs of the public that they serve, which often includes low-income individuals who live in the periferia, Afro-Brazilians, and the LGBTQ community.
Therefore, the themes of racial, sexual, and gendered violence and trauma are prevalent in the religion’s activism. The religion is practical in its approach to caring for these violences and in approaching this marginalization. One of the main functions of terreiros is the combatting of hunger, and terreiros often provide food (most of which is of African origin) to both members of the house and visitors. In a country with a high rate of murders of LGBTQ individuals, and a growing Evangelical population that is vocally intolerant against the LGBTQ community, the terreiro is a necessary, and accessible space not just for the safety of many individuals, but also the personal and spiritual growth of individuals.

In Brazil, African heritage is nearly synonymous with candomblé, as it is the system of beliefs and practices that has maintained West and Central African languages, philosophies, and environmental knowledges in Brazil. Rio de Janeiro, along with Salvador, is at the center of this image. However, whereas quilombola communities have received seemingly endless attention from policy makers and pharmaceutical researchers around their use of medicinal plants as healing agents, Afro-Brazilian religious groups have had to fight for such attention. Candomblé, in addition to existing as a religion, acts as a network and physical space for the healthcare of both initiates and non-initiates. The terreiros in Rio de Janeiro had their own ecosystems of plants both within the terreiros’ domains, and outside of them in nearby forested areas. The medical and spiritual use of plants is a central tenant to candomblé, as is expressed by the ubiquitous phrase used among practitioners “Sem folha, não tem orixá,” or “Without plants, there are no orixás.” Part of the role of mães and pais de santo is to hold extensive knowledge of plants to use for spiritual and health purposes, and they often make teas and baths for anyone seeking their services. When the two mães de santo that I conducted research alongside explained the uses of plants to me, they used both medical language (i.e., that a plant was for
diabetes, the flu, or body aches) and spiritual language (i.e., that a plant was used to discharge energy, attract positive energy, or attract love).

Several seminal studies have documented the healthcare practices and knowledges present in the belief system of the religion (Verger 1995; Voeks 1997). In reality, the religion offers a comprehensive range of healthcare services that includes plants, spiritual healing, what would be considered psychological care, as well as general social support (Seligman 2010). Rebecca Seligman (2005; 2010) takes a phenomenological approach in explaining how candomblé is effective as a healing system. In one account Seligman (2005) describes the role of *filhas de santos* in candomblé, who in her study are usually impoverished Afro-Brazilian women that act as spirit mediums. She argues that mediumship seems to provide the same benefit espoused by psychotherapy -- particularly the reframing of one’s personal identity -- and therefore should be considered a therapeutic activity. Afro-Brazilian women can go from being powerless in society to having power, influence, and control over their positions in terreiros.

Candomblé provides an accepted cultural role (i.e. the *filho de santo*) and space for this type of identity transformation. Seligman (2010) also explains that suffering of any kind represents a disruption in self-experience. "Self," Seligman argues, encompasses bodily, social, and rhetorical dimensions, all of which candomblé incorporates as a religious practice. Participants in candomblé work to mend these dimensions of self when their alignment is somehow disrupted. DeLoach and Petersen (2010) similarly describe candomblé as being both a method of holistic healing and cultural continuity in relation to colonial and post-colonial oppression. They argue that the historical and current inequities faced by Afro-Brazilians constitute a form of prolonged and “cumulative” trauma not adequately treated by biomedical interventions, motivating practitioners to seek care in terreiros.
In a current, and more biomedically and ethnobotanically-oriented study, Voeks (1997) catalogued nearly 200 plants used by a candomblé terreiro in Bahia. But perhaps the most famous study was that of Pierre Verger (1995), which he began in 1953 and continued over decades. He produced what is arguably the most extensive work describing plants used both in Brazilian candomblé and its derivative practices in Nigeria, cataloguing a total of 1,086 species as classified by the Western European Linnaean taxonomic system (which corresponded to 3,529 Yoruba names), and listing which orixás, or deities, corresponded with each plant. He described how plants and recipes made from several plants are used for both explicitly medical purposes and for spiritual purposes, and often times some combination of both. He noted 268 medicinal recipes, and a total of 197 spiritual recipes. Regardless of the use of plants and recipes, healing, he stated, does not only include the uses of materials themselves, but includes the utterance of chants, and the care and advice of a mãe or pai de santo. Verger’s work was the first to translate spiritual knowledge into biomedical knowledge, a tradition which many activists from the religion continue to follow in to this day.

Candomblé and the Periferia

The use of medicinal plants by candomblé must be placed in the context of Rio de Janeiro’s healthcare landscape. Conversations around medicinal plants (versus traditional medicine) are particularly rampant in Rio de Janeiro, as it exists as a research and industrial hub for medicinal plants. As previously noted, the vast majority of Brazil’s population uses medicinal plants in some form for health care. However, geographical space largely affects what kind of medicinal plant-derived pharmaceutical individuals and communities use. For example, in Rio de Janeiro’s wealthier southern part (zona sul), phytotherapeutics are sold in natural food stores, created in compounding pharmacies, and offered in some clinics. In Baixada Fluminense, such
services are less common or nonexistent. However, in or near such peripheral areas, medicinal plants can more commonly be found in public markets, in forested areas, and in home gardens. Moreover, the *periferia* is defined by a relative lack of regulation in settlements. In this research, this led to many residents having access to larger spaces (both personal and public) within which to grow and find plants as compared to Rio de Janeiro’s center.

One of the central components of candomblé activism is healthcare. When approached from a political angle, candomblé’s healthcare services are significant and vast. For years, beginning in the early 1990s, the religion’s health activism has been focused on sexual and reproductive health, especially in the context of the HIV/AIDS epidemic and Brazil’s comprehensive response to it. Its response to the HIV/AIDS epidemic included a reframing of what it meant to “care” for the conditions. The religion was, of course, not focused on “curing” the illness, but rather treating the physical and psychological effects of it, which biomedical solutions at the time were necessarily not focused on.

The peripheral part of the Rio de Janeiro metropolitan area did not have a strong biomedical presence until health programs implemented by Lula, especially Farmácia Popular in 2004. Until today, clinics and hospitals in the periferia are often overcrowded or inadequately served. A common concern of practitioners of candomblé is that of discriminatory practices within clinics and hospitals. Many practitioners argue that healthcare providers do not take into consideration dietary restrictions practices by practitioners, do not acknowledge the practices of *terreiros* in conjunction with biomedical care, and that the general intolerance present within Brazilian society is often present in the provider-patient interaction. *Terreiros* themselves offer alternative spaces to such situations, and their political approach has been institutionalized beyond the *terreiro* itself. For example, during fieldwork, I most often accompanied activists
connected with the organizations Criola and the National Network of Afro-Brazilian Religions and Health (Rede Nacional de Religiões Afro-Brasileiras e Saúde, or RENAFRO), which organized and were present in the public actions of collectives of terreiros.

_Candomblé Publics_

Besides this institutionalization, candomblé as a religion has various public domains with regard to their authority as healthcare providers. Public markets and fairs are part of this domain, and medicinal plants are sold outside of the regulation of pharmaceutical policies. One of the most frequented markets in Rio de Janeiro, Mercadão de Madureira (located in zona norte) has several stores that sell religious items and includes a large market of herbs, which is utilized by practitioners of the religion. Another large market also located in the _periferia_, in Irajá, similarly provides religious goods and medicinal plants (Arjona et al. 2007; Azevedo and Silva 2006; Matos et al. 2009). These markets are natural spaces for knowledge exchange, and the strong presence of the religion in the _periferia_ makes these markets corollaries to the _terreiro_ (Oliveira and Oliveira 2013).

The religion’s public face also has a strong presence on social media. Various Facebook groups also exist as spaces of information exchange around medicinal plants. One group, Ewé Ervas Sagradas, has over 25,000 members (as of January 2018) and has several (usually over ten) posts per day. Members normally discuss the scientific name of plants, the Yoruba name of plants, the common Portuguese name of plants, the plant’s corresponding orixás, and the plants medicinal and/or spiritual qualities.

But one of the most common ways that practitioners of Afro-Brazilian religions create a public for themselves is through presentations and lectures in public spaces. Religious leaders, in fact, are often called upon to speak on the subject of candomblé and health both domestically and
internationally. One example of this was when Mãe Lúcia was invited to Colombia to give a presentation and workshop around religious tolerance and health to Palenque communities (also descendants of maroon societies). The language used in the email inviting her was telling. The coordinators asked her to discuss practices of health that must be “hidden,” for fear of being seen a “witch” (*bruxa*), and to talk about the sexual and reproductive rights of black women.

An important aspect of these presentations is the balance of divulging and not divulging information. One the one hand, the religion is built on a notion of secrecy, or more accurately, a hierarchy of who is privy to certain spiritual knowledge (Johnson 2002). But on the other hand, in order to gain some kind of legitimacy, they must communicate their knowledge to the general public. Medicinal plants are part of this knowledge hierarchy. But the translation of spiritual healing knowledge to biomedical healing knowledge aids in this separation of publics. In fact, much of their activism around healthcare was defensive, in that they were constantly trying to justify how in fact *terreiros* are spaces of healthcare (Silva 2007).

One standard and common presentation given by leaders of RENAFRO that I saw during fieldwork (both while working with Mãe Lúcia and at a black health conference held in Porto Alegre) made a concerted effort to combine biomedical, political, and liturgical knowledge. It gave a quick explanation of the religion’s cosmology with regard to health, specifically that the body is seen as the residence of *orixás*, that the concept of axé – vital energy – is used to understand illnesses, and that it is believed that diseases are considered to be manifestations of an imbalance between the spiritual and human worlds. In the presentation, a list of illnesses and conditions is given (skin conditions, HIV/AIDS, menstrual problems, vision problems, asthma, liver problems, obesity, and others) along with their corresponding *orixás*, which accompanies an explanation as to why each *orixá* is paired with specific conditions.
An important aspect of the presentation is its explicit reference to public policies around health, and its articulation of political challenges faced by practitioners. The presentation argues that health practices within the terreiro, including touching the body, respect for the elderly, the celebration of birth, psychosocial balance, the use of medicinal plants, and social inclusion are all included in policies such as the National Policies for Humanization, Elderly Health, Mental Health, Integrative and Complementary Practices, and SUS in general. In one presentation, a prominent leader of RENAFRO, José Marmo da Silva, argued that different knowledges systems should be approached equally (i.e. “scientific” vs. “folk”), and that there should be a recognition of the “importance of traditional healers as living archives of tradition, of cultural resistance, and as an important part of the history of health of the country.”

The public engagements of candomblé practitioners point to a need for the expanding of notions of traditional medicine. Although there is a hierarchy of knowledge within the religion, this exchange of this knowledge appears as significantly more horizontal than the approach to phytotherapeutics, for instance, that is presented within policies. However, as central as medicinal plants are to the religion, they were rarely mentioned in detail, and almost never elaborated upon in public spaces where the conversation was around healthcare (with the exception of the Facebook group). In this regard, there is seemingly a disconnect between how policies around health mention Afro-Brazilian religious groups, the activism of Afro-Brazilian religious groups, and the actual healthcare practices (and perhaps to a greater extent, knowledges) of Afro-Brazilian religious groups.

*Territory, Nature, and Candomblé*

Perhaps the most common factor in upholding a systematic use of medicinal plants was the collective (i.e., not individual) maintenance of territory. As I have explained previously,
rights to “territory” in Brazilian law is approached from various angles, and policies around territorial rights affect quilombola communities and Afro-Brazilian religious groups differently. However, a common theme underlying a notion of “territory” as it relates to the environment is that of having access to parts of the environment or not.

Whereas making presentations around healthcare in terreiros was common for candomblé practitioners, during fieldwork their presentations around medicinal plants specifically were often approached from an environmental angle, occurring within an entirely different set of spaces than those of healthcare conversations. candomblé’s territorial reach for the use and collection of medicinal plants – in terms of which spaces members have some kind of marked presence – goes well beyond terreiros themselves, and often the extension of terreiros are nature reserves and other protected spaces.

During my initial research on medicinal plants in 2013, one mãe de santo, Mãe Nilda, almost immediately took me to the Serra dos Órgãos National Park directly north of Baixada Fluminense to teach me about plants. Mãe Nilda participated in several Criola workshops, and I began to work closely with her during my time volunteering with Criola. She organized workshops and roundtables at her terreiro, which was in the city of Magé in Baixada Fluminense. Her insistence on going to the National Park was telling. Her terreiro, which she had already showed me around twice, was full of plants used for medicinal and/or liturgical purposes. However, the National Park, she said, had more of a diversity of plants. The trip to the Park was not simple and included an hour bus ride and a 20-minute walk to the park itself. She was initially apprehensive about our ability to enter into the park in a restricted entrance, but the groundkeeper cheerfully allowed us to enter and allowed her to collect plants (he was more concerned about potential contamination of the park’s water sources). Her use of the Park in that
moment was limited compared to how practitioners use public natural spaces. It was not uncommon for me to see shrines for orixás in spaces both in Rio de Janeiro and in Pará, and practitioners often use natural spaces for religious rituals. However, it was clear that Mãe Nilda, had experienced some kind of conflict in the past with such a space.

I attended two events in Rio de Janeiro that further demonstrated this conflicted relationship between the religion and public natural spaces. The first was in 2013 at the Tijuca National Forest, a public park and nature preserve in zona sul of Rio de Janeiro. The event framed as a workshop, called the “Workshop of Sacred and Medicinal Plants of the Atlantic Forest.” I heard about the event from a Facebook post that was passed along to me by an activist working with Criola. The workshop was organized by the particularly politically active terreiro Ilê Omi Oju Arô, located in the municipality of Nova Iguaçu in Baixada Fluminense, and was characteristically popularized for a broader audience. The event received support from the city’s Secretary of the Environment and a social justice NGO, Elos. A banner outside of the event read “Those who respect religious diversity, respect nature.” It was held in the park’s visitors center, a 30-minute walk from the park’s entrance, and included the attendance of around 200 people, most of whom were not (apparently) practitioners of the religion. The event was organized as an interactive lecture, where several leaders of the religion presented and passed around no more than 30 fresh plants to the audience, explaining the biomedical uses of the plants after giving their Yoruba names and brief commentary of their religious significance. The mãe de santo who led the event, Mãe Beata de Iemanjá (perhaps the most well-known activist from candomblé in the city of Rio de Janeiro, and who had a strong following nationally), explained that one does not have to be a believer in the religion to use the religion’s knowledge of healthcare,
representing a direct attempt at making liturgical knowledge translatable – and directly applicable – to a general audience.

I sat in the back, cramped up against other anxious attendees who were quick to make conversation both about the plants and about the religion itself. The majority of attendees around me were taking notes, and no one asked questions while the mães and pais spoke about the plants. The questions and comments were hushed and only among the audience members themselves. The woman sitting next to me asked if I was a member of a terreiro. When I said no, she explained that she was Catholic, but that her mother knew a lot about plants. She listened intently, often verifying what she heard. In this context, practitioners of candomblé held clear authority around knowledge of medicinal plants, even if others already held some information about them.

The event ended with a strong plea (accompanied by an online petition entitled “Campaign for the Waters and Woods of the Atlantic Forest”) for the conservation of the Atlantic biome, and for the allowing of Afro-Brazilian religious groups to use the public space for religious purposes. The petition argued that the nature held by the Atlantic Forest is essential to the religion’s worldview, and that the religion has the role of educating the public on the importance of environmental conservation. They also stated that the entire Atlantic Forest should be considered public patrimony, and that Afro-Brazilian religions should be treated as important to the maintenance of biodiversity in the region.

A similar event, entitled “Black Knowledge: A Perspective of Integral Health” took place at Rio de Janeiro’s Botanical Garden in 2016. The event included two lecturers, one of which was a pai de santo who discussed the use of medicinal plants in within candomblé. He gave the example of a woman who had sickle cell anemia, hypertension, and diabetes, and explained how
she was cured by a mãe de santo in his terreiro (using medical terminology such as “diagnosis” and “prescription”). He listed the plants that were used, stated that the mãe takes into consideration possible effects with pharmaceuticals, and argued that contrary to popular belief, the healing practices of candomblé are not “magic,” but instead empowers an individual to better deal with future social and physical problems.

This presentation was significant for a variety of reasons. The Botanical Garden is a space similar to Tijuca National Park in that it is located in zona sul and that it is an “elite” space guarded by security officers and with an entrance fee of 15 reais (at the time of writing). It is also a protected natural space which restricts the actual use of nature within its limits. The Botanical Garden, since its opening in the 19th century, has continued to represent a nationalization and homogenization of plants, as in the garden they are arranged and described as Brazilian above all else (although signs indicate their places of origin).

The Garden’s medicinal plant collection, where the lecture was held, represents a framing of this nationalization. The collection includes over 150 plants, the majority of which are labelled by their name, use, cautions, and mode of preparation (separated by folk use and scientific use). There is a section of the collection that explains the different traditions of medicinal plant use in Brazil, specifically African, European, Indigenous, Chinese, and Ayurveda. This model almost directly follows a dominant narrative of racial mixture in Brazil, that there were distinct roots that eventually came together to form one national and indistinguishable practice.

I argue that the presence of candomblé practitioners in such spaces represent a way of proving that they are knowledgeable enough about the environment in a way that is useful to the general public, that they should be able to have access to a public space of nature. The sponsors, both direct and indirect, of both events are notable. The event in Tijuca National Park held
support from two Brazilian NGOs, and the city of Rio de Janeiro’s Secretary of the Environment. The Botanical Gardens of Rio de Janeiro are managed by the federal Ministry of the Environment, but the event did not gain specific partnership. This is important, because practitioners of the religion have not only historically excluded from the areas of the city, but also from areas of federal nature conversation in general (Copolotti 2015; Corrêa, Moutinho-da-Costa, and Loureiro 2015). In these cases, medicinal plants are used as a way to communicate technical knowledge of the environment in a way that is intelligible and urgent to the general public.

4.3 Post-1988 Black Environmentality in Brazil

Although the political activism of candomblé practitioners, as described above, has existed for several decades, since the implementation of the 1988 constitution particularly, the political rights of black, indigenous, and traditional communities have been in constant construction. Along with this construction has been the defining and redefining of protected social categories within health and environmental policies. The establishing of such rights followed a societal moment that highlighted blackness and conditions of blackness in Brazil. By the 1970s, during the process of the decriminalization of candomblé, the strengthening of Brazil’s black movement (o Movimento Negro Unificado, founded in 1978), and Afro-Brazilian religions and Afro-Brazilian cultural forms in general gained new national attention (Capone 2010). Countercultural movements, developed in response to the military dictatorship, and rights around gender, race, and sexuality came to the forefront of social and political conversations. candomblé, quilombismo, capoeira, and samba, all became valorized not only as practices, but also symbolically as essential parts of the Brazilian national fabric and essentially African and black. It was beginning in this time period that the term negro, or black (as opposed to Afro-
Brazilian, Afro-descendant, and preto and/or pardo), became instrumental in the political struggles of African descendant Brazilians as an attempt to unify the population (Capone 2010).

*Mães de santo*, especially from Bahia and Rio de Janeiro, began to gain national recognition outside of religious spheres, and popular musicians, artists, writers, and politicians began to align themselves both culturally and politically with candomblé *terreiros*, candomblé symbols, and Afro-Brazilian culture in general. In the national imagination, one’s alignment with candomblé began to have a degree of prestige as it was no longer exclusively associated with blacks, poverty, and “backwardness” (Capone 2010). *Quilombismo* also became a symbolic political concept of autonomy and the imagining of black social formations (Nascimento 1980; Domingues 2007; Afolabi 2010).

The efforts of activists, scholars, and politicians during this time period manifested into a host of policies focused on the rights of the black population in Brazil. Their work created a vocabulary and political structure according to which political rights would be articulated until now. One of the first political achievements in this new era of anti-racist legislation was the outlawing of racism and prejudice one year after the drafting of the new constitution (Lei 7.716 1989). This broad law opened up the possibility to legally condemn racism in various physical spaces, such as clinics, schools, the workplace, and public spaces. In 1995, the Zumbi dos Palmares March Against Racism, for Citizenship and Life (*a Marcha Zumbi dos Palmares Contra o Racismo, Pela Cidadania e a Vida*) also marked a significant point in the fight for racial justice in Brazil. Zumbi dos Palmares, the leader of the mythical Palmares quilombo who had died 300 years prior, has always served as an idol in the fight for rights, and in general the notion of a *quilombismo*. The March was accompanied by the development of a National Program of Human Rights in 1996 and of an Interministerial Working Group for the Valorization
Global Moments Around Race

Around this time period, Brazil’s national policies around race influenced and were influenced by other global political shifts. Black Brazilian activists were in conversation with black activists in the United States, who had also made significant political achievements in the preceding decades. In 1991 Colombia also drafted a new constitution, and shortly after granted political and territorial rights to various black communities throughout the country. Similar social movements around racial equality, gender equality, and territorial rights were occurring throughout Central America, the Caribbean, and South America (Laó-Montes 2017). The 2001 World Conference Against Racism, Racial Discrimination, Xenophobia and Related Intolerance in Durban, in particular, brought such conversations together with representation from not only the Americas, but also Africa and Europe. The resulting declaration, the Durban Declaration, offered an intricate tracing of rights, recommendations, and background related to education, the eradication of poverty, market access, food security, and the right to healthcare, with regard to member states addressing systematic racism. In addition to African and African descendant populations, the declaration also discussed discrimination against and the rights of peoples of Asian descent, indigenous peoples, the Roma, refugees, migrants, Muslims, and Jewish people.

Notable is the language used around African and African descendant populations and indigenous populations, which is quite similar in the Declaration (for example, a focus on education, the maintaining of language, traditional knowledge, and heritage, and the ability to be able to choose their own forms of social organization). It is one of the first global policy texts that describes the territorial rights of African descendant populations as similar to that of
indigenous groups. Indigenous groups are described as having a “special relationship…with the land as the basis for their spiritual, physical and cultural existence,” and the Declaration urges governments to “ensure that indigenous peoples are able to retain ownership of their lands.” The two articles (13 and 34) referring to the territorial rights of African descendant people similarly both state that the lands are ancestral, and that governments should “resolve problems of ownership” of such land.

Also important in the Durban Declaration was the acknowledgement of an African Diaspora. That is, blacks in the African Diaspora are not framed as without history or historical linkages outside of the Americas, but framed as people who came from somewhere, and could be connected to people in other spaces who also came from that place by experience and current conditions. Moreover, the Declaration acknowledged that this process of coming from somewhere was violent, and that the effects of that violence ought to be corrected by governments. This both imagined and tangible centering of Africa as an origin is present in the rhetoric of the political struggles both quilombola communities and Afro-Brazilian religions communities. This, in effect, extends a notion of indigeneity to black populations.

The Durban Conference became a reference for various policy texts in Brazil around racial discrimination, human rights, the health of the black population, and the rights of traditional populations. It raised questions such as: What spaces do black Brazilians have the right to occupy? How is their relationship to that space recognized? How are black populations designated within policies that are developed around that recognition? The presidency of Lula, which began in 2003, brought additional changes to political conversations around race, which together began to redefine blackness itself through a delineation of specific rights. Under Lula, the Special Secretary of Policies of the Promotion of Racial Equality was created (Secretaria
Especial de Políticas de Promoção da Igualdade Racial, or SEPPIR), it was mandated that Afro-Brazilian history be taught in schools (Lei no. 10.639 2003), and the Programa Brasil Quilombola program was established, which further outlined rights for quilombola communities beyond those originally mentioned in the 1988 constitution. One of the most important advancements under Lula was the Statute of Racial Equality (2010), which sought to confront racial inequality, gender inequality, and included a mandate to establish affirmative action. In the Statute, “black” (negro) is defined as those who self-declare as both preto (black) and pardo (brown, or mixed) in the Brazilian census, which continues to be how “black” is defined in Brazil’s policies and by activists. Specifically, the Statute discussed the right to health, access to land and habitation, workers’ rights, means of communication, and rights to education, culture, sports, and leisure for black Brazilians.

Quilombola Legislation and Policy Approaches to Black Environmental Citizenship

Perhaps the most impactful policy set that has begun to define black populations by their relationship to the environment has been that around quilombola communities. The 2003 Programa Brasil Quilombola outlined a variety of rights for quilombola communities, including rights to education, local development, “citizenship,” and access to land. The Program has been an important development for all black communities, quilombola and non-quilombola, as it has placed the conversation around black autonomy into political conversations. The original definition of quilombola communities was groups of escaped slaves and their descendants who were occupying a particular piece of territory. However currently, quilombola communities are black communities and their descendants who have worked under various types of exploitative conditions and occupy their own territories. Quilombos themselves, as territorial demarcations,
have been conceptualized symbolically as spaces of refuge for both quilombola communities and other types of black communities (Afolabi 2010).

This has opened the opportunity for various black communities, especially those living in rural areas, to gain not only land rights, but also rights to education (primary, secondary, and post-secondary), healthcare, and economic development initiatives. In order to gain rights, quilombola communities must first self-declare as quilombola officially through Fundação Palmares, which was established alongside the 1988 constitution. Although both the 1988 constitution and the law establishing Fundação Palmares (Lei no. 7.668, de 22 de agosto de 1988) called for the right for quilombola communities to self-declare, and to have political rights based on that declaration (namely, territorial rights), it was not until 2003 that specific means through which to achieve these rights were elaborated. The federal agency INCRA was charged with the role of granting and managing land rights for quilombola communities. The 2003 decree also included other key government agencies that would work to recognize quilombola communities and their heritage, such as the Institute for Historical and National Patrimony, the Brazilian Institute of Environment and Renewable Natural Resources, and the National Indian Foundation. Programa Brasil Quilombola also received significant international attention and institutional support. SEPPIR, with assistance from the UN Development Programme and UN Population Fund, for example, have been monitoring the effects of quilombola policies on communities.

The first quilombola communities received land titles in 1995, seven years after the mentioning of them in the constitution. By 2017, a total of 170quilombola lands (some of which include multiple communities) had titles. This number is relatively small however, since as of 2017, there are a total of 2,533 communities with certification from Fundação Palmares, and a
total of 3,018 communities that have self-declared themselves as *quilombola*. Part of the discrepancy between self-declared, certified, and land-owning communities is bureaucratic. Communities must have researchers prove that they are in fact *quilombola* through historical and anthropological documentation and conduct surveys of the community, a process which can take years. Communities also often encounter land disputes with surrounding landowners, which may include corporations, the Brazilian government, and farmers. These statistics and challenges highlight the fact that the legitimization of *quilombola* communities, and more broadly, *quilombismo*, is still contested in practice.

In addition to legislation around *quilombola* communities, there are three particular groups of policy texts that have worked to define a notion of black environmentality with respect to what are now considered to be “traditional populations” within policies, all of which mention or discuss medicinal plants either directly or indirectly: the National Policy of the Integral Health of the Black Population (PNSIPN)(2009), the National Policy of Medicinal Plants and Phytotherapeutics (PNPMP)(2006), and the National Policy of the Sustainable Development of Traditional Peoples and Communities (PNPCT)(2007). These three policy sets exist within broader racializing projects in Brazil and in the world. In comparison to the policies described above from the early 20th century, policies instituted in the past 15 years are not assimilationist, and increasingly outline specific sets of rights for an increasing number of people groups. After the Durban Conference, the UN declared 2015-2014 the International Decade for People of African Descent, a declaration which has included the organizing and sponsoring of events, seminars, and the creation of a platform for people of the Diaspora to speak at UN meetings and talks. In Brazil, this shift was brought on by the Worker’s Party (*Partido de Trabalhadores*, or PT) during its 13-year rule under Lula and Dilma. These policies help define black
environmentality in two ways. The first is by what makes black bodies different from other types of bodies, and the second is by recognizing how certain black populations rely on the natural environment for survival. Although not a primary focus of any of the three policy sets, the black populations in this ethnography have used and/or been affected by such policies in their use of medicinal plants for their healthcare.

The PNSIPN specifically mentions, although briefly, the knowledges of black populations that are outside of the biomedical sphere. The brief mentioning of these knowledges is significant, because the policy is particular monumental and often cited by activists and researchers, and particularly discuss the importance of care for Afro-Brazilian religious communities and quilombola communities. The focus of the PNSIPN is on the production of scientific knowledge, a fact further highlighted by the only brief mentioning of the role of knowledges of African origin in the deliverance of healthcare. But the policy is particularly important because it represents the beginning of the framing of the black Brazilian body as different, reifying the argument of black activists that there is in fact a discrete blackness in Brazil (rather than just racial mixture)(Jerome 2003; Rotania and Werneck 2004; Maio and Monteiro 2005; Pagano 2014). Moreover, it framed the healthcare of the black population as both a political and a scientific matter.

Part of the policy’s framing of the black Brazilian body is its naming of diseases and conditions that disproportionately affect black Brazilians, specifically sickle-cell anemia, malnutrition, anemia, poor occupational health, HIV/AIDS, STIs, violent deaths, high infant mortality, septic abortions, psychological suffering, stress, depression, tuberculosis, hypertension, type II diabetes, chronic kidney disease, and cancer. Although not approached as such in the policy, I argue (in the context of this study), that such framing is ecological, in that
none of such conditions occur and/or progress independently of the natural and social environment of the body they reside in. Moreover, the communities in this study used medicinal plants to treat such conditions, often in the absence of synthetic pharmaceuticals, which requires a different understanding of living with such illnesses.

The National Policy and Program of Medicinal Plants and Phytotherapeutics (2006) are the two most comprehensive policy texts that present how medicinal plants should be approached by federal, state, and local governments in the achievement of broader social and economic goals. It places particular emphasis on the role of all traditional and local communities, but names quilombola communities specifically alongside indigenous communities. Although Afro-Brazilian religious groups would, according to the 2007 National Policy of the Sustainable Development of Traditional Peoples and Communities (PNPCT) and related policy texts, be included in this label of traditional and local communities, they are not once mentioned specifically as quilombola communities are. This is notable because the policy purposely maintains distance from religiously-oriented healing, even if communities extensively use plants alongside their practices.

The PNPCT is the most comprehensive that guarantees rights to traditional populations in Brazil, although many other policies guarantee more specific rights, such as health and agricultural policies. It was developed by the National Commission of Sustainable Development of Traditional Peoples and Communities, established in 2004, which has been charged with the execution and evaluation of the PNPCT. The Commission distinguishes between 28 traditional communities and holds representation from each. Some communities are defined by their ethnic and/or national heritage (e.g., Roma and Pomeranian), others more by region and/or biome (e.g., retireiros do Araguaia, communities who live along the Araguaia and nearby rivers,
pantaneiros, who work in the pantanal wetland biome in the states of Mato Grosso and Mato Grosso do Sul, and caatingueiros, who work in the dry Caatinga of Brazil’s northeast), and others by the particular natural resource that they work with (e.g., cipozeiros, who work with vines to make artisan goods, and quebradeiras de coco babaçu, who are groups of women who work specifically with products from babaçu trees).

Medicinal plants and traditional medicine are included in the Policy in both explicit and implicit ways. The Policy also lists as one of its specific objectives the “guarantee to traditional peoples and communities access to quality services of health of and adequate to their sociocultural characteristics, their necessities and demands, with emphasis on conception and practices of traditional medicine.” There are two groups involved in the policy (i.e., included in the Commission) that are defined specifically by their healing practices: benzendeiros or benzedores, and raizeiros, both of whom use plants and prayers for curing. One type of community listed in the policy, andirobeiras, works with a plant-derived oil that is valued specifically for its healing properties (andiroba). Importantly, many of these categories overlap in practice. For example, at least a few bezendeiros and raizeiros normally exist within many traditional communities. Also, many quilombola communities have, over generations, mixed with indigenous communities both through marriages and through their customs.

Complicating Traditionalism and Blackness

Both quilombola communities and Afro-Brazilian religious groups (listed as povos do terreiro, or people of the terreiro) are included in the Commission, and are the only black groups to be listed in this group of policy texts. The Policy, in fact, is one of the only federal documents that explicitly mentions Afro-Brazilian religious groups as a traditional community, but does not outline their rights as traditional communities (i.e., around territory, biodiversity, and healthcare).
in the same way that other policies geared towards quilombola communities do. From the PNPCT, a separate federal policy text aimed specifically at rights (healthcare, environmental, cultural, and educational) of these two groups, the National Plan of Sustainable Development of Traditional People and Communities of African Origin (2013). This document reiterates what other policy documents, specifically the PNSIPN and the PNPCT guarantee for traditional black populations, listing as one of its objectives “recognizing and fomenting the traditional practices of health preserved by traditional peoples and communities of African origin.” To reach this objective, it calls upon the Ministry of Health to take initiatives such as creating informational and educational materials on values and knowledges of traditions of African origin and recognizing and financially supporting practitioners of traditional medicine as promoters of health within the public health system.

It is important to note that the label “traditional peoples and communities of African origin” refers specifically to Afro-Brazilian religious groups, although the connotation of the label could imply several other communities that hold practices that originated in Africa. For example, many quilombola communities have dances, music, foods, and healing practices that have African origins. But in fact, the National Plan of Sustainable Development of Traditional Peoples and Communities of African Origin does not explicitly mention religious groups as being beneficiaries of the policy (i.e., it does not use the word “religion” in this context), per se, nor does it mention quilombola communities specifically. This term, in other words, is more of a cultural and political term, although historical and anthropological studies have demonstrated the intricacies of these groups and traditions and the differences between them.

In the 2010 Statute of Racial Equality, too, the rights of quilombola communities are described differently than those of Afro-Brazilian religious groups. Whereas the Statute states
that quilombola communities have the right to preserve their “customs, traditions and religious manifestations,” the right to their “traditions of environment protection,” and the “right to health, including improvements to environmental conditions,” Afro-Brazilian religions are only guaranteed “the right to liberty of conscious and of belief to the free exercise [of religion].” The absence of details within these three policy sets is especially striking given the existence of studies conducted, and research money invested, around the use of medicinal plants and traditional medicine by black Brazilian populations. It is also striking when considering the sheer visibility of Afro-Brazilian religious groups as health authorities in various urban spaces, especially in streets and markets in Brazil’s largest cities.

The language around medicinal plants and traditional medicine in these three policy texts can be analyzed in comparison to the language used in policies around indigenous rights in relation to traditional medicine, which are more integrated as a whole on various policy levels. For example, the UN’s 2007 Declaration on the Rights of Indigenous Peoples mentions traditional medicine both as health and political economic resources, stating that:

1) “Indigenous peoples have the right to their traditional medicines and to maintain their health practices, including the conservation of their vital medicinal plants, animals and minerals.”

2) “Indigenous individuals also have the right to access, without any discrimination, to all social and health services”

3) “Indigenous peoples have the right to “maintain, control, protect and develop their cultural heritage, traditional knowledge ad traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures, including human and genetic
resources seeds, medicines, knowledge of properties of fauns and flora”

4) “Indigenous peoples have the “right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions.”

The UN’s definitions of knowledge systems are particularly salient here. Ayurveda, Traditional Chinese Medicine, and indigenous knowledges are considered to be knowledge systems both in international policies and Brazil’s policies on complementary and integrative medicine. Where then, do the knowledges of black traditional groups, as defined by Brazilian policies, fall within such definitions? There have been several comprehensive studies not only on the origin of plants used by Afro-Brazilian religious groups, but also on the efficacy of such plants, many of which are commonly used throughout Brazilian society and in several African countries (Verger 1995; Voeks 1997). The knowledge and practices of Afro-Brazilian religious groups are often described as oral traditions, but in recent years the groups have shared their knowledges through various media, such as magazines, public lectures, and Facebook groups. There have also been many studies around quilombola communities that document diasporic practices linked to agriculture and knowledge of plants, and that quilombola communities have increasingly packaged their ecological knowledges for both political recognition and economic protection (Gomes 2009; French 2009; Voeks and Rashford 2003; Acevedo 2006).

However, the ambiguity of many of these policies allows for the space for groups to strategically use policies in their favor, often in unexpected ways. For example, during fieldwork, by far the international policy most often referred to, and perhaps the most unifying policy between Pará and Rio de Janeiro (and more broadly between quilombola communities and
Afro-Brazilian religious groups), was the ILO’s convention 169 in reference to its language around the occupation of traditional lands and the management of natural resources. It is precisely because the policy’s language is so broad that it becomes more useable, authoritative, and unifying compared to federal policies that use levels of at times conflicting concepts and definitions.

From the early bioprospecting models inherited from colonial expeditions, this more recent political approach begins to vary in key ways. A crucial point of comparison here is that notions of blackness and traditionalism have emerged jointly within Brazilian policies, especially in terms of “citizenship,” much in the same way that the rights of indigenous groups have been approached. Indigenous groups in Brazil, both in policy and in popular opinion, have always been considered as inseparable from the natural environment. But this association, until the 1988 constitution, often meant a denial of rights and citizenship; that is, indigenous peoples were more accurately framed as part of nature. However, the political concept of indigeneity is more flexible, extending notions of territorial occupation and the operative use of natural resources, while still attempting to acknowledge origin of people groups and their practices.

How then have traditional black populations in Brazil experienced these policy shifts in regard to their uses of medicinal plants? Although the three policy sets listed above explicitly guarantee recognition of use of medicinal plants to Afro-Brazilian religious groups and quilombola communities, what other policies and political tools do these communities use to gain further recognition and legitimacy around their uses of plants, and why? How have all of these processes formed this notion of a black environmentality?
4.4 Connecting Blackness from Rio de Janeiro to Pará

Black environmentality is key in understanding how black populations in Brazil have strategically used unaligned policy texts to gain some kind of recognition around their use of medicinal plants. The act of legitimizing candomblé’s use of medicinal plants through an environmental narrative, for example, is important because it does not necessarily require the same process of “proof” that medical narratives possess. Practitioners have also used the policy term “immaterial heritage” to legitimize their practices of medicinal plants. At the National Workshop of the Elaboration of Public Cultural Policies for Traditional Peoples of the Terreiro in 2012, participants argued that UNESCO’s definition of “cultural immaterial heritage” which is defined by UNESCO as “practices, representations, expressions, knowledges, and techniques – together with instruments, objects, artifacts, and cultural places that they are associated with – that communities groups, and in some cases, individuals recognize as an integral part of their cultural heritage,” directly pertained to practices related to the environment and health.

In reality, the religion’s use of medicinal plants is indeed much broader than what is described in biomedically-oriented policies, as the two events described earlier in this chapter demonstrated. “Health” in relation to plants in the religion not only concerns the use of remedies for specific conditions, but also practices of nutrition and the use of baths, as well as an accompanying psychosocial component. In the example of Tijuca National Park above, the practitioners of candomblé conceptualized well-being as mere presence in and access to nature. I argue that biomedically-oriented policies, therefore, are often too narrow for the kind of health that medicinal plants provide within the context of candomblé.

The events in Tijuca National Forest and at the Botanical Garden are indicative of a larger struggle of candomblé that directly concerns a notion of black environmentality and points
to broader ideas about the differential governmentality of ecologies throughout the Rio de Janeiro metropolitan area. The situation of Afro-Brazilian religious groups is especially important, because their notion of territories and the use of natural resources within territory differs from that presented in policies. Whereas many terreiros, out of necessity, safety, and accessibility, exist in peripheral areas, their spaces of collection, trade, and societal engagement with regard to medicinal plants are much vaster and more varied, often existing outside of the terreiro itself.

One characteristic of the periferia, especially in comparison to the center of the metropolitan region, is that there are stretches of spaces that are unclaimed and undeveloped. Units of conservation, on the other hand, are protected areas of nature, which both the organizers of the event at the Tijuca National Forest and Mãe Nilda argued should be viewed as common goods to be not just enjoyed, but utilized by communities (especially those labelled as traditional). However, this notion of territoriality has not reached public policies, which conceptualize “territory” as fixed, singular space actually owned collectively by a community. Afro-Brazilian religious groups are arguing for territory as defined by access to a particular space.

This notion of territory is controversial for other reasons as well. All of the traditional groups protected by the National Policy of the Sustainable Development of Traditional Peoples and Communities have experienced issues around land and territorial rights, and terreiros have had their own particular set of issues. Whereas churches, for example, do not have to pay taxes for the spaces that they occupy because of their religious designation, terreiros are most often taxed as normal residences and do not gain land rights because of their designation as traditional groups. The National Policy of the Sustainable Development of Traditional Peoples and
Communities, which includes Afro-Brazilian religious groups, places emphasis on the designation of traditional territories, defining them as “the spaces necessary for cultural, social and economic reproduction of traditional peoples and communities, whether they are used in a permanent or temporary form.” *Terreiros*, both conceptually and by the definition offered in the Policy, are traditional territories, although Afro-Brazilian religious groups do not go about gaining rights to their territories in the same way many of the other traditional communities do. However, these territorial issues are not completely separate from those of *quilombola* communities. As one mãe in Pará said, the *terreiro* is an urban *quilombo* in that it is, and has always existed, a space of refuge for Afro-Brazilians.

*Blackness and Quilombismo in Pará*

Blackness in Pará, and in the Amazon region in general, is quite different from how blackness is approached politically in the rest of the country. Regional activists and scholars point out the “invisibility” of blacks in the region, which has in both political and popular imagination been perceived as indigenous. This invisibility is also the result of scholarly focus on the black movement in urban centers such as Salvador, Rio de Janeiro, and São Paulo. Yet Brazil’s north (which includes the Amazon region), is the most non-white region of the country, with only around 20% of the population identifying as white. As a comparison, the southeast region of the country, where Rio de Janeiro is located, is around 55% white. Although there was and has been European (and European-descendant) settlement in the region, European involvement mostly took the form of prospecting and resource extraction, a pattern which persists to this day. The political label of “black” (*negro*) in Brazil includes the labels of both *preto* (black) and *pardo* (brown). According to statistics, therefore, just under 80% of Pará’s population would be considered black (Instituto Brasileiro de Geografia e Estatística 2016).
However, the reality of ethnic mixture in Pará obscures such labels. Many individuals are of some combination of indigenous, African, and European descent, and those who are at least partially of indigenous descent but do not live in indigenous territory often self-identify as *pardo* (i.e., they do not see themselves as “white” or “Asian”). The self-declared indigenous population in Pará is around .4% percent of the total population, the same proportion of the indigenous population in Brazil as a whole. Yet still, much of the activism that has gained attention in the region, especially at the international level, has indeed been around the rights of rural and indigenous populations, rather than those of black populations per se.

In reality, indigeneity and blackness in the region are nearly inseparable in terms of the ancestry of individuals, religion, and more pertinent to this study, practices and knowledge of plants. Moreover, the division between whites and non-whites is perhaps starker in practice than in other parts of Brazil. In rural communities throughout Pará, especially those with current issues around territorial rights, a plantation hierarchy still persists, where those who own the most land and have the most political economic power are white (Bentes 2014). A strong cultural memory in the state, for example, is that of *Cabanagem*, a five-year war (1835-1840) waged by indigenous, black, and white laborers and slaves against the white elite of Pará. The anniversary of *Cabanagem* continues to be celebrated in Belém yearly as a symbol of the resistance of *campesino* populations, and is particularly celebrated by social movements such as the Landless Workers Movement (*o Movimento Sem Terra*, or MST), *quilombolas*, and indigenous communities. Such alliances between social movements have been and are common in the state. The original inhabitants of *quilombos* in the region, in fact, often fled into indigenous territories, where knowledge exchange and intermarriages occurred if there were no conflicts (Bentes 2014; Hecht 2011).
Quilombola Communities and Health in Pará

Such racial and ethnic dynamics extend to practices and politics around medicinal plants. To describe medicinal plants as “ubiquitous” in the state of Pará would be an understatement. In the main market of Belém, the Ver-o-Peso, rows of healers offer various plant and animal-based remedies for a variety of ailments ranging from diabetes and arthritis to love and money problems. One street over are stores that sell plants and industrialized plant-based remedies.

"Remedies," (remédios, in Portuguese) in fact, is a broad label to describe how plants are used to treat the body. Extracted oils, pills, teas, honeys, tinctures, liquors, pomades, soaps, creams, wines, resins, and infusions are all products that are used for healing purposes. Throughout Pará, people often have multiuse garrafadas, infusions of wine and plants, stored in their refrigerators ready to use when someone in the family has a bad cough, menstrual cramps, stomachaches, or other common ailments. These garrafadas are normally made and/or sold by someone in the community or dropped off by a visiting relative.

Whereas in Rio de Janeiro, healers that incorporate spiritual and medicinal plants may follow the traditions of Afro-Brazilian religions and/or espiritismo, in the Amazon region shamanism, or pajelança is often referred to as an epistemological basis for healing, whether or not the healer considers himself or herself a shaman, or pajé. Afro-Brazilian religious groups in the region, too, have incorporated indigenous elements that are not present to the same extent in Afro-Brazilian religions in the South, Southeast, and Northeast regions of the country.

The politics around how the quilombola communities in this study politically organized around their use of medicinal plants was multifaceted. Central to this ethnography is that the communities were all involved in community medicinal plant pharmacies. But the communities
also worked with, alongside, and against cosmetics companies, federal researchers, and cooperatives in relation to their use and knowledge of medicinal plants. Outside of these institutional politics, at the most basic level, the use of medicinal plants for these communities was absolutely crucial. Biomedical healthcare services within communities themselves were limited or nonexistent. Across the three Paraense municipalities of focus in this study, I catalogued over 250 medicinal plants used for a wide range of health issues, including hemorrhaging, gastritis, cancer, gastrointestinal problems, diabetes, high blood pressure, anemia, headaches, liver problems, infertility, erectile disfunction, infections, fevers, menstrual problems, tremors, and muscular pain, among other conditions. The gendered nature of this knowledge and political organization was pronounced. In all three locations, both men and women, as well as people of all ages held knowledge of medicinal plants. However, in my research it was almost exclusively women that formed groups or organizations around medicinal plants. Importantly, many of the women who hold knowledge of medicinal plants were also parteiras, or midwives, and a large number of the plants used were for women’s health concerns.

With quilombola communities, the notion of black environmentality arrives with the idea in policies that quilombola communities, as traditional communities, are inherently dependent on natural resources for their survival and reproduction of cultural knowledge, and that government programs for the betterment of these communities should be developed through programs focused on natural resources, such as family agricultural programs, nutrition programs, and environmental education programs. The political landscape of medicinal plants in Pará, therefore, differed significantly from that of Rio de Janeiro, and in this respect, the communities in Pará were more similar than different. Many smaller municipalities in the interior of Pará, including all of the municipalities in this ethnography, have a similar layout: an urbanized center,
where government offices are located, and a large rural region where various types of traditional communities normally reside. Although the two types of spaces may exist within the same municipal territory, there is usually a marked difference between the lifestyle in such spaces. Within a single family, some family members may live in the urbanized area of the municipality, while other family members may spend the majority of their time in the community, located in the rural part of the municipality. While urban centers have clinics and hospitals, the rural areas rarely have clinics, and when they do, they may be understaffed.

The northern and northeastern regions of Brazil, in general, have been the sites of the implementation of various federal programs around economic development, health, and agriculture, while at the same time being the victims of government neglect and the exploitation of resources and people. Federal programs such as *Mais Médicos* (which has placed Brazilian and Cuban physicians in rural communities) and *Bolsa Verde* (which provides economic assistance to agriculture), for example, both affected the livelihoods of the communities in this study. But the ignoring of the effects of environmental projects and harmful environmental practices at the federal level also affected all of the communities in this study. Communities organized themselves through cooperative models and according to the idea of *economia solidária* (solidarity economy) in resistance to such capitalistic environmental forces.

The most unifying factor of the communities in this study was that of bioprospecting, which has always been a polemical topic in the region. In all three municipalities, ethnobotanical studies had already been conducted. Bioprospecting in the region took various forms and included various types of institutional actors in the communities. Federal research units, pharmaceutical companies, and cosmetics companies all had interest in the knowledge of the communities. The communities were accustomed to strategically sharing their knowledge to the
outside in a way that was not necessarily related to how the communities used plants for themselves. This, similar to the experiences of practitioners of candomblé, led to a discrepancy between the lived experiences and practices of communities and the way policies approached the populations’ uses of medicinal plants.
5.1 Institutional Landscapes of Territoriality

I was first introduced to the town of Santa Luzia do Pará through networks of black women activists that stretched from Rio de Janeiro to northern Brazil. When I returned to Rio de Janeiro in 2016 to continue fieldwork, Joyce (from Criola), knowing that I planned to return to the Amazon region to continue the research that I started in 2014 in Oriximiná, began to reach out to possible contacts in Pará. As a testament to the virtual nature of black activist networks in Brazil, Joyce had never met Lara in person (only through Facebook), a black activist in Belém who without question ended up putting me in contact with representatives from CEDENPA.

CEDENPA, I would soon learn, was similar to Criola in that it was spearheaded by black women, but it organized around the needs of black communities in the state of Pará specifically. CEDENPA had various regional representatives who actuate socioeconomic development and political projects in rural black communities throughout the state, a difficult feat considering the inaccessibility of many of those communities and the sheer size of Pará. In addition to its political activities in rural communities, the organization also had a strong presence in Belém, sponsoring and organizing events, as well as maintaining cultural spaces. CEDENPA activists were healthcare professionals, public school teachers, artists, university professors, quilombola leaders, and terreiro leaders, making the organization’s influence widespread.
Criola had a more cosmopolitan presence and trajectory, mainly focused on communities in Rio de Janeiro but very much at the center of a transnational network of NGOs and UN agencies in Brazil, whose conferences, meetings, and hearings overwhelmingly occur in Rio de Janeiro. During my fieldwork Criola’s longtime director, nationally-revered activist Jurema Werneck, for example, became the executive director for Amnesty International Brazil, which was already a partner of Criola. Founded in 1980, CEDENPA’s political activities reflect the institutional layout of the region, where UN officials themselves rarely reach, and in the Amazon region the organization has grown to be powerful and dynamic, gaining support from organizations such as Oxfam and the Ford Foundation as much as the municipalities of several smaller towns and regional research entities.

Upon arriving in Pará and contacting Lara’s reference, Helena, I was immediately thrown into CEDENPA’s sphere of institutional influence. Over text message, Helena asked if I could meet her and another activist, Rafaela, at her home in Belém. I assumed the meeting would be casual, but it was more of a vetting interview, a step that became common before my work in all communities (but that had never occurred in Rio de Janeiro). They asked what kinds of programs I would hope to develop for the communities, what I would do with the information I collect from the communities, and what kind of experience I already had in the region. I was not-so-subtly asked about my political leanings, as well as my age and family background.

After around an hour, the conversation became more relaxed, and I began to learn more about Helena and Rafaela. Rafaela was an educator and artist in her 50s from the interior of Pará. As I will describe in the next chapter, she was a fierce advocate for untitled quilombola communities, both helping with the titling process and with economic development.
Helena’s activism was much more institutional and proprietary, and she and her husband had set up numerous institutions over the past 20 years in the town of Santa Luzia in support of alternative economics for small farming communities and traditional populations. Her husband, Bernardo, who had immigrated to Brazil in the 1990s from Italy after being a volunteer in the Amazon region, helped in the maintenance of ties with Italy and other European countries, from which they received funding for their projects. Each year they welcomed young Italian volunteers to work within the organizations that they coordinated. Their work in the region was as much a community and international endeavor as it was a family endeavor. The house where we met, in fact, was located in a gated villa that included other houses owned by her family, as well as a small organic café that sold goods (food, crafts, phytotherapeutics, and oils) sourced from communities in their network. I made it a point to visit the café often while I was in Belém, and it was often so crowded that seats and tables had to be rearranged to accommodate visitors.

I was immediately drawn to how the phytotherapeutics in the café were displayed, which seemed to honor those who made them and espouse a philosophy and language of natural resource management and economics. It struck me that many of the products included the names of the one or two women who produced the phytotherapeutics, and all of the products included the names of the communities and/or the organizations with which the women were associated. Labels on phytotherapeutics read “Economia Solidária Artes & Sabores” (Arts and Flavors Solidary Economy), “Fitoterápico Artesenal” (Artesenal Phytotherapeutic), and “Consumo Sustentável: Seu Consumo muda o mundo” (Sustainable Consumption: Your consumption changes the world”), explicitly advertising the political mission of the phytotherapeutics’ production.
These phytotherapeutics, I learned, were just the end product of an extensive network of people, communities, and organizations who support an alternative economic vision for the northeastern Amazon region. Helena invited me to Santa Luzia, where she lived and mostly worked, to meet with two women and one man that she indicated as healers and who were living in quilombola communities within the city’s limits. Santa Luzia is unlike the other two municipalities in this study in that it is located in the northeastern part of the state where extensive deforestation has taken place, and it does not sit on a large body of water. In fact, it is completely accessible by land and is only three hours by bus (200 km) from Belém. It is therefore difficult for communities in the region to be self-sufficient without some sort of agricultural effort, which was reflected in the centrality of the cooperative that Helena coordinated.

Dona Lene and Pimenteira

Pimenteira, the community in which I conducted research in Santa Luzia, is one of 42 traditional communities in the municipality, including indigenous, small farming, quilombola, and extrativista (communities that rely on directly extracting and selling natural goods), only some of whom have land titles. Five of these communities are quilombola, and there is, and over decades has been, quite a bit of marriage between communities. Quilombola communities must be organized under an association registered as an institutional entity (e.g., a nonprofit or business) before receiving land titles from the federal government, and this association acts as a political structure for communities through which they can legally negotiate rights and finances. This association is often organized at the community level, but sometimes, as is the case with communities in Oriximiná, multiple communities organize under a single association.
Upon arriving in Santa Luzia, I was introduced to Dona Lene, the 54-year-old president of Pimenteira’s quilombola association (Association of Family Farmers of Pimenteira, Associação dos Agricultores Familiares de Pimenteira) and the community’s herbalist and midwife, or parteira. The women in quilombola communities who extensively knew about and used medicinal plants rarely ever called themselves herbalists or healers (curandeiras, which can have a religious connotation). In fact, I was consistently introduced to them with the phrase “Ela sabe muito sobre ervas,” or “She knows a lot about herbs.” Indeed, as the case of Dona Lene shows, the women were much more than herbalists, but also were political leaders, businesswomen, farmers, educators, and delivered babies in the communities. That the women who “knew a lot about herbs” were also the women with the most political economic influence in communities was no coincidence, as I will describe in this chapter and those that follow.

Dona Lene, it turned out, was a difficult person to catch in one place. She was constantly travelling between the community, the center of Santa Luzia, and Belém for political and business trips. Pimenteira was not far from the city of Santa Luzia, taking only one hour by car to arrive. However, most of that trip had to be made on hilly dirt roads, and the only consistent form of public transportation was a daily school bus, which did not run when there was too much rain (a common occurrence in the Amazon). Moreover, there was practically no cell reception in the community.

Eventually, I was able to coordinate a time to go to Pimenteira to meet Dona Lene, and a visiting Italian volunteer who was a friend of Helena and Bernardo offered to drive me to the community. The other communities in this study were inaccessible mostly by distance and geography, but Pimenteira was inaccessible because of the complexity of the dirt road system. Even with the directions given by members of other communities along the way to Pimenteira,
one must know exactly where they are going to arrive at Pimenteira if they are not simply accompanied by someone from the community itself.

Disorienting initial trips to communities became common, and I eventually grew certain that community leaders purposely left travel information vague as yet another way to vet visitors (i.e. researchers) who come to the communities. I became even more certain when, on my arrival, Dona Lene and other community members seemed to routinely show me around the community and talk about medicinal plants. During my first visit to the community, Dona Lene hardly asked about my background, and did not seem suspicious or cautious about my visit to the community. Instead, she gave me a rote presentation on the history of the community, showing a few plants that were growing around her house, and introduced me to the family members that

*Image 5.1 The common area of the quilombola community.*
lived closest to her, which were her brother and his family, and her sister and her family. She explained how the main extended family of the community has both black and indigenous heritage, but that they had differentiated themselves as quilombola because there was already a non-black indigenous group in the region.

She also explained that although the community had recognition from Fundação Palmares as quilombola, they were yet to receive their land title from INCRA, from whom they had merely received a “declaration.” When I asked why they had not yet received their land title, Dona Lene explained that INCRA committed to help send a researcher out to the community to conduct an anthropological assessment, but that the researcher never came. When they submitted their own paperwork and an anthropological study that had eventually been conducted, INCRA, in a delayed response, stated that the community was lacking documentation. She added: “INCRA doesn’t have interested in collective titles, just private ones.”

The historical narrative of the community that Dona Lene presented to me was sprinkled with references to plants, and it was clear that in the last five decades a relationship had evolved between the community’s identity and its plants. The community’s name, in fact, is indicative of this relationship. The founders of the community, Dona Lene’s parents, had arrived in the current territory of the community 40 years prior from a much larger and older quilombo, Narcisa that is fewer than 50 km away and is over 200 years old. Before settling on the territory, they would hunt there and eat peppers, leaving the seeds on the ground. Eventually, pepper bushes (pimenteiras) began to grow in large numbers, inspiring the name of the community.

Similarly, as I talked to more people both within the community of Pimenteira in Santa Luzia and outside of it, it became clear that there was a network of institutions affecting the community’s relationship with medicinal plants. Dona Lene and other members of the
community association stated that they would like to try to plant the community medicinal plant garden, but only if was on the grounds of a community school. This raised a more complex matter. Schools are, in fact, the sites of many political debates for quilombola communities. Schools are first and foremost a political space, in that they receive government money and support. They also provide jobs for members of the community, as well as a way for dedicated outsiders to work within the community.

*Family Disputes and the Struggle for Rights*

In Pimenteira, where there was no school, a new school represented a fierce political fight between two sides of a family. The community is made up of the descendants of one couple, the parents of Dona Lene. One of Dona Lene’ brothers and his children wanted to have individual land rights, rather than the collective land rights afforded by residence in the community’s territory, and occupied land at the top of the hill overlooking the community. On this private land the family built a private school, where students would have to pay to attend. Otherwise, students (especially those from the community itself), would and did have to take a bus ride to the public school in the center of Santa Luzia.

While I was conducting fieldwork in Pimenteira, this feud was at the center of all political conversations. The municipality was slow to acknowledge the community’s request to have a school built within the community’s territory. Moreover, the building of a school was connected to various other governmental programs, such as the public housing program *Minha Casa, Minha Vida*, and the National School Nutrition Program, which pays small-scale farmers to provide food to public schools. Therefore, it was perhaps unsurprising that the continuation of political organization around medicinal plants was, by default, connected to the building of a
school. Dona Lene argued that the community garden should not just serve as a tool for preparing medicine, but also as a teaching tool for the community’s children.

The example of the school demonstrates that gaining full rights (i.e. political and territorial) as a quilombola community is, above all, a political economic move. When government services are afforded to recognized quilombola communities, they are funneled collectively through the quilombola association, rather than to individual families, as in the case of the brother of Dona Lene. This also applies for money gained through agricultural production and any other economic initiatives developed at the community level. In this way, as I will describe in the next section, institutions such as cooperatives and CEDENPA are crucial for quilombola communities, because they provide a structure through which this kind of collective economics can exist.

After three visits to the community over the course of a year, territorial rights continually proved to be the core of all conversations in Pimenteira. A constant threat was that of agrochemicals distributed by nearby farmers which did not directly get sprayed on Pímenteira’s land but affected the water supply and air quality of the community. Several passionate congregations within the community (be it in church, during a youth hangout, or at one of the community’s three bars) ended in tearful declarations of love for family and territory, especially in relation to the possibility of a school. In July 2017, the Pímenteira community, along with other quilombola communities in Pará, occupied INCRA’s headquarters in Belém for five consecutive days to protest the agency’s slow bureaucratic processes, which gained substantial national media attention.

I became more involved with other events in Santa Luzia and the region around education, cooperatives, and biodiversity, where members of Pímenteira were often present.
Accordingly, the presentation of this community’s struggles to me became much more complex. Although everyone in the community knew that I was interested in medicinal plants, they soon enlisted me for other tasks related to securing their territory, which placed me squarely in the matrix of health, territorial rights, and environmental rights.

As I was often travelling from Santa Luzia to Belém, the community first enlisted me to deliver government documents to family members in Belém. At the end of my first visit, the community received a call from a government worker clarifying what paperwork would be necessary for the community to be beneficiaries of the Minha Casa, Minha Vida program. The government worker explained that they would need to present a map and a register of all of the houses in the community. The community had no map, and Dona Lene saw that I had been using a GPS handheld to mark the locations of plants. She explained the situation indirectly to me (i.e., explained it to her daughters but made sure that I was present during the explanation), and ended up using the GPS data I collected to draw a map of the community by hand. After I explained to her that a more comprehensive map would require a more careful collection of GPS coordinates, she invited me back to the community to begin the process of creating a more detailed map.

Such dynamics are indicative of the position that many quilombola communities find themselves in, which is often one of negotiation with outside organizations, researchers, and private companies. Fourteen years after the passing of the quilombola land program, and in a context where INCRA seems more often to act against the interest of quilombola communities, communities negotiate government resources, human resources, and natural resources both directly and indirectly in order to secure the rights that promised but are not delivered in practice. In the case of Pimenteira, plants are part of that negotiation. Plants are part of the community’s origin story; they are what attract researchers (like myself, and others, as I will describe later in
this chapter) to the community; and they are one way that Dona Lene and other women mark their indispensable places in the community.

5.2 The Cooperative Model and Private Bioprospecting

Cooperatives are means through which traditional and rural communities can gain more control over the economics of natural resource management within their communities. Helena and Bernardo helped found and coordinate COOMAR, *Cooperativa Mista dos Agricultores* (Joint Farmers’ Cooperative), which has operations throughout northeast Pará. In a region where exploitation is the norm rather than exception, cooperative organizations are often heralded as beacons of hope for traditional communities. Pimenteira already held strong ties with COOMAR, which had its own phytotherapeutic pharmacy in the center of Santa Luzia called ATAVIDA (*Associação Campo Cidade Transformar e Agregar Valores e Vida*, or Country City Association to Transform and Gather Values and Life) and whose operations extended to the café in Belém where I initially met Helena. The cooperative model, as two community members of Pimenteira explained to me, is directly tied to former conditions of slavery in the region. After the abolition of slavery in 1888, many formerly enslaved individuals continued to work on plantations and farms under violent and exploitative conditions. As black communities began to participate in regional and national markets by selling and cultivating natural resources, middlemen often paid producers very little for their goods. Cooperatives were established as ways to combat such exploitation, and cooperativism in Brazil surged as a popular model of alternative economics in the 1970s. Cooperatives in the state of Pará, which now number over 200, not only act as economic resources for communities, but also as political resources, aiding communities in gaining political rights and recognition (Organização das Cooperativas Brasileiras 2017).
The operations of COOMAR were extensive. Helena and Bernardo were involved with the preparation and delivery of documentation for land titles, interpreting policies and laws around land and agriculture, and connecting NGOs and researchers to the community. COOMAR included membership from the majority of communities in the town and helped run a school focused on teaching agroecology to youth from traditional communities (called ECRAMA, *Escola de Campo para Jovens Agricultores de Comunidades Amazônicas*, Country School for Young Farmers from Amazon Communities). Helena, who was Brazilian, and Bernardo, who was an Italian national, gained support from Italian and German organizations (as well a steady flow of Italian missionaries, volunteers, researchers, and doctors) for such initiatives. Moreover, the cooperative’s broad structure allowed for the support of various government agencies, such as EMBRAPA (Brazilian Company of Farming Research, or *Empresa Brasileira de Pesquisa Agropecuária*) and the Ministry of Health.

COOMAR, and by extension ATAVIDA and ECRAMA, had supported extensive research on medicinal plants, which members conceptualized as going beyond the medical sector and very much being part of agriculture and nutrition. Dona Lene, along with two other women, Dona Beatriz and Dona Heloísa (Dona Lene’s aunt from a different quilombola community), worked at ATAVIDA in partnership with the cooperative creating phytotherapeutics and nutritional goods, which were then sold to the public. ATAVIDA, which sat behind COOMAR headquarters, had an industrial kitchen, a meeting space, a small store, and a small garden from which plants were cultivated to make products (see Images 5.2 and 5.3). Dona Beatriz and Dona Heloïsa were often working several hours a day making phytotherapeutics and extracting oils, which were then sold in Santa Luzia and in Belém. ECRAMA also taught students (who were anywhere from 15 years old to 35 years old) about the nutritional benefits of certain crops, and
how farming according to agroecological methods (i.e., without using agrotoxins and strategically planting certain plants next to one another) increases the nutritional value of plants.

Image 5.2 Garden of ATAVIDA.

COOMAR and ATAVIDA operated according to the philosophy of *economia solidária*, or solidary economy, which placed emphasis on workers’ right to manage their own economic trajectory and that of their communities. A poster on the wall of ATAVIDA read “This enterprise builds a solidary and feminist economy,” an accurate declaration of the role of women in COOMAR, and as I will explain later in this chapter, stood in direct contrast to various exploitative systems that community members find themselves up against.
The cooperative is also essentially a bioprospector, albeit a much more democratic and equitable one, discovering and preserving heirloom varieties of crops in members’ communities. However in their activities, *economia solidária* prevails as much less exploitative in comparison to larger companies’ bioprospecting activities in the region. At least two Japanese companies have established bioprospecting operations in the northeast region of Pará, one of which tried to patent a popular fruit seed, *cupuaçu* but later abandoned their attempt (Nogueira et al. 2015). During one trip to a family farming community with Helena and Bernardo, I witnessed the frustrations of a group of oil-extracting women who had interests in extracting and selling passion fruit seed oil. The cooperative had tried in the past to extract the oil, but the process
ended up being too labor intensive. They began to talk about how a Japanese company operating in the region had been using sophisticated machinery to extract the oil and sell it at a high price.

*Natura and the Cultivation of Murumuru*

Therefore, the communities constantly face economic threats and competition from larger companies and organizations, and rely on more local markets for their livelihoods. This other side of political activity around medicinal plants has nothing to do with the health of communities themselves, but rather than health of the rest of the Brazil, and by extension, the rest of the world. All of the quilombola communities in the study were involved in the bioprospecting activities of outside organizations. But perhaps the most impactful company throughout the Amazon region is Natura. Natura consultants were present in all of the municipalities in my research, and communities in all of the municipalities were aware of the possibility of Natura offering to buy raw materials from them.

Natura is an influential Brazilian corporation, with a net revenue of US$2.4 billion dollars in 2016. It has been praised for its social responsibility and has become a model for other cosmetics companies. Natura is a notable example of Brazil’s global economic influence. It has headquarters in Argentina, Chile, Colombia, France, Mexico, and Peru (as well as operations in the United States) and in 2017 bought the British company the Body Shop, also noted for its stance on sustainability and its goal for an ethical corporate culture, from the French company L’Oréal for over US$1 billion (L’Oréal Finance 2017). It had already acquired a majority stake in similarly-positioned Australian cosmetics company, Aesop in 2013 for US$71.6 million (Business Wire 2012).

Its business model focuses on sustainability — sustainable packages, the use of natural resources sustainably, and above all, the socioeconomic sustainability of communities, citing the
model of sociobiodiversity. Still, it is considered to be a luxury brand by the average Brazilians, with prohibitively high costs for everyday products such as lotions and soaps.

Although there are storefronts that sell Natura products, Natura has since 1974 (five years after its founding) primarily worked through a direct sell model, using a total of 1.6 thousand “consultants” who sell Natura products. Notably, and in contrast to other companies that use natural resources from the Amazon region, the vast majority of Natura’s revenue itself (not including acquisitions such as Aesop and the Body Shop) comes from the Brazilian market, and nearly all of its revenue comes from its Latin American market. Natura works through cooperatives and community organizations rather than with communities directly in their use of raw materials, and a total of 32 communities (all but one of which are in Brazil) are involved in the extraction of raw materials, involving a total of over 3,000 families. Pará possesses the highest number of organizations involved in Natura’s extraction, totaling 13 (Natura 2014).

In 2011, Natura launched Programa Amazônia, whose goal was to support the sustainable development of the Amazonian communities with which Natura works utilizing a model referred to as “ethical biotrade.” Over 250,000 families are involved in this program, and the program includes the conservation of over 250 hectares of land. In other communities, Natura’s reach is not through collection of raw materials, but through the employment of consultants (the vast majority of whom are women), who sell Natura products through the company’s catalogue. Part of Natura’s appeal to many individuals (in both urban areas and rural communities) is that the ingredients come from the Amazon region and possess natural properties.

Currently, a total of 20% of the raw material used by Natura comes from the Amazon region. The line of Natura products that most directly involves traditional communities in the
Amazon is Ekos (launched in 2000), which includes products made from ingredients native to the Amazon region (specifically, Brazil nut, ucuuba, andiroba, passion fruit, açaí, pitanga, cumaru, buriti, murumuru, and patuá). The communities grow, collect, and provide the raw materials for Natura’s products.

Although it is a Brazilian company, Natura does not cite Brazilian laws around the environment or the development of traditional populations. In fact, it has as its own separate set of “policies” and programs that are not necessarily in conversation with Brazilian or international policies, such as its 2009 Policy on Sustainable Use of Products and Services of Sociobiodiversity. The company cites support from private international organizations and foundations that legitimize its practices. One example is the B Corporation, where Natura was the first publicly traded company (and at the time, the largest) certified by the organization in 2014. Importantly, the B Corporation does not necessarily align itself with policies such as the CBD, which would put it into conversation with more central issues around the rights of traditional and local populations.

Although Natura may not directly follow policies around equal access, benefit sharing, and traditional populations, the company still takes political stances on certain issues. Natura aligns itself with the UN’s Sustainable Development Goals, which were implemented in 2015. There are 17 Sustainable Development Goals in total, focused on the eradication of poverty, hunger, and inequality, environmental protections, access to healthcare, and gender equality. Natura claims that its Ekos line confronts every one of the UN’s sustainable development goals. Another way that Natura claims to be involved in public policies is by supporting the development of Brazil’s 2015 biodiversity law (Lei 13.123), which focuses specifically on benefit sharing and the protection of the rights of traditional populations. Natura had strong
interest in the construction of this law, as around 70% of the requests in analysis for the use of
genetic patrimony to the Brazil’s government Counsel of Management of Genetic Patrimony
have been made by the company itself. Natura elaborates on its development initiatives through
its Vision of Sustainability through the year 2050, and has in fact adopted much of the
sustainable development and biodiversity language propagated by the UN and past policy texts.
In addition to explicitly identifying the ways that it meets the 17 UN Sustainable Development
Goals, it also is certified by the Union for Ethical BioTrade (with offices in Amsterdam, Geneva,
and São Paulo), a UN partner created in 2007 which developed its guiding principles based on
the UN’s Convention on Biological Diversity, signing a “Memorandum of Understanding” with
the Convention in 2008 in an effort to make members and future members more aware of the
guidelines of the CBD.

The community of Pimenteira collected the seed of the tree *murumuru* for Natura.
Immediately upon entering the community, the large drying racks full of the *murumuru* seed
were some of the first sights. They are some of the most uniform and technical features of the
community, with large coverings to protect the seeds (Image 5.4). A single rack fits well over
1,000 seeds, and all but four houses in the community had racks. But the influence of the
company on the community is broader and more complicated. At least one person in the
community, a particularly precocious 18-year old named Tiago, worked as a Natura consultant at
the time of fieldwork, selling their products both within and outside of the community.
Natura works with seven rural communities (through associations and cooperatives) in the production of their *murumuru* product line, which is comprised of haircare products. But as one Pimenteira community member, Marta (who was also a former participant in the pharmacy), said, “By the time Natura makes the product, it’s already too expensive for us.” Indeed, in this line, the cheapest product is shampoo (27.50 *reais*, or the equivalent of $8.50 as of January 2018), and the most expensive product is hair butter (47.80 *reais*, or the equivalent of $14.75 as of January 2018). Community members were paid 3.80 *reais*/kilogram of *murumuru* seeds, and 3.90 reais/kilo if they are members of the regional cooperative (a fact that one community member, Marco, scoffed at while telling me). Natura provided supplies (such as rubber boots)
and yearly training in the collection of the seeds, as well as classes on environmental sustainability. In fact, to collect for Natura, one much have certification that is gained from the company’s training.

But Marta explained that the trees are lined with thorns, and grow only in forested areas, making it dangerous to collect the seed. During this conversation, Marta swiftly brought up a colleague of hers who also worked making phytotherapeutic products. Her colleague, a well-respected herbalist in the region, had been walking through the forest barefoot and received a fatal snake bite. The incident, it seemed, served as a cautionary tale for Marta. Marta added: “I can’t say that [our collection] of *murumuru* is worth it. We gain very little for a lot of work, and we can gain more from selling *açai* and cassava flour.”

Perhaps unsurprisingly, Natura’s operations throughout the region have not been without controversy. In the town of Salvaterra in Pará, where there are over 15 quilombola communities, Natura was accused of being involved in predatory practices in the extraction of *ucuúba* bark in at least one quilombola community (Acevedo 2006). Moreover, Natura’s business is not much less exploitative, nor much more lucrative, than business done with middle men, with whom the community previously conducted business. The community sold the leaf *malva*, used to make artisan goods and much easier to collect, for 2.50 reais/kilo. Today, the municipality’s cooperative plays a key role in balancing the economics of the community in terms of their selling of natural resources. The community sells *malva* to the cooperative, and various cooperatives, community pharmacies, and grassroots groups of women, both connected and similar to those in Pimenteira, produce similar products as those sold by Natura (e.g., lotions, soaps, shampoos, etc.).
Ultimately, Natura’s model of “sociobiodiversity” looks very different from how Pimenteira implements it in practice, especially through their participation with COOMAR. Although community members in Pimenteira used *murumuru* at times, they were not producing products from the seed in high quantities. Whereas Natura has limited its focus on Pimenteira to the community’s collection of a single seed, the community’s participation with COOMAR relies on a variety of crops and products.

Part of Natura’s dealings with Pimenteira and communities like Pimenteira is the assumption that such communities do not have other sources of income that are sufficient for the livelihood of the community (i.e., that they would be worse off without Natura), and that they only live off of the land in the quilombola community territory itself. Both narratives are false. In Pimenteira, there are *açai* trees, *malva*, several types of fruits, and cassava, all of which are profitable. Moreover, several families had their own *roças*, small, private farms that usually include a variety of crops. Money gained from crops sold from *roças* does not have to be funneled collectively to the community, meaning that some community members have an additional source of income, which can also be managed through COOMAR. Community members’ collection of *murumuru*, then, is almost exclusively for the benefit of Natura, a defining and telling detail of their relationship to institutions interested in their resources in general.

5.3 Centro Popular Biosaúde Pornusena

In Pimenteira, as in all communities in this study, I introduced myself as a researcher interested in medicinal plants. And, like all of the communities in my research, academic studies had already been conducted on medicinal plants in Pimenteira. During my first visit to the community of Pimenteira in Santa Luzia, it was clear that the community members were
accustomed to receiving visitors asking about medicinal plants. Still, community members were eager to walk me around the community to talk about plants. The community was relatively small in terms of area, but arranged in such a way that each family had their own corner and their own selection of plants.

During my first two days there, Dona Lene presented to me three different books arranged by previous researchers, volunteers, and one Italian priest that catalogued medicinal plants. Dona Lene walked me around forested and garden areas of the community, discussing plant uses with me. I was surprised at the number of plants catalogued by these works (well over 100), since the community had fewer than 35 households. In walking around separately with Dona Lene and six other women in the community, I took note of a total of 55 medicinal plants.

The community’s since-abandoned first attempt at organizing around medicinal plants was in 2006, in the form of a phytotherapeutic pharmacy (called the Centro Popular Biosaude Pornusena, or the Pronusena Popular Center of Biohealth, named after one of the community’s founders, the mother of Dona Lene) within the community itself. The pharmacy was built under a broader project entitled “Development and Valorization of the Quilombola Community Pimenteira,” which received support from the Ministry of Health and support from CEDENPA and was to include a community garden where medicinal plants would be grown. The pharmacy included technical equipment such as a dryer for plants, a stove, and a refrigerator. The result of the three studies that catalogued plants in the community were stored in the pharmacy’s empty building.

Upon seeing the empty pharmacy, I was both encouraged and dismayed. It was clear that at some point, the women of the community had invested a great deal of energy into the
functioning of the pharmacy. They had attempted to make the pharmacy their own, separate from that of ATAVIDA, for instance, which mostly served the general public. In addition to plants, the pharmacy acted as a training space for bioenergetics healing, a faith-based practice that involves diagnosing illnesses via an amulet and the touch of the healer him or herself. The women had requested that classes be held around bioenergetics, and three of the young girls in the community began to learn the techniques.

When I asked women of the community why the pharmacy wasn’t functioning anymore, the answer was simple. They said that it was much easier to create the remedies at home as they were needed than create them in bulk and store them in the pharmacy. This was especially true

Image 5.5 Dona Lene’s own collection of andiroba, used to make a medicinal oil.
given the size of the community, and the fact that just one community member (Dona Lene) more often than not singularly made remedies for the rest of the community.

The pharmacy initiative had originally been proposed because of the lack of biomedical care in and around Pimenteira. There were no clinics in the community itself, but healthcare services existed in the center of the municipality. Young women from the community had to travel up to two hours to the nearest larger city, Capanema, in order to give birth since the *parteiras* in the community various other responsibilities. A celebrated travelling Italian doctor came to the community at most once a year, and other doctors came by randomly throughout the year. One travelling nurse attended several other communities in the area, both within Santa Luzia and outside of Santa Luzia.

The eventual dismantling of the pharmacy and the infrequency at which biomedical professionals visited the community put Dona Lene in an invaluable position in the community. Each of the three times I stayed at her house, individuals and/or families from different communities came to visit her for a consultation and to pick up phytotherapeutics. Dona Lene, in fact, had a separate refrigerator outside of the house where she stored remedies for visitors (Figure 5.6 and 5.7). Although she no longer worked as a *parteira*, she still gave gynecological advice to women informally and often.
Image 5.6 Dona Lene’s storage for her phytotherapeutics.

Image 5.7 Dona Lene’s selection of phytotherapeutics at her home.
Alternative Pharmaceutical Spaces

The other side of Dona Lene’s work as a healer was her participation in ATAVIDA, which existed as both an educational space and a production space. It was with ATAVIDA that the majority of researchers and projects associated with the cooperative worked. After, at the time, four years of existence the phytotherapeutics that Dona Lene, Helena, and other women created at ATAVIDA were nearly in line with the regulations outlined by the Brazilian Pharmacopoeia, although certain materials (such as glass containers) were too expensive for the organization to keep in stock.

But my visits to ATAVIDA were telling. It did, indeed, represent a stark contrast to the work performed by women for Natura, for example, which was limited to either being a consultant and selling products, or in hazardous conditions collecting murumuru seeds (in the case of Pimenteira). Women were involved in all steps of the production of phytotherapeutics, from the extraction of oils to inventory and accounting. All of the women involved in ATAVIDA held a stake in the quality of the final product, as well as in the selling of the products to the public.

However, members of ATAVIDA such as Dona Lene and her counterpart Dona Heloísa had limited time to spend at the headquarters. Dona Lene was almost always travelling, and towards the end of my fieldwork began to work for the municipality of Santa Luzia. She continued to make phytotherapeutics, but mostly in her own home. The money that she gained from working at ATAVIDA simply was not enough to sustain herself or her family. Dona Heloísa, a nearly 70-year-old woman from another quilombola community, suffered a leg injury and could no longer work at ATAVIDA. She too held a vast knowledge of medicinal plants and
made medicines in her own time, but at a certain point working at ATAVIDA became too cumbersome.

The same could be said for many of the women who passed through ATAVIDA. Almost all had at least some knowledge of medicinal plants and made their own products for their families and/or communities. But creating phytotherapeutics in large volume for public consumption required a different kind of commitment that was primarily economic in that it required labor that did not offer adequate payoff. Therefore, although the cooperative, ATAVIDA, and the Centro Popular Biosaude Pornusena all promoted the preservation of knowledge around biodiversity, solidarity economics, and a feminist economic structure, ultimately it was difficult for the women in Pimenteira and the surrounding communities to solely rely on that one network of organizations and had to move between various spaces to take care of their health, economic, and political needs.

5.4 Conclusion

My impression of Santa Luzia upon my departure in July 2017 was that matters were very much unsettled, despite a sophisticated network of institutions supporting Pimenteira. By the time I had visited the community more than once, territoriality, bioprospecting, and initiatives around medicinal plants had all come together, each time in a way that surprised me. This was partly because every time I visited Pimenteira or talked to Helena, there was always an entirely new issue to be solved, and Helena, Bernardo, and Dona Lene were always coming up with new solutions that involved their institutional network and the extraction of natural resources.

Before my arrival for my last visit to Pimenteira, Dona Lene had already spoken with her nephew, who had become physically disabled in a motorcycle accident one year before about
continuing at least some of her work around medicinal plants. He was unable to walk without crutches, meaning that he could not perform many of the tasks expected of him in the community, such as farming and extracting fruits and nuts. He showed some interest in medicinal plants, and she asked that he work with me during my next visit. He and three other young adults from the community were getting ready to attend the cooperative’s ECRAMA school, and Helena suggested that the organizing of a medicinal plant garden on the community’s school grounds be the applied project of the group.

Despite offering a space for members to participate in the building of local economies, cooperatives are not always perfect egalitarian solutions to the exploitative labor practices that they were established to counter in that they run the risk of falling into familiar hierarchical patterns of labor and profit. As previously stated, the phytotherapeutic pharmacy in Pimenteira itself ultimately closed because the women of the community found it easier to simply make remedies as they were needed: There was only so much time and labor that they could offer to initiatives that seemingly did not directly benefit the community itself. It is for this reason, as well as the others described in this chapter, that the communities in this study create piecemeal political strategies to create resilience against exploitative systems.

I however argue, from the opposite perspective, that my last project with Pimenteira with Dona Lene’s nephew and ECRAMA, is a result of these piecemeal and at times imperfect strategies, and the continuation of a dynamic fight for territory that such strategies often promise. It is, after all, through the institutional structures of ECRAMA, the cooperative, and ATAVIDA that the preservation of traditional knowledge so valued by national and international policies around medicinal plants could be made possible through the creation of an intergenerational dialogue. Therefore, as institutional intermediaries, the cooperative and its associated
organizations were able to achieve what government agencies could not in communities. Yet still, the lack of government stability, and the strength of private enterprise (i.e. Natura), often created holes in the abilities of such organizations.

The case of Pimenteira illustrates the complexity of how the concept of black environmentality presents itself within quilombola communities. Organizing as a quilombola community would not have been the only option for Pimenteira, as I will portray in the next chapter on the community of Campo Grande. The extended family of Pimenteira had indigenous ancestry, some of whom lived in a recognized indigenous village nearby, and which they could have, at least in theory, claimed in order to gain political recognition. They could have also chosen to identify as a family farming community, which would have allowed them to gain profits as individual families and wouldn’t have required anthropological proof of community heritage and history. But choosing their identities based on their undoubtable African descent – that is, as quilombola – would guarantee permanence on territory based on an already existent family cohesion.

However, that decision opened the door to other institutional bodies establishing political order in the community. It is the complex nexus of stipulations, expectations, and implications of quilombola recognition – that communities must earn and distribute money collectively, that they are seeking some kind of alternative way of livelihood outside of “modern” society, that there is some kind of preserved knowledge, and that there is relatively uncultivated land – that attracts these institutions and organizations into communities. In the presence of such actors, the residents of Pimenteira by and large negotiated their rights specifically as environmental subjects.
It is no coincidence that Natura chooses to work with quilombola communities. Pimenteira offered an unadulterated supply of murumuru due to its ecology, which community members left uncultivated since the tree grew natively. Pimenteira and often times other quilombola communities, by definition, do not have an internal economic structure that could compete with or even challenge the company’s business model. Cooperativism seemed like a natural evolution from slavery, the subsequent middleman system, and the arrival of companies such as Natura, since it promised workers’ participation in labor decisions and a more horizontal power structure. It was an agricultural cooperative, COOMAR, that helped the community with bureaucratic difficulties around securing land rights, rather than a lawyer or an anthropologist, for instance. The community’s involvement in the cooperative, therefore, has benefits that go far beyond just selling goods. ECRAMA, the agroecological school associated with COOMAR, was one of the most viable educational options for youth in the community, even going so far as to employing youth from nearby communities in the region.

Medicinal plants factored into this environmentality in numerous ways. The coveted murumuru is as cosmetic as it is medicinal, in that Natura regulates its collection and production and makes claims towards its effects on bettering the body. COOMAR’s associated traditional medicine pharmacy, ATAVIDA, counted on the knowledge and labor of women from Pimenteira and other communities to create and sell phytotherapeutics. And finally, the healthcare initiatives within the community had all centered around medicinal plants and the community’s knowledge of medicinal plants, rather than making synthetic pharmaceuticals available or placing biomedical healthcare professionals in regular roles in the community.

Yet I argue that the environmentality negotiated through projects around medicinal plants acts as an insufficient proxy for crucial rights such as economic development and healthcare. As
Community members noted, hyper-focusing on the collection of *murumuru* for Natura is not profitable, safe, or economically sustainable. Although COOMAR’s ATAVIDA offered a crucial space of exchange and was a catalyst for several community projects, the pharmacy itself was not necessarily a sustainable way for the women involved to be compensated for the labor that they put into it. And although medicinal plants are commonly used as a healthcare solution within Pimenteira, they do not quite form the *system* that biomedical care does (even when a physical center with equipment is build), especially given that Dona Lene often acted as a sole healer in the community.

The next two chapters offer variations of this model of black environmentality, which include the presence (and absence) of different institutional actors, and different stakes and priorities. Pimenteira was unique in that it was the only community in this ethnography that was involved with a cooperative, as well as the only community that worked directly with Natura as a supplier. However, one of the major common factors in this variation is to what extent communities adopt a *quilombola* legal structure, which in both cases, like Pimenteira, ended up affected their relationships to medicinal plants.
 CHAPTER 6

BAIÃO: ECOLOGICAL PROXIMITY AND POLITICAL DISTANCE

The community of Campo Grande in the municipality of Baião was the last community that my research networks introduced me to. It was one of 21 quilombola communities in Baião, which had an estimated population of over 46,000 inhabitants. My initial meeting upon arriving in Pará in 2017 with the two CEDENPA representatives most immediately led to my work with the community of Pimenteira in Santa Luzia with Helena. I began to see the other representative, Rafaela, at events around Belém and soon learned that her work involved visiting quilombola communities throughout the state and offering political support to them. In addition to being a quilombola activist and teacher, she was also an artist who designed Afro-Brazilian themed clothing and sold it at events and fairs, which made her a ubiquitous figure that connected various spaces and networks. One such event was a national meeting in Belém of quilombola communities, where she told me about a recent trip she took to Baião. She told me, simply, that there was a well-regarded herbalist in Campo Grande and asked if I would be interested in visiting the community. Uncertain as to whether she would be able to accompany me on the trip, she joked “You don’t have a fear of riding in boats, do you?”

The boat ride, it turned out, was the least complicated step in the process of arriving to Campo Grande. She passed me the contact information of the president of Campo Grande’s quilombola association, José. She told me that he was in Belém for a few days and staying with his daughter and her family, and that I should meet with him to coordinate a trip to the
community. I called him to introduce myself and get the address of where he was staying in Belém, which was in a peripheral neighborhood in the far northern part of the city. The trip to his daughter’s house felt like a trip to a quilombo itself: The neighborhood was characteristically periférico, peripheral, with inconsistent infrastructure and narrow, winding residential roads unmarked by street signs. Compared to other neighborhoods in Belém, the map on my phone was much more inaccurate for this neighborhood, and José ended up having to guide me verbally by phone. His daughter’s family lived in a gated subdivision, and their house was filled with what might be considered modern decorative touches such as glass and tile flooring. A large, five-year-old indoor shopping mall on the outskirts of the neighborhood was a reminder of its recent socioeconomic changes.

When I finally arrived at his daughter’s house, José greeted me in a serious tone, and we immediately began to converse on two couches in the living room about the history of Campo Grande. José was witty but guarded, often throwing out short, sharp comments that held more emotion and weight than they seemed to hold on the surface. It was, to say the least, a change of pace and scenery compared to my introduction to other quilombola communities. His daughter and her family walked in and out of the house only slightly acknowledging my presence, seemingly accustomed to visitors. There was no extended family network around that was entrenched in the quilombola community’s physical location, and there was nothing to show about the community (neither directly nor indirectly), so much so that it felt as if a significant part of the community existed outside of the community itself. Unlike my experiences in Santa Luzia and Oriximiná, I learned most of the historical and demographic information that may appear on a factsheet of Campo Grande through my initial conversation with José at his daughter’s house, rather than within the territory of the community. It was obvious, like leaders
of other communities, that he had told the story of Campo Grande dozens of times before. But the physical displacement of the story of the community underscored just how well José singlehandedly told and delivered the story of the community, especially without the chiming in of other members, which I often saw in other communities. I would soon learn that he was, in fact, a pillar of the community, the one who constantly reminded and persuaded the community of its unity at a time when many in the community did not want to see themselves as such under a quilombola rubric.

I learned during that initial meeting that Campo Grande was quite large, with around 300 households. He told me about the community’s economic strongholds: cassava, rice, and other smaller crops that individual families sold. Campo Grande, like communities in Santa Luzia and Oriximiná, which will be discussed in Chapter 7, had a history of interactions with indigenous groups in the region. He said that there were conflicts between indigenous groups and quilombos in the early 20th century, but that many of the families in the community had mixed with indigenous groups. “My parents and grandparents were negro negro. I don’t know what happened,” he joked as he talked about the phenotypical variations within his own immediate family and offspring.

It was clear that there was an ideological shift occurring from a black, quilombo past to a more mixed present and future that would possibly not include a quilombola self-identity, at least in the way that it has been approached in public policies. Campo Grande had been fighting since 1999 to gain political recognition and land rights. It had held political recognition through Fundação Palmares since 2006, over a decade, but was still awaiting a land title. When I asked what exactly the issue had been in receiving these rights, José argued that there was a disagreement in the community around an individualistic model of land rights and a collective
model. In the individual model of land rights, community members and families would be able to retain whatever profit they made from materials collected from their plots. In a collective model, profits would have to be funneled through the quilombola community association, since the land would technically be owned by the community as a whole, and not a single person or family. He mentioned that, on the external side of the territorial rights battle in the region, many of the ribeirinha communities, most of whom, like Campo Grande, heavily relied on fishing for their income in the region, had begun to claim quilombola identities, raising questions about how a “true” quilombola could be defined. In José’s definition, the original quilombos were not established along the river but in the forest, since they wanted to be as hidden as possible.

José had already met with leaders from Oriximiná, who helped him in Campo Grande’s process of trying to gain territorial rights. Oriximiná, he argued, benefitted from the early support of the São Paulo based NGO Pró-Índio (which I will discuss in more depth in the next chapter). But now, communities were having to negotiate their territorial rights at the state level through governmental institutions (rather than federal), which in Pará particularly had become a complicated fight given the various organizational and institutional actors interested in using and owning land in Pará. Politicians in Pará had the reputation of favoring large-scale environmental projects, as well as large-scale farmers, which more often than not threatened both the lands and the livelihoods of traditional communities.

In relation to these complications with territorial rights, the community was also economically in a bind. The community was upstream from the Tucurui hydroelectric project, which José said had negatively affected the quantity and quality of fish that made its way to the community. The community as a whole could no longer dependably rely on fish as a source of income, and José argued they could also no longer rely on the prospect of gaining land rights,
especially since changes in government administrations often created a climate of precarity in terms of ensuring rights for traditional peoples.

At various moments throughout our initial encounter, he mentioned that he was having trouble seeing and that his vision was progressively worsening, which in that moment seemed to exacerbate his overall exhaustion around the issue of land rights. It also led naturally into a conversation about his wife, Dona Patricia, who was the healer that Rafaela initially told me about. He told me that she was regularly prescribing remedies for him and others in the community, and that she had already worked with researchers and educators that had come to the community interested in medicinal plants, including one Dutch researcher just a few years prior. José said that there had been several smaller initiatives and projects aimed at incentivizing the preservation of traditional knowledge in the community, but that “the government [was] practically incentivizing the opposite,” particularly referencing an overall push towards biomedicine and a reliance on synthetic pharmaceuticals. I would learn that Campo Grande felt that push in a painful way. While the government focused on expanding biomedical care to rural communities, extensive and specialized biomedical care had not yet arrived in Campo Grande, leaving the population dependent (at least ideologically) on biomedical care in a space where it almost did not exist.

The contrasting imageries of a quilombola community, an urban periphery, and aspirational economic upward mobility, along with José’s sheer exhaustion, foreshadowed the story of Campo Grande that I would soon witness. Campo Grande existed in a seemingly directionless oscillation between government recognition (which, as a quilombola community, implied a type of freedom) and establishing and maintaining the possibility of autonomous institutions and networks that not being legally marked as quilombola offered. The community’s
interest in organizing around medicinal plants waxed and waned around such conversations related to autonomy and political rights, and my presence as a researcher in the community ultimately acted as an impetus for this interest. While I conducted research in the community, community members organized workshops in an attempt to establish a traditional medicine pharmacy, and a Brazilian researcher was trying to stimulate the community’s fishing economy through the cultivation of an exotic (i.e., non-native) peanut, highlighting the experimental nature of the community’s engagements with medicinal plants.

6.1 Campo Grande as Villa, Campo Grande as Quilombola

Arriving to the community became an entirely different endeavor than arriving to meet with José, and Campo Grande was unlike any quilombola community that I had seen up to that point. The route from Belém to Baião and then to Campo Grande was well-organized by community members. I was to take the earliest bus from the bus station in Belém, at 6 a.m., to Baião in order to catch the boat to the community, which left from the administrative center of Baião daily at noon. The bus ride from Baião to Belém was around four and a half hours, and motorcycle taxis were waiting at the bus station to immediately take people directly to the boat dock, no more than a five-minute ride through the city’s center.

There were a few members of Campo Grande who had their own boats large enough to carry around 20 people and cargo (mostly food, household goods, and products to resell), and they charged around 10 reais per person each way. On and around the boat, people, including community members, sold snacks and popsicles, which passengers bought without second thought for their trip. During my first trip to Campo Grande, I noticed how nonfamilial interactions seemed. My initial impression was that it was probably clear that I was an outsider to the community, since I was alone and did not speak to anyone on the boat, no one openly
wondered or questioned who I was, why I was visiting, or who I was going to visit. In fact, no one addressed me directly and I received no extended questioning stares. It was not at all as if I was encroaching on their extended family or on their territory. Conversation on the boat flowed comfortably and familiarly, although there were casual threads throughout the conversation of people trying to decipher relationships and connections to one another. I learned later that my physical appearance was much like other young women in the community, as numerous people in the community would come up to me and simply ask “Where is your mother?” or “Where is your aunt?”, assuming that I was the daughter or niece of someone in the community and perhaps pointing to the sheer size of the community. When we arrived in Campo Grande around two hours later, I simply asked where José lived and a female community member led me to his house, again without asking who I was or about my intentions in the community.

The community itself was extensive both in size and diversity. There were both small, wood framed houses and large, two-story houses made of a stucco material. There was a plaza at the entrance of the community that was so neatly built and arranged that it closely resembled a smaller version Baião’s own plaza. There were several congregations of churches within the community, including Catholic, Baptist, and Seventh Day Adventist. Several families, who were directly of quilombola descent and relatives of the Campo Grande residents, but were not part of the community itself in terms of its physical limits, had larger plots of land on the outskirts of the community, where they were able to practice horticulture and extract products from their land to sell.

*The Economy of Campo Grande*

But what immediately struck me about the community, especially in comparison to other quilombola communities in this study and that I visited, was how organized and particular its
internal economy was around the needs of community members and, as José pointed out, how that economy was based on individual endeavors. The paid transportation network that I described above to the community was a prime example of that economy. In Pimenteira, for instance, the main mode of transportation into the community was a public school bus that the city provided free of cost. In Oriximiná, families and quilombola community associations had their own motor boats to arrive to the communities, and my attempt to pay Marina’s family for gas resulted in an unrelenting back-and-forth which ultimately resulted in them refusing the money. The only other form of transportation to the community was by a free ferry, and from the ferry one would have to drive around one hour on a dirt highway to arrive to the community. The ferry’s schedule, however, was not synced to that of the bus to and from Belém. The 10-real motor boat, therefore, was the most convenient option for Campo Grande residents.

Campo Grande had several small stores, owned by individuals and their families, that sold groceries, personal hygiene products, school supplies, and other basic items. Some families sold snacks and pastries from their houses, and many women sold Natura products. There were several families that offered services such as tailoring and party planning. While I was in Campo Grande, I stayed at José and Dona Patricia’s house, where they lived with their daughter, her husband, and their three children, all of whom were under 10 years old. During my time there, it was clear that their livelihoods were dependent on this monetary-based economic system, especially in comparison to communities in Santa Luzia and Oriximiná, who hardly spent money within the communities themselves. Throughout the day, the children would ask for money to buy popsicles at the nearest store, which the owner sold for 50 centavos each. Their neighbor across the street had wireless internet and at times charged two reais per day for neighbors around him to use it. As I walked through the community, I saw numerous houses that offered
access to wireless internet and printing for a small fee, as well as houses that offered printing and copying services. The quilombola association’s headquarters in the community also offered wired internet access and printing. These private wireless internet services, however, were crucial because there was only intermittent cell phone service in the community, depending on one’s cell phone provider, and the messaging application WhatsApp, which could function with a wireless internet connection in the absence of a cell phone connection, was by far the most popular means of communication.

The autonomy formed by this informal economic system looked much different from the notion of autonomy upheld by quilombola legislation, which favored a more collective model of ownership and wealth distribution. The economy in Campo Grande was instead built around flexibility. Many of the store owners had an informal credit system, and the two-real per day wireless internet was a very loosely enforced subscription, especially when the internet connection was not strong. Still, it seemed like everyone and every family in the community that had some kind of service to offer carefully guarded their respective service, and community members took great care to ensure that people were paid for those services.

Healthcare in Campo Grande

The community’s apparent strands of economic autonomy were necessary where the government, either municipal, state, or federal, had not been present. However, the spirit of economic autonomy had not been mirrored in the community’s efforts towards healthcare autonomy, which Dona Patricia had become a vocal proponent of. In Santa Luzia and Oriximiná, NGOs, researchers, and private corporations fostered various kinds of approaches to organizing socially and/or politically around plants as objects of value (either monetarily or medicinally), which gave communities at least some sense of autonomy, or at least desired autonomy, over
their knowledge and use of plants in their territories. In Campo Grande there were no large-scale bioprospecting efforts happening in the community and a series of failed efforts to organize around medicinal plants continually broke that sense of autonomy.

Alongside this absence of a sense of medical autonomy, there were few healthcare services provided by the government within the community itself, although significantly more than in Pimenteira and the communities of Oriximiná. Community members often regularly went outside of the community to receive healthcare. There was a hospital in the city of Baião where residents of the community went for more specialized care and examinations. And, as Dona Patricia and the other women of the community would later tell me, members of the community went as far as São Paulo to receive care, especially surgeries, which is a three-and-a-half-hour plane ride from Belém, if one is able to book a direct flight. Therefore, illnesses could easily become the main focus of one’s concerns due to the lengths at times taken to receive care, but unlike monetary concerns, residents had been treating healthcare as if it was out of reach of the solutions that could be attempted within the community itself.

There were also several individuals who were constantly coming in and out of the community offering healthcare services. There was a large, newly built clinic in the community that was staffed full-time by a nurse and contained basic medications for common conditions such as high blood pressure and the flu. However, there was no doctor that lived in the community and staffed the clinic full-time. Instead, the most frequently visiting doctor in Campo Grande was Cuban and part of the Mais Médicos program, only having arrived in late 2017. He stayed for a few days at a time, offering consultations for community residents. Other more specialized doctors only went to the community once or twice a year, staying for a few weeks at a time.
Another intermittent visitor was a man who sold industrialized phytotherapeutics in the form of large, bottled syrups called *garrafadas*, made from medicinal plants and some kind of alcohol, such as *cachaça* or wine, for 20 reais each. The particular *garrafada* that this man sold was called *Aguardente Alemã*, or German Aguardiente, a popular folk recipe of *garrafada* which uses the plant *jalapa* as its primary ingredient and had been commercialized by various manufacturers. My impression of him was deeply impersonal, a product of how community members themselves described him to me. I never saw him, although he had visited the community while I was there, and any time someone mentioned him, they never knew his name. However, several of my interlocutors repeatedly iterated some key facts about him that they had picked up: that he lived in, southward on the river, and travelled throughout the region selling these *garrafadas* to communities; that he most certainly was not any kind of medical professional, and did not have any medical training, but rather was just a salesman and gave no advice on how to use the *garrafadas*; that the *garrafadas* were manufactured at a factory in the state of Ceará. He came to the community regularly, and his products were widely bought by residents.

The case of the traveling *garrafada* salesman points to a few indicative realities regarding the use of traditional medicine in Campo Grande. For one, *garrafadas* are some of the most common forms of traditional medicine in rural communities and towns, and most of the time community members themselves made the *garrafadas* or they could be bought at local fairs or small stores. They are popular because just one is said to be effective against a variety of conditions, most of which are chronic (such as diabetes, irregular menstruation, and high blood pressure), and because they last for months when stored in a refrigerator (the *Aguardente Alemã* that the traveling salesman sold was valid for four years after manufacturing date). This makes
them easily accessible cure-alls that most certainly did not have to be consumed as a commercialized product by the community. They did not, for example, have to be shipped in from Ceará, three states to the southeast of Pará and in a completely different biome, the extremely dry but biologically unique caatinga region, when similar ingredients for garrafadas were readily found in the community itself. But, as Dona Patricia would often point out to me, people in Campo Grande were accustomed to paying for medication and healthcare. The Aguardente Alemã sold in the community was anything but homemade. It had been marked as an exempted dietary product by the Ministry of Health, which means that it would be exempted from regulations that pertain to pharmaceutical products, but would still fall under less strict regulatory measures. Some of the value placed on the garrafadas sold by this man undoubtedly came from the fact that they were more regulated than those that would be made in the community, having been treated and marketed as if they were pharmaceuticals, and the brand recognition that he had constructed over time that justified it having to come from outside of the community and the state. Dona Patricia mentioned to me at one point during my visit that she had just spent a total of 150 reais for one order, explaining that she bought them to get the recipes and to later use the bottles, highlighting the authority that the products carried in the community.

The healthcare landscape of Campo Grande was therefore in line with much of the other political economic dynamics of the community in that in the absence of government programs and support there was a monetary economy built around basic services largely outside of the purview of government attention. The community had not quite adopted a shared political narrative around traditional medicine, as they had not been placed under the institutional pressure that communities in Santa Luzia and Oriximiná had (i.e., by Natura, researchers, and local
NGOs) to consider the political ramifications of the knowledge they held. Dona Patricia had however singlehandedly considered the political economic ramifications of the knowledge of medicinal plants held by communities, but also the community’s reliance on biomedical institutions.

6.2 The Donas of Campo Grande and Their Plants

Dona Patricia had a definite and prominent place in Campo Grande as a healer, but also as a political leader. I first met Dona Patricia immediately when I arrived to her and José’s house, and I had only seen her constantly on the move since that moment. Not only did Dona Patricia maintain her own small garden, which itself contained what I counted were over 20 medicinal plants at any given time, but she also had her own small plantation where she performed much heavier work with her crops and hunted animals several times a week. On this small plantation Dona Patricia had a much larger and diverse collection medicinal plants, which she used alongside the medicinal plants from her garden to create teas, garrafadas, and tinctures for individuals from the community and from outside of it.

Dona Patricia was therefore also a pillar in the community, and her work was tireless. She was a midwife and had helped birth numerous babies in the community. I visited the community twice, and during those visits Dona Patricia made consultations at least once a day, which included both health advice and making remedies for visitors, some of whom I saw on multiple occasions. She was in her early 60s, and joined the community when she married José around 30 years prior. She herself was not from a quilombola community, but from a small city not far up the river, but in a different region of the state.

When I arrived in the community, she and her daughter Nat, who was just approaching 30 years old, had me by their sides at all times. Dona Patricia took me around her garden, explaining
the uses of her plants to me and sprinkling parts of her personal story in her descriptions of the plants. Nat also had a deep interest in plants, what she called “a gift to grow plants,” but had not yet taken on the authority that her mother had. Still, she often named plants to me and explained some of each plant’s uses.

At some point early on in our interactions, Dona Patricia began to talk to me about the series of projects that researchers and informal instructors had tried to mount in the community. Dona Patricia listed the projects as if they were endless, disconnected, and hopeless, projects around beekeeping, soap making, basket weaving, pottery, fishing, and of course medicinal plants. She said that although community members, especially women, had enjoyed participating in the workshops, the women hardly ever continued developing the skills that they learned in the workshops for profit.

Planning a Phytotherapy Workshop

This, I would eventually learn, was a warning for me to now be so optimistic about the results of any project that I may develop in the community. Dona Patricia immediately put me into the category of “teacher” as she had all of the workshop instructors before me, rather than researcher there solely to gather information. When she introduced me to people in the community, she called me, Professora Kerri, Teacher Kerri, and they accordingly asked what I would be teaching about, which automatically pushed me into a more active role for my research. But ultimately, it was Dona Patricia who was enthusiastic, although subtly, about a possible workshop around the production of phytotherapeutics, and it was clear that she had already mentally planned how the workshop would be.

After two days of talking with Dona Patricia and Nat, and them introducing me to plants around their house, Dona Patricia began to introduce me to other women in the community who
had their own gardens and knew about medicinal plants. While introducing me to the women, she slowly began to coordinate a meeting with all of them. We would go to a woman’s house, the woman would show me around her garden, and Dona Patricia would then say something along the lines of “We are going to have a meeting on Thursday at 2 p.m. Bring a few plants from your garden and some empty bottles.” to each woman.

While going to each house, it was obvious what the strengths of each woman and her garden were. There was Dona Isete, the wife of the coordinator of the *quilombola* association, who also married into the community and who was just as enthusiastic as Dona Patricia about having a meeting around medicinal plants. Her garden had succulents, cacti, and a variety of culinary and scented herbs. She was sharply political, constantly criticizing how the *quilombola* association was being run and laying out plans for future community projects and endeavors.

There was Dona Lorena, in her early 30s, who had a number of fruit trees on her property, many of whose leaves were used medicinally in the community. There was Dona Clara, also in her early 30s, who was married to Dona Patricia’s son and lived on a large property directly outside of the community and had a plethora of medicinal plants, crops, and fruit trees. There was Dona Eliane, who had married into the community but was widowed, and had a number of cacao trees on her property. There was Dona Lene, who had a near-encyclopedic memory of the names and uses of plants, but preferred to quietly stay in the background throughout our interactions around and during the meeting. Dona Lene ended up being the group’s *de facto* secretary, recording the names and uses of plants mentioned by women.

In total, there were seven women who attended the first meeting, all of whom had varying levels of experience using medicinal plants in a collective way. In fact there had already been at least three attempts at projects around medicinal plants in the community. The first was
organized by a Dutch researcher, who had conducted an ethnobotanical study on the knowledge held in the community. When I arrived in the community, Dona Patricia and José said that they had lost the contact of this researcher and had not received the results of the study. The second was an attempt to create a community garden, which would include medicinal plants. A lack of interest by community members left the project to the side. Almost all of the women in the community had their own home gardens, and the maintenance of a separate shared garden seemed almost redundant and out of character for the community, which maintained few shared spaces in the first place.

Dona Patricia (who at this point was completely spearheading the majority of projects that arrived in the community) but not any of the other women in Campo Grande, had experience with the third project, a traditional medicine pharmacy that was organized in Baião and included

![Figure 6.1 Ingredients used for the phytotherapeutics during the workshop.](image)
women from various rural communities in the municipality. The project was supported by the municipality’s Secretary of Health, and included a group of women trained in making and administering plant-based medicines throughout Baião. This project, however, proved to be completely unfeasible. During the rainy season, it was nearly impossible to travel from interior locations to the center of Baião on the municipality’s dirt roads for training and production, and even in the dry season transportation by motorcycle was too expensive for the participants (20 reais each way). The materials, especially if bought new, proved to be too expensive. The women would reuse glass pharmaceutical bottles after boiling them in hot water.
These experiences, collectively, led to an organic meeting that became a series of three workshops over my two visits to Campo Grande. The workshops were held in the quilombola association’s headquarters, which had a kitchen space, two meeting spaces, and a computer lab. There seemed to be a dormant idea of a traditional medicine pharmacy, perhaps the accumulation of ideas presented by previous projects, and the women immediately began to plan what such a pharmacy may look like. Their interactions with me were aspirational. Without my asking, they conducted research alongside me at the workshops, taking notes, asking one another questions, and beginning to imagine what their own phytotherapeutic space would look like. During the workshop they made phytotherapeutics and shared information with one another, using empty plastic soda bottles and plants gathered from their own gardens and from the surrounding forested areas. The result of the workshops was a name for their pharmacy (Grupo de Ervas Medicinais das Mulheres Quilombolas de Campo Grande, Medicinal Herb Group of the Quilombola Women of Campo Grande), at least a dozen phytotherapeutics, and a register of the plants and recipes used to create the phytotherapeutics (Images 6.1 and 6.2).

Dona Patricia set the tone for the workshops, telling the women that there was no reason for them to be spending so much money on basic medications, trying to convince them that collectively they held a great deal of knowledge, and that it would only take a few hours a week to erect a fully running traditional medicine pharmacy for the community. During the workshops, Dona Patricia repeatedly and assertively posed the question “What do you think will happen when I die and you all need medicine?” to the other women.

While the women planned what a community-run phytotherapeutic pharmacy would look like, their preferences indicated the particularities of the community and completely out of the purview of a governmental structure around medicinal plants. They recounted stories of common
sicknesses among widowed women, the increased prevalence of malaria in the community, and a rampant eye infection going through the community. These conversations were epidemiological in nature in a way that epidemiological research could not have encompassed. The women analyzed all of the factors that could have led to certain people being affected by certain conditions: how close someone’s house was to the river (and therefore how common mosquitos were), how often someone stayed in their house or travelled to Baião or Belém, if a woman had miscarriages, if a woman’s husband was sexually impotent, the behavior and/or misbehavior of a woman’s children, changes in the quality of water, patterns of rainfall, etc. If an epidemiological research had arrived in the community, by the time they would have collected data, published research, and started to think of a solution or treatment, the women in this group most likely would have scoped out and alleviated the issue long before the researcher. As a researcher travelling to the region, for example, I was only aware of a surge in malaria through the women, and not through any international public health warnings or precautions. I was urged to get a yellow fever shot by public health officials, which at the time mostly concentrated in the southern part of Brazil and not in the Amazon region.

One particular story told collectively by the women in the workshop illustrates well the particular public health conditions of residents of the community. A community fisherman’s hook cut through his hand in a gruesome accident, but the fisherman did not want to go to the city center of Baião to get treated because he was fishing during the off-season. Regulations around the fishing season had shifted after the building of the Tucuruí dam, and fishing during the off-season (which was common in the community, where many families relied on selling fish for their livelihood) was punishable by fine. The man ended up suffering from an infection and was treated by various women in the community.
The women were interested in producing phytotherapeutics in the ways they had been used to: *garrafadas* made with wine, tinctures made with cachaca or grain alcohol, pomades made with lotion, and simple infusions and teas. At the time, they did not have pharmaceutical-grade equipment and supplies, and were using items from their kitchens. They discussed setting a price for the pharmaceuticals, which they argued should be low for community members and higher at fairs and other public spaces outside of the community. They argued for that it was a priority to use fresh plants rather than dry plants, because the properties of the plants would be lost in the drying process. They preferred building a community medicinal plant garden, where a large variety of plants would be available, rather than women having to seek out certain species. The method of taking their phytotherapeutics, in comparison to how synthetic pharmaceuticals are prescribed, was that each remedy could be used for a multitude of purposes, especially if an underlying issue (for example, liver problems) caused a number of different symptoms. A general antibiotic or remedy for anemia could, for instance, treat a variety of symptoms.

**Gender and Medical Authority**

Shifting and already-shifted gender roles repeatedly presented themselves in conversations around the planned pharmacy. By far, the most pressing conditions encountered by the women were those around women’s reproductive health, and three of the women in the group were *parteiras*. The women viewed it as in their best interest to have this gendered divide, and it became a way to concentrate power in the presence of numerous weak and exploitative institutions. The previous group of women working with phytotherapeutics in Baião, for instance, ultimately did not gain any money from their work after a man who was to manage their money ended up taking all of the money for himself. The idea that women were working more than men, and that men were benefitting from that work, was common among the group.
As Dona Isete group stated during the workshop: “Men in the community don’t do anything these days and want to take the role of the woman.” The women viewed organizing politically around a project that would generate income as a necessary and perhaps inevitable reversal of gender roles.

There were tensions around the legitimacy and authority of various medical actors in Campo Grande. One of the most prevalent sentiments in Campo Grande specifically was that of the danger posed by medical institutions, and that medical professionals (and other healers) were more concerned with profit than care. Dona Patricia explained that people in the community went as far as São Paulo for specialized care, and she argued that the stress and time inherent in traveling to receive care is more detrimental to the health of individuals than not receiving care at all. She and the other women of the group recounted stories of unnecessary surgeries and expensive treatments, regardless of the availability of SUS, which in theory would provide free and accessible care for all Brazilians. The women also told stories of adverse side effects caused by the garrafadas sold by sales representatives, who do not have medical training. They speculated that these garrafadas included ingredients not listed on the ingredient label, which could put users at risk.

According to the women, many community members also held fear of traditional remedies, not trusting them in comparison to biomedical healthcare and synthetic pharmaceuticals. However the women, collectively, were informed by a variety of sources. They mentioned learning information from their mothers and grandmothers, books, Globo (the largest national broadcasting corporation), from doctors and nurses, and from other community members. They collected plants not only from their own property, but were constantly receiving plants from visitors outside of the community, municipality, and state.
Dona Patricia described much of her practice as attending to the mistakes of other healthcare providers: the doctors, the sellers of *garrafadas*, and spiritual healers (*curandeiros* and *benzendeiros*, who she also labelled as dangerous). While I stayed at her house, she received visits at least once per day (both by phone and in person) from individuals and families looking for consultations, never charging money for her services.

One story told was that of a woman who had a stomach worm that a doctor from Belém claimed only existed in children. Dona Patricia argued that the worm does not inherently only affect children, but that the only reason the worm usually affects children is because women have it and pass it on through breastmilk. Dona Patricia called the doctor to discuss his position, and she was met with resistance. The gendered aspect of their work is therefore crucial, because in comparison to doctors raised and trained in urban areas, the women have significantly more experience with the realities of health in rural areas, especially the health of other women and children. The women are also often on the front line of outbreaks, and can monitor the spread of diseases much more quickly than researchers or doctors that would have to arrive from outside the community and would only stay temporarily. Therefore, the women are often in the position of being advocates and witnesses in addition to just healers.

The women of the phytotherapeutic pharmacy group held strong opinions about the Cuban doctor that worked in their community, as well as the other Cuban doctors who practiced in the city center of Baião, and their abilities to provide adequate service. They mentioned that while he was in the process of learning Portuguese, it was difficult to understand him and for him to understand them. Moreover, he was not necessarily *part* of the community in that he did not live in the community fulltime. When asked if he was open to the use of medicinal plants, one woman said that he was still learning some species’ names, but that he seemed receptive and
already knew about some plants. They respected his position as a physician in the community, especially in comparison to other physicians whom the women had dealt with, but it was clear that their expertise and daily observations were much more tailored to the realities of the community than his. There was a handful of community health workers, including Dona Lorena, that began to work alongside the doctor and better orient him to the needs of the community.

6.3 Hope and Alternative Quilombola Futures

As enthusiastic and proactive as the women were to be participating in the workshop, the overall mood following the workshop was somewhat cautious. To them, there seemed to be various obstacles to the establishing and continuation of a traditional medicine pharmacy, mostly around the question of resources and continued interest of the participants. Whereas in Santa Luzia there was an entire institutional infrastructure around the existence of a traditional medicine pharmacy – whether one existed or not – Campo Grande did not have a cooperative or a network of producers and sellers to rely on. Even the existence of Natura in Santa Luzia set up expectations for a standard of pay and production which community members began to constantly reference in their organizing of new spaces of health care and economic development. This structure simply did not exist in a communal form in Campo Grande, and the women were going into the project blindly, but with clear goals as to how their pharmacy should run.

This caution, however, took an interesting turn when during my second visit to the community I was introduced to Flávio, a researcher from the state unit of the federal agency SENAR (National Service of Rural Learning, **Serviço Nacional de Aprendizagem Rural**). Flávio was from a rural town in the state of São Paulo, but had for decades lived in Pará and was currently living down the river in Tucuruí. He had been holding meetings to attempt to establish a community cooperative, supporting the idea that the community must diversify their means of
sustaining themselves independent of past or future quilombola legislation. When I arrived at Dona Patricia and José’s house for my second visit, there was a group of men constantly going in and out of the house. I was introduced to all of them only briefly at first, but soon learned that they were working alongside José and Flávio to create the cooperative.

These dynamics were telling. Although at that point the group of women was well-established, and they were even sharing the same space to hold meetings (the headquarters of the quilombola association), the two groups never crossed. Flávio, who was in his late 40s or early 50s, spoke with me at a distance, almost afraid to ask too much about my background. It wasn’t until my third day there, after a meeting with the women, that he began to speak more (albeit away from others in the community) about his project there.

Flávio began a project three years prior of cultivating a peanut of Peruvian origin that was high in omega-3 fatty acid. He argued that it could have a variety of lucrative uses in the community, especially for its production of fish. Although known to a few researchers throughout Brazil, this peanut was by no means a common introduced crop, and its introduction to Brazil seemed to be recent and quite purposeful at the hands of researchers. He had already worked with two universities in São Paulo to conduct studies proving the omega-3 content of the nut. He first wanted to test how well the peanut would grow in that climate, and several members of the community had been growing the peanut in their home gardens.

When I asked why he chose Campo Grande, Flávio argued that it was because the community is relatively isolated, and that the plant could grow without pollution or contamination. His vision, which potential cooperative members agreed with, was to produce an oil from this nut within the community itself, and either sell the oil or create products (e.g., cosmetics, animal feed, and foods). This would require erecting a small but sophisticated
production system with technical equipment in the community. He argued that companies such as Natura and Beraca (a Brazilian company that produces and sells base products to other cosmetics companies) normally use communities to gather crops, pay the communities for the raw materials, and profit off of products made from the materials. This would be different, he said, since the nut is not native to the region and would have to be cultivated by the community first for such companies to have interest. It was a seemingly perfect proposal, since the community would have more control over the profit gained from the crop and the production of the oil itself, and as Flávio said, the project would help with the “self-esteem” of the community.

Again, the meeting for the cooperative and the project included only men from the community. Upon learning about the women’s plans for a phytotherapeutic pharmacy, Flávio immediately began to connect the phytotherapeutic project with his own. During my conversation with him, he took out his laptop and began to show me academic studies on the peanut and talk about the possibility of producing the oil on a larger scale with institutional partnerships throughout Brazil.

Flávio did not present his project to the group of women, and the women for the most part stayed out of the discussion around the cooperative, although they held opinions about it. They unanimously supported the idea of a cooperative and knew the details of Flávio’s project, but were critical of the fact that it had not happened yet. When I mentioned the possibility of the women working with the cooperative, Dona Lorena began to criticize the fact that the project seemed to be strictly for men and that as an association they were not sharing information with the female leadership of the community. Separately, the women began to discuss the possibility of making cosmetics, such as skin creams and soaps, high in omega-3 in addition to phytotherapeutics. They noted that such cosmetics would require the same kinds of ingredients
that they would already be using to make the phytotherapeutics, such as butters, oils, raw plants, and conservatives, and that it would heighten their possibility of making a profit from their products, since they would be the only community in the region that would be offering products with added omega-3 oil.

The cultivation of the Peruvian peanut in Campo Grande also represented a possible way to secure land rights. Community members of Campo Grande had disagreements about a collective approach to land rights versus an individual one, but the solution to such internal conflicts was varied and did not directly swing in favor of Brazil’s laws around quilombola recognition. One community member, João, who was a leader in the community’s governmental organization, argued that because federal politics were so precarious, the community must focus on various streams of income to secure occupation on their land. One example of this precarity (that goes beyond quilombola legislation) is the building of the Tucuruí dam, built to the south of Campo Grande on the Tocantins river, which community members note drastically changed their local economy and livelihood which had previously been based on fishing. Environmental projects such as the Tucuruí dam often gravely affect nearby communities, even if the project is not built on community land itself, meaning that issues related to territorial rights are not dependent on a particular piece of territory itself. The quilombola law, therefore, could not guarantee protection of a lifestyle or traditional economy based on demarcated territory. Communities members recognized the need to be able to constantly recreate their economy in a way that was not solely reliant upon extracting resources from the land that they occupied.

6.4 Conclusion

Almost all of the community members that I spoke with argued that since the community did not yet have its land title, it was in a position to strengthen the internal economy of the
community through taking advantage of the fishing and agricultural market of the region. The women of the pharmacy were also thinking along such lines, as they planned on selling their remedies to those outside of the community and becoming competitive in the local market through the use of the omega-3 oil.

Dona Patricia’s hardly rhetorical question (“What do you think will happen when I die and you all need remedies?) to the women of Campo Grande is indicative of the healthcare landscape of the community specifically, and the region in general. Campo Grande is an example of a community where policies around medicinal plants, and policies around healthcare in general, simply do not reach. Even when such government initiatives occur, they are often inadequate (i.e., not frequent enough or financially inaccessible), forcing the community to scramble to find other sources of economic and political viability. According to the experiences of community members, the reality of the ecology of the community (involving, for example, fishing and bodily infections), was largely misunderstood and/or unacknowledged by government actors and policies. Campo Grande, as a result, became a territory of experimental short-term projects sponsored by NGOs, state and municipal agencies, and individual researchers and instructors.

Notable in the case of Campo Grande is how the community did not work within a network of other communities, especially compared to communities in Santa Luzia and Oriximiná. I could not, for example, appreciate how difficult phytotherapeutic initiatives were to maintain by one single community until I heard about stories of failed initiatives in Baião. In Baião specifically, the distance – both in terms of distance and frequency of interactions – between communities made it difficult to construct any kind of sustainable project. It was my intention to only visit one quilombola community in Baião, since coordinating transportation
between communities was no small feat. However, at the very end of my second trip to Campo Grande, I had to leave the community on a Sunday, when the community members do not offer the 10-real direct boat ride to Baião. I therefore had to take the ferry, which was one and a half hours by motorcycle from Campo Grande. The dirt highway to arrive to the ferry was particularly muddy that day, and the driver, who was the grandson of Dona Patricia, could not feasibly get me to the ferry on time. Luckily, he had an aunt, Dona Maria, who lived in the quilombola community closest to the ferry, and I was able to stay with her until the later ferry arrived. Her property was full of medicinal plants and fruit trees, and she spent the afternoon walking me around her lot. I mentioned to her that I had been meeting with some of the women in Campo Grande in order to plan a traditional medicine pharmacy, and she proceeded to tell me about yet another traditional medicine pharmacy initiative that she had participated in, which had also been dismantled because of logistical difficulties. She had met Dona Patricia several times (and was technically part of the same extended family), but she had a condition that made it difficult for her to walk and had not been able to go to Campo Grande much. Still, she told me that she wanted to participate in any future meetings that may occur in Campo Grande, and told me to pass the word along family networks for her to receive the news that there would be a meeting.

This, and other experiences recounted in this chapter, point to that fact that Campo Grande’s self-sufficiency became a double-edged sword. On the one hand, it led to a solid economic base on which to possibly grow the community, even if it did not follow a collective model. On the other hand, it led to a kind of self-isolation, where knowledge and resource exchange were difficult to maintain. Both are counter to both quilombola legislation and how the other quilombola communities in this study existed in practice, where collective quilombola
networks are essential to survival. In Campo Grande, it did not matter what policies around
traditional medicine and phytotherapy may have existed, because the way that the policies have
been crafted is nearly untranslatable to the reality of the community.

Campo Grande was the only community in this ethnography that included enough
residents who doubted the valued of being recognized as a quilombola community, or at least
doubted the value of having a collective social structure. Unlike Pimenteira, Campo Grande was
not and did not see itself as an extended family unit, and residents had developed its economy
outside of a collective model without the involvement of an outside or umbrella organization.
This more “pioneer” approach to quilombola politics (i.e., not necessarily wanting to adopt a
policy-oriented quilombola identity and practice) translated as a more experimental, and
autonomous, stance on environmental projects in the community.

When thinking about black environmentality in the case of Campo Grande, it is worth
remembering the constantly shifting politics around blackness and the environment that began as
early as the 16th century in Brazil, which for five centuries had not favored black territorial
and/or environmental autonomy. Quilombola communities have only been recognized since
1988 and have only really begun to gain widespread territorial rights in 2003. Black territorial
rights were young at the time of my research, and as José told me, quilombola territorial rights,
which Campo Grande had not yet secured, could be taken away at any given administration
change.

It is also worth noting the similarities in Pimenteira and Campo Grande around projects
related to medicinal plants. Both communities worked with medicinal plants towards an end
product that was not for them, but for the consumption of others. In the case of Campo Grande,
the Peruvian peanut that would, in theory, eventually lead to the harvesting of fish whose meat
would be high in omega-3 fatty acid and would be attractive to consumers. Actors in both communities had difficulties, but still at least some desire, to *organize* around medicinal plants, and both lacked the institutional and systemic support to do so (which again, goes far beyond merely establishing a space). Yet in both communities, the actual use of medicinal plants by community members was held up solidly due to the efforts of key women.

However, the case of Campo Grande demonstrates that black environmentality is not constructed upon policies and laws (in this case *quilombola* legislation) but created through a negotiation of survival through and around those policies and laws, which are often precarious. Black environmentality, for example, is not necessarily *collective*, but can very well be market-driven and individualistic. It also does not have to be hyperlocal, relying only on native species and what are perceived as “local” ecologies, as many national and international policies imply. It can involve the introduction of species from places that community members have never been, and where they do not profess to have had possible ancestors. In reference to medicinal plants specifically, black environmentality as conceived of according to policies can also mean not necessarily being self-sufficient. For example, one key difference between Campo Grande and Pimenteira was that community members were consuming industrialized phytotherapeutics that came from an entirely different state. The women in this study spent a significant amount of money on these phytotherapeutics, but they also reappropriated them in their own practices of using medicinal plants. “Autonomy” in the case of Campo Grande meant the ability of community members to direct their own laboratory, so to speak, within their territory in the absence of stable governmental and nongovernmental projects.

In the next chapter I describe a long-term phytotherapy project in Oriximiná, which had become a laboratory for a variety of actors from other parts of Brazil and from North
America. Whereas Pimenteira was characterized by the presence of several nongovernmental institutions and organizations, and Campo Grande was characterized by an absence of such institutions and organizations, in the next chapter I describe how the presence of governmental programs and research affected the use of medicinal plants in various quilombola communities in the municipality of Oriximiná.
The communities in Santa Luzia and Baião have, at least partially, attempted to establish and follow a model of weaving medicinal plants into political economic development strategies based on more established models of phytotherapeutic pharmacies, cooperative economics, and sociobiodiversity, all in relation to their rights as traditional communities. But by 2014, in Oriximiná this model had been well-established for around three decades, and the collective struggle of the quilombola communities in Oriximiná had become a reference for other traditional people groups throughout the region, including those in Santa Luzia and Baião.

In this final chapter, I recount the development of this model through 2014, when I visited Oriximiná, and in particular the complex outcome of a 13-year long series of increasingly organized phytotherapeutic initiatives. Whereas the communities of Pimenteira and Campo Grande very much saw their struggles as in the development stages (i.e., not yet granted land rights, not yet with an established cooperative structure, and not yet with a sustainable community medicinal plant pharmacy), quilombola communities in Oriximiná as a whole were well past established in terms of possessing an institutional and organizational structure around their territorial and political rights. Oriximiná, with nearly 64,000 inhabitants in 2010, has just over 150 communities designated as “traditional,” 34 of which are quilombola. Because of this large number of traditional communities, the city, located in the Baixo Amazonas, or Lower Amazon region, had for over 30 years (since right before the 1988 constitution) been on the radar
of federal, state, NGO, and private actors and institutions, and had been an illustrative battleground for issues around the land rights of traditional populations, large scale environmental projects, and government-sponsored social development research programs.

In addition to their lengthy and articulated relationship to a characteristically legal apparatus and understanding of territory, the quilombola communities of Oriximiná are notable in comparison to other Paraense quilombola communities in this study because of their historical geographical conditions, which are considerably more interior within the state (i.e., away from the Atlantic Ocean) and can only be reached by river. Compared to the other municipalities in this study and other municipalities in Brazil in general, the interior conditions of the traditional communities in Oriximiná are further magnified by the fact that the municipality is the fourth largest in the country in territorial area, at 107,603 km² (Departamento de Informática do SUS 2015). That is, there is a vast amount of space away from the municipal center of Oriximiná within which the communities have settled. The communities are settled not on the banks of the region’s larger Trombetas river, but rather on a network of smaller rivers that stem from the Trombetas river. The levels of these smaller rivers vary greatly by season, such that the fluvial routes used get to communities are constantly changing, and one must have knowledge of the geography of the region to arrive in the communities. Moreover, boat transportation to the communities must be arranged privately, as there are no commercial boats that go to them.

Historically, the difficulty in reaching Oriximiná’s quilombola communities served the communities’ goal of existing away from the reaches of enslavement and other exploitative labor practices. This does not mean, however, that the communities are or ever have been “isolated” or “remote,” especially given their extensive history of interactions with other traditional groups within and outside of the Baixo Amazonas region, researchers from other parts of Brazil, and
transnational companies whose foreign employees have intermittently settled and worked in the region. In other words, they are entrenched in a web of actors both from the region and outside of it, and those who have wanted to reach the communities have had no problem doing so, and vice versa.

The Brazilian actors who came from outside of the Amazon region that I encountered in Oriximiná were almost exclusively from the southeast region of the country, specifically from the cities of Rio de Janeiro and São Paulo. My experiences being introduced to Oriximiná both preceding and throughout my one and half months there, which came three years prior to my introduction to other communities and networks in Pará, perhaps highlight these interregional connections. By the time I first heard about Oriximiná in 2013, because of my time spent with Criola, I had become enmeshed in a network of healthcare professionals, researchers, and activists, many of which worked specifically with black communities and populations.

I had been living with the same family in Rio de Janeiro — a woman and her daughter, with other family members and friends periodically visiting and living in the house — since 2010. The woman, Joyce, was a black physician and activist who lectured and coordinated programs at Criola, and I often accompanied her to work. I became part of the professional and personal lives of the extended family, doing translation and interpretation work and performing administrative tasks on the one hand, and attending family gatherings on the other.

Periodically, I would accompany Pedro, the father of Joyce’s daughter and a psychiatric nurse, to his job at a public psychiatric hospital in the wealthier, southern part of Rio de Janeiro popularly referred to at IPUB (Institute of Psychiatry, o Instituto de Psiquiatria). This federal hospital was an interesting case study, as it was an experimental teaching hospital attached to the Federal University of Rio de Janeiro that incorporated various types of psychiatric treatment that
ranged from art therapy to electroconvulsive therapy, but explicitly incorporating a more social, non-biological approach to mental healthcare. In 2013, seeing that I was developing an interest in such non-biomedical healthcare practices, especially those which were state-supported, Pedro suggested that I speak with his sister, Ana. Also aware that I had been working with issues around racial inequality, he told me that Ana worked with quilombola communities and ervas (herbs), but not much else.

I had met all of Pedro’s siblings except Ana because she had lived in Pará for the previous 15 years. She happened to be briefly visiting Rio de Janeiro, where she was born and raised, and I was able to meet her in the family’s home one evening. The meeting became a near-formal presentation of her work in Oriximiná. I learned that she was a pharmacist trained in Rio de Janeiro, but that she was working as Oriximiná’s sanitation coordinator. Through a gallery of photos on her computer and a PowerPoint presentation, she described a mostly government-sponsored phytotherapy program that she was attempting to establish, which extended from her work around medicinal plants in quilombola communities. Ana’s presentation of her work was romantic in that she emphasized how rural and beautiful the region was, that the communities’ knowledge around traditional medicine needed to be “rescued,” that creating phytotherapeutics could become a source of income for the communities, and that women were the primary actors in the program. I was struck, and perhaps a little overwhelmed, at the sheer abundance of what she presented: an abundance of ideas, an abundance of knowledge, and an abundance of plants. The possibilities seemed limitless, and Pará seemed like a wonderland. It was a far cry from the health programs and politics that I had witnessed in Rio de Janeiro, marked by scarcity and a reliance on what activists argued were inadequate institutions.
To someone who had been working in the Amazon region, my combined interests in medicinal plants and the health of the black population, without question, translated to the traditional knowledge and practices of quilombola populations (as compared to in Rio de Janeiro, where it translated to work in candomblé terreiros), and Ana quickly insisted that I join her for her trip back to Oriximiná in a few weeks. I was both taken aback and intrigued by the ease at which she suggested that I work with her, which undoubtedly was a product of the relationship I had built with their family. Wouldn’t I need some kind of authorization, or at least specialized training and background to work with such populations? At the time, her line of work was a complete diversion from my own research interests, but her presentation made it seem like a natural fit: If I wanted to know anything about medicinal plants in Brazil, I had to visit the Amazon.

The trip was tellingly entirely unfeasible to make at the last minute, as I only later was fully able to contextualize. I was woefully unprepared for such a trip at the time, as my fieldwork up until that point had strictly been in an urban environment, and preparations to go to and from Pará were comparable to preparations traveling to an entirely different country. I needed different vaccinations, a different cell phone carrier, waterproof versions of almost all of my fieldwork gear, and water treatment supplies. The costs were prohibitively expensive and the time to arrive in and leave from Oriximiná was prohibitively long without prior coordination. Leaving Pará was more complicated than leaving Rio de Janeiro as well. While carrying wooden spoons made by quilombola community members in my checked luggage, I was questioned at the airport gate immediately before boarding about how well I knew the people who gave me the spoons, the name of the community from which I got them from, and what the spoons were made out of.
As I was to learn during my first trip to Pará, which did not occur until the following year, in 2014, the act of traveling to and throughout the region is as important as actually arriving to one’s destination. In order to arrive in Oriximiná, one must fly to Belém, almost exclusively accessible through larger Brazilian cities (rather than internationally), then to the city of Santarém, and stay overnight in Santarém in order to catch one of two boats (one which is a four-hour ride, and the other which is overnight and an eight-hour ride) the following day to Oriximiná. Rain, technical failures, holidays, and weekends can and often do complicate this itinerary, which can easily make a two-day trip a three or four-day trip. But news of the region quite literally travels via these routes, perhaps more consistently and reliably for the region than it does through Brazil’s mega media network Globo, which is heavily skewed towards news from the south and southeast. This journey, with its reorientation of time and space, offers an infinite number of opportunities to make rich conversation with others through shared frustration and/or shared curiosity, and to observe the natural environment of the region.

It was during these initial trips that I started to be inducted into the world that is Pará, which, as will appear as crucial throughout this chapter, is based upon family and movement. A prime example of this occurred on my first plane ride into Belém in 2014. Upon learning of my eight-hour layover in the Belém airport, the 60-something year old woman sitting next to me on the plane, with a concerned tone, offered to cook me dinner at her house during my layover, talking to me tenderly about her family and their house. Such invitations never stopped and became the basis of my fieldwork in the state.

However such structural, social, and environmental realities act as a kind of wall around the Amazon region, behind which a much less romantic version of Ana’s rendition of the region existed. Movement and traversing space marked much of my trip in Oriximiná. In just six weeks,
I visited a total of nine communities (five quilombola and four indigenous), all of which were only accessible via smaller, non-commercial boats. I spent countless hours accompanying Ana in her mission to expand the municipality’s phytotherapeutic program throughout its territory and organize a phytotherapeutic pharmacy in Oriximiná’s town center. When I arrived in the city of Oriximiná, there was no walk through forested or garden areas, as there did not exist many areas within the city to do so compared to within the communities themselves. Instead, when I wasn’t in the communities themselves, my visit was more geared toward attending planning meetings for the pharmacy, which included the participation of various actors tied to different institutions, including traditional communities.

7.1 National Pioneers

Upon my settling into Oriximiná, I was bombarded with several well-scripted versions of the history and conditions of the quilombola communities of the municipality. Although Ana had been working with women from quilombola, ribeirinha, and indigenous communities, her personal social network, and the people with whom I spent the most time while with her, were all healthcare professionals and professors at the local university, none of whom were from the traditional communities of the municipality and only one of whom was not from the state of Rio de Janeiro or São Paulo. I picked up various strands of the communities’ collective story from time spent with this group, which held tremendous privilege over the communities in terms of economic and political power.

The secondhand perspective that I gained from this group and others throughout the city was that quilombolas had been receiving government funding for 20 years towards their parties, small boats, and basic food items such as juice, bread, ham, bread, and water. People constantly compared the behaviors and habits of quilombola people to that of indigenous people. The
former slept a lot and relied on the government, the latter were “smart,” “political,” and slept less (especially, one of Ana’s colleagues said, in comparison to people in the city, who ate large lunches and napped in the afternoons). Both, I heard from one source, did not work (quilombola communities being “worse than the Índios”). Notably, I never heard ribeirinha communities (who are not necessarily of African or indigenous descent in terms of how land has been argued, but very well could be) included in this comparison, which underscored the racialization processes that occur alongside notions of territory.

There was a clear difference in perceptions of individuals and families who lived in the communities proper versus those living within the urban limits of Oriximiná. The wealthier families’ housemaids, or empregadas, were overwhelmingly quilombola women who had moved, at least temporarily, to the urbanized part of Oriximiná. One of Ana’s colleagues praised the older sister of Marina, her quilombola empregada, who formerly worked for the colleague but was at the time enrolled in an undergraduate geology program and seemed to have no desire to live within the territory of her ancestral community. Although quilombola individuals and communities had long held territorial and political rights, it was clear that their struggles against discrimination were alive and well, and rural to urban migration was an important factor in the economic inequality present in the city.

*Bom Jardim*

A ten-day trip into the quilombola communities was my most telling experience of the divide between different actors in Oriximiná, their lived experiences and geographies, and what was at stake for each. Ana did not accompany me for this particular trip, which set an entirely different pace for my experience, as the visit was not transactional (i.e., not part of her duties as sanitation coordinator and not directly related to her phytotherapy efforts) and I had no definitive
end goal. Moreover, the communities did not have much to prove to me. I was neither an employee of the government nor someone who could help them make a case for land rights (since they had already secured them). Furthermore, research on medicinal plants had already been conducted in the community. The communities, therefore, knew exactly how to articulate to me who they were and what they knew.

I went to the communities with Marina’s family, who split their time between the community and urban part of Oriximiná. It was a two-hour boat ride to the community, which was one of the closest to the town center. The family would go to the community to collect raw materials in order to make crafts and other goods, and any other items (such as eggs, cassava flour, and Brazil nuts) that would be sellable in the city. Marina’s mother also taught at the community’s school, where Marina would help some days.

While I was in their community, an education activist from a nearby quilombola community came by with a team of teachers who worked in the communities. They were in a large boat going around to various quilombola communities in order to enroll young people who had not finished school in a completion program. They offered to take me on their route alongside Marina, and I was able to visit three more communities and participate in meetings around the completion program. These meetings and my visit ended up dealing with topics much broader than education, particularly because a local mining company, Mineração Rio do Norte, used the occasion of the communities meeting to plan its corporate responsibility programming in the communities.

The schools within the communities ended up being the center of the transmission of the communities’ stories. In Marina’s community, classrooms were lined with posters that discussed Afro-Brazilian history and the history of quilombos throughout Brazil. During the education
meetings and in classes, the stories of the communities were reiterated repeatedly until I gained a composite version of their history. Today, not all of the 34 quilombola communities in the municipality have land titles (at the time of writing, the most recent was awarded in March 2018 after a 13-year application process). But in 1995, seven years after the acknowledgement of quilombola rights in the new constitution and eight years before the Programa Brasil Quilombola, Oriximina became the site of the first quilombola communities to receive land titles in Brazil. Unlike communities granted titles after the passing of the 2003 Programa Brasil Quilombola, communities in Oriximina were granted land rights based on their argument that they made economic use of natural resources, particularly Brazil nut (the wood and the nut itself) and copaiba, a tree whose seeds are used to produce a medicinal oil sold throughout the country and internationally) (Acevedo and Castro 1998).

The history and conditions of individual communities, of course, became more complicated. Some were larger and more politically articulated than others, and some had more prominent indigenous descent. One community, Paraiso, was one of the most interior and political powerful communities. The president of the multi-community quilombola association lived in this community, and had negotiated receiving resources such as large boats and solar paneling from Rio do Norte and the municipality. Bom Jardim, Marina’s community, was founded in 1930 and was composed of around 80 families. The community was much smaller, but had more varied geography. Some families lived away from the community and had to take a canoe through low, forested river to arrive at the center of the community, where the church, school, and meeting spaces were. Some of the older individuals of Bom Jardim had immediate ancestors (i.e., grandparents) who they considered to be indigenous, and many individuals had
very obvious European ancestry. And as one lighter-skinned older community emphatically told me, “I may not look negro, but I am quilombola.”

Even though many of the communities had secured their territorial rights, additional issues around land ownership arose. Years after the first quilombola communities in the municipality gained land titles, bauxite mining operations by Rio do Norte began to use land near communities who had land rights as well in or around communities that had not yet secured titles. This led not only to major ecological changes in the quilombola region, but also a slew of sociopolitical repercussions mediated by the company’s extensive institutional programs geared towards their relationship with traditional communities. The mining company Rio do Norte had become one of the major sponsors of quilombola activities, providing boats, supplies for parties, and building schools.

I witnessed this relationship during the meetings between the company and the communities. Two enthusiastic representatives from Rio do Norte’s corporate responsibility department organized workshops in two of the communities with the goal of gauging how exactly they would want the company to invest in each community. The representatives passed out survey forms to be filled out by small family groups that asked questions such as “Which cultural activities are organized in the community?”, “What are the difficulties confronted in the community to realize these activities?”, and “What does the community need to turn these activities more productive?”. The communities listed religious events, dance and cultural performances, and artisan production, citing a lack of funding and dialogue between communities as major challenges. It was clear that the general reception of these representatives was one of ambivalence. They were not welcomed with friendly smiles and hugs, but with pointed discussion and stern questionings. Rio do Norte may not have been directly taking the
communities’ territories, but they were certainly changing the way that the communities thought about their right to live a traditional lifestyle.

_Urban Migration, Mining, and Leaving the “Traditional”_

One major change in the lives of _quilombola_ individuals had been migration from communities to the urban area of Oriximiná, or to other urban areas of the state, such as Santarém and Belém. Rio do Norte had become one of the major employers of the area, and young people, like Marina’s sister, had begun to enroll in universities in cities to study geology and related subjects to work in the mining industry. With the expansion of mining operations and the increase in _quilombola_ youth gaining formal higher education, the geography of _quilombola_ livelihood had become more expansive and varied. The construction of the federal housing
program *Minha Casa, Minha Vida* (Image 7.1) in Oriximiná in 2014 was indicative of this shift. The project involved the building of 994 single-family homes in the periphery of the city of Oriximiná (in the neighborhood of *Bairro Novo*, or New Neighborhood) to accommodate this shift in population. Families moving into the community would receive loans from the Brazilian bank Caixa, which had already invested in the 51 million- *real* project.

I walked through the *Minha Casa, Minha Vida* construction space with a group of city officials, including Ana, who were to make suggestions as to how to improve the area before families started to move in. The officials made crucial criticisms that point to how misunderstood the nature of lifestyle changes from rural communities to urban communities are. One of the city officials pointed out that the median family size in Oriximiná was seven individuals, but the houses were built for four to five individuals. Another official made the observation that the material used to build the houses were not ideal for hanging hammocks, which is the preferred way to sleep in the region. One of the most telling comments that one official made, and two more later repeated, was that she was afraid that the community would “become a *favela*” if it was not managed and serviced adequately, pointing to the explicitly racialized assumption that moving families into the development could begin a cycle of poverty.

The lifestyle changes required for such a rural to urban move were indeed painfully obvious given the design of the *Minha Casa, Minha Vida* development. Despite the development still being in the construction stage, the ubiquity of red-brown dirt and absence of vegetation made it feel barren compared to the lush, aged forest that grew along and well inland from the river, which characterizes the *Baixo Amazonas* region. I also felt immediately uncomfortable with the uniformity of the houses. Each house had the exact same construction, except for a smaller number of handicap-friendly models. They were spaced close to one another with hardly
any space for a garden, let alone larger trees or crops. Ana pointed out that without proper accommodations for hanging hammocks, it would be difficult for extended families to live together, as they often did, in such a small space with beds. The houses, made of a kind of concrete, would be much hotter and harbor more mold than the wooden houses built in the communities, especially if there was no air conditioning installed.

The Minha Casa, Minha Vida project, in other words, attempted to establish a new form of social organization and economics for new homeowners in the city. The sociality promoted by the development was unlike that of the communities themselves. Families weren’t necessarily clustered together; territorial ownership would now be based on a loan system controlled by Caixa; and families could not use resources from the environment around them to earn money. Community members could, instead, gather at the plazas built throughout the development. They could go to the grocery store or fair for food. They could forget about going into a forest to retrieve plants to take care of their health needs.

Ana’s phytotherapy program fell directly in line with these sociogeographical changes and migrational patterns, which could be characterized as a prototypical push from traditionalism into modernity, as families who were accustomed to using medicinal plants in the absence of institutional healthcare began to live in the city. A more biomedical model of medicinal plants seemed only logical, especially following a decade’s worth of ethnobotanical research in the communities that helped promote the idea that quilombola communities held a command of the natural world around them.

7.2 Quilombola Laboratories

I learned that medicinal plants, and traditional knowledge more generally, were sprinkled in the story of how the communities in Oriximiná gained legitimacy as traditional populations
both during and after their struggles for territorial rights. The original communities in Oriximiná, after all, gained territorial rights and legal recognition as traditional communities in part based on their extraction and use of the medicinal oil of *copaíba*, a tree which is common in the region. The importance of *copaíba* cannot be understated. *Copaiba* is, in fact, quite valuable worldwide, although it is native to the South American tropics. The first patent involving the oil was filed in 1878 by an Ohioan named T.P. Ohilds, who used the oil in the form of an inhalant to treat respiratory conditions. Since then, well over 1,000 patents have been filed worldwide that involve the tree in some form. The first Brazilian Pharmacopoeia in 1926 included *copaíba*, and it has since then held a steady position in both Brazilian popular culture and within biomedical phytotherapeutic practice. If the tree had not been widely recognized as producing a kind of miracle oil used for everything from skin conditions to hair treatment, the communities’ extraction of the tree would not have been considered relevant or valuable. One of the most pressing concerns from critics of bauxite mining in the region is that land directly outside of the communities used for the collection of *copaíba* is being deforested in order to construct mining operations.

The initial arguments for the communities’ land rights were negotiated primarily at the federal level (as opposed to the state-level, as has been the case with Pimenteira and Campo Grande) and spearheaded by São Paulo-based NGO Pró-Índio, which remains as one of their strongest institutional supporters. Pró-Índio acted as a broker in the communities’ interactions with government agencies, and helped with the divulgation and regularization of the communities’ histories and struggles so that they could more solidly argue their cases for territorial and political rights.
The actions of Pró-Índio in Oriximiná are just one example of the stronghold that outside actors and capital (i.e., from other regions in Brazil and other countries) have in the region. In many respects, Baixo Amazonas is marked, almost in mythologized and idiosyncratic ways, by its hodgepodge of actors from various places. In addition to quilombola communities, the presence of Oriximiná’s several indigenous groups has also contributed to the attention that it has received from federal actors, since indigenous rights are handled by the federal agency FUNAI. But, as I will discuss later, the largest indigenous ethnic group in Oriximiná, the Wai-Wai, spreads into Guyana and often travel across international borders for events. This, along with the work of an American missionary in Wai-Wai territory and a relative lack of Portuguese spoken by the Wai-Wai, makes the territory in that part of Oriximiná much less governable by Brazilian institutions and actors.

Rio do Norte’s operations also have dramatically influenced the social landscape of the region. During the company’s meetings with the communities, one of the company’s representatives approached me, hardly able to hold in his excitement to practice English with me. He explained that the company had a large amount of investments from Canada and the United States, and that he wanted to move his family to the United States in order to get a graduate degree. I was made uncomfortable by his act of exclusion through language in the community’s own territory, but also by a kind of proximity that I hadn’t expected or felt before, even in Rio de Janeiro where there is a certain familiarity with the United States and the English language. That is, it was clear that outsiders had set up an entire infrastructure in Oriximiná, rather than just dabbling in disconnected projects or passing interest.

This infrastructure established exclusionary structures that became part of daily life and the cultural imagination of rural communities in Oriximiná. Once during a conversation with
three quilombola individuals, we began to discuss Rio do Norte as a haven for this kind of exclusion. They talked about how they heard that domesticated alligators roamed the streets of Porto Trombetas, the protected and shutoff riverside town a few hours by boat from the center of Oriximiná erected especially for employees (Brazilian, American, Canadian, and other nationalities) of Rio do Norte, without problem. They said that Porto Trombetas had its own schools and markets, and that its residents never had to leave. Lucky were the Brazilians who gained proximity to those who lived inside, as they were exposed to a kind of fantasy world of internationalism and stable employment.

Importantly, the outside actors who worked within the rural areas of Oriximiná did not have the same profile as those who work in the urban area of Oriximiná. The quilombola communities’ long history and expertise in political negotiation attracted the attention of NGOs, Brazilian researchers, and healthcare professionals who were mostly from the southeastern part of Brazil. Oriximiná, and specifically its quilombola communities, became a kind of laboratory for social policies and programs in the Amazon region. The Federal Fluminense University (UFF), which is based in the Rio de Janeiro suburb of Niteroi, opened a campus in Oriximiná in 1975 and hosted a steady flow of students, interns, professors, and researchers from the Rio de Janeiro campus over the years.

The first ethnopharmaceutical research conducted in the quilombola communities was a product of such institutional connections. It was soon clear to outside actors that copaiba and Brazil nut were not the only valuable natural resources that the quilombola communities of Oriximiná were using. Ethnobotanical research became key to this attention to quilombola communities when in 2003, a researcher from UFF named Vitor began to conduct extensive ethnobotanical studies in some of the communities. In the end, he along with other researchers,
including Ana, catalogued a total of 242 plants used by Oriximiná’s quilombola communities. This research spanned over several years, and Vitor and Ana formed close relationships to the communities, and more specifically the communities’ leaders.

When I arrived in the community of Paraíso therefore, upon learning of my interest in medicinal plants, the quilombola association president, Miguel, emotionally began talking about the work of Vitor and Ana. He told me that Vitor organized workshops and classes around medicinal plants, both teaching the communities about the plants and creating a space for dialogue. I heard a story from Miguel similar to what I had heard in other communities: “If Vitor hadn’t conducted this research, we wouldn’t know all of the knowledge that we have here.” and “The youth don’t have an interest in plants.”
Miguel, and others in the Paraíso community, were not guarded about their knowledge of plants, and it was clear that they had begun to adopt an ethnobotanical approach to the identification of plants and their uses. He readily listed a few plants that were commonly used, and already had a few leaves and pieces of bark separated out in his kitchen about which he could talk. He took out one small piece of bark, and began talking about how crucial it was for treating diarrhea. “Anani,” he said, “Write it down.”

This was a different introduction than that of Pimenteira and Campo Grande, where, even though there were attempts to organize pharmacies and there was some structure around how healers dealt with patients and talked about plants, my primary presentation of plants occurred in forests and gardens. The arduous in situ research, in the communities’ eyes, had already been conducted. It was also different in that the gatekeeper of the knowledge in that moment was also the political gatekeeper of the community (i.e., the president of the quilombola association), rather than a group of women. In this sense, I wondered about the continuity of the knowledge gained from the research conducted by Vitor and Ana. I had no doubt that the knowledge would continue to be reproduced, but through whose hands?

7.3 Imagining a Phytotherapeutic Oriximiná

Because Ana was the sanitation coordinator for the municipality, the planning of Farmácia Viva fell under sanitation efforts of the city in general, and her work was mostly done through her main duties of evaluating the sanitation practices and infrastructure of rural communities. Ana had the difficult task of integrating different spaces and communities into an umbrella program, which included quilombola, indigenous, ribeirinha, and urban populations. Between meetings, I served as a kind of assistant for Ana, translating documents, helping her with inventory and budgeting, and creating and editing paper materials for the meetings.
Importantly, it wasn’t until Ana’s attempt to create this program that medicinal plants were institutionalized as a way to help the healthcare of communities and Oriximiná residents themselves. As the city had received attention from actors at the federal level, the institutionalization of the use of medicinal plants had also been at the federal level, involving researchers, government agencies, and NGOs. Another important aspect of the city’s governance is that many researchers and medical professionals in the city come from outside of the region (i.e., from the Southeast of Brazil) or from outside of the country (i.e., from Cuba). By the time my fieldwork began in Oriximiná in 2014, medicinal plant initiatives by the municipal government had been in place for 13 years and had seen several waves of individual and institutional actors.

*Mapuera and the Wai Wai*

The first meeting and trip that I organized with Ana was to the indigenous village of Mapuera, home of the Wai Wai ethnic group. A few weeks before the trip I, alongside two undergraduate interns from the Federal Fluminense University in Rio de Janeiro, were preparing two brochures to deliver to the village. One brochure was a briefing on policies around medicinal plants and included the goals of Brazil’s national phytotherapeutic program, such as the sustainable use of biodiversity, the valorization of traditional knowledge, and the strengthening of family agriculture. The other brochure was a visual tutorial of how to reduce harmful waste in rural communities. It talked about topics such as using natural coconut soap versus detergent-based soap and disposing of batteries in landfills versus near water sources. In addition to delivering the brochures to the village, Ana’s main goal for her visit was to evaluate the water system there, but she also wanted to recruit indigenous women to participate in the Farmácia Viva program, since their numbers were relatively low in comparison to quilombola women. As
Ana instructed us as to how to organize the brochures, she was approached the brochures from the perspective of her own work – that there were unsafe and unsanitary practices occurring in the rural communities of Oriximiná, and that they must be monitored and fixed.

Upon organizing and commencing our trip to the village, it suddenly made sense to me why there were hardly any indigenous women in the Farmácia Viva program, and why it was so difficult to monitor sanitation practices within the village. The only means of transportation to the village, even for city officials, was a small, metal, uncovered boat with a motor attached to it. Ana and a city councilwoman, who accompanied us, hired two indigenous men to operate the boats. The boat ride itself was an exhausting 12 hours, which was only made more exhausting under the equatorial sun. We stopped in several quilombola communities and indigenous villages, where Ana got updates about any threats, territorial disputes, and other happenings in the communities.

But Mapuera was the most distant village. So much so that our boat ran out of gas at night before arriving to the village, and a second boat had to come help us. So much so that Mapuera is the same distance from Guyana as it is to the administrative center of Oriximiná, and that a group of around 100 Wai Wai living in Guyana came to visit Mapuera to attend a church service while we were there. So much so that the majority of residents in Mapuera did not, and in reality did not necessarily have to, speak Portuguese.

Ana’s efforts to educate residents of Mapuera via brochures, therefore, seemed to grossly speak past the realities of the community. On the last day of our trip, which was three days, we held a roundtable discussion about the results of her research, and she delivered the brochures to community leaders. Present at the meeting were male village leaders, all of whom spoke Portuguese, and their wives, who Ana and the city councilwoman said did not speak Portuguese,
but communicated quite well in Portuguese despite speaking little. The male leaders took the brochures (both of which were in Portuguese), looked at them, frowned, and one of them chuckled. What was conceived of in the administrative center of Oriximiná simply did not translate, both literally and figuratively, to the village of Mapuera.

This is not to say that Mapuera was isolated. On the contrary, Mapeura was a multinational and multilingual space. In keeping with the rest of Oriximiná, those who wanted or needed to arrive in Mapuera were already there. A missionary from the United States had, starting around 20 years prior, nearly single-handedly spent years establishing Christian institutions (i.e. churches and aid through religious groups) in the village, to the point where the Wai Wai identified as Christians and gathered in a village church for many community functions. The English-speaking Wai Wai who lived within Guyanese territory were no strangers to the Wai Wai in Brazilian territory. Cuban doctors in the Mais Médicos program had, by far, the strongest presence in Mapuera as compared to the other sites in this study. There were three Cuban doctors permanently stationed (i.e., actually living) in Mapuera and they provided the only biomedical care in the village. Because of these factors, they were deeply integrated into the community.

Yet still, there seemed to be no room for Ana’s phytotherapeutic program in Mapuera, especially in comparison to what had already been achieved in quilombola communities. Language, transportation, geographical distance, and history with public policies around political and territorial rights all affected the relationship of both types of communities to the municipal government. The indigenous groups in Oriximiná were not quite in a position to negotiate strategically with mining companies, especially to the same extent as quilombola communities, who were benefitting financially from mining activities in the region, yet still experiencing the
effects of environmental degradation. In other words, quilombola communities in Oriximiná had all of the governmental infrastructure ready to participate in a federally-organized phytotherapeutic program.

 Phytotherapy in the City

In the urban area of Oriximiná, Ana's efforts took on a much different character, marked by several bureaucratic meetings, a biomedically-oriented planning of the pharmacy, and what seemed like an over-saturation of actors who were interested in the project. The model of phytotherapeutic pharmacy in Oriximiná followed that of Farmácia Viva, which by 2014 had been well established as a model program and institutionalized into both educational and medical institutions in the city. It required the planning of a community garden as well as the planning of a biomedical laboratory space. One night, I helped Ana create an inventory and budget for the pharmacy, which included pricing for equipment such as beakers, plant dryers, steel pots, and a stove.

Ana garnered tremendous support from various institutions. What became particularly interesting about these meetings in the urban area of Oriximiná was the strict designated roles of each set of institutional actors in the development of the phytotherapeutic pharmacy. Key organizations included the Fundação Oswaldo Cruz (from Rio de Janeiro), which provided technical research support; the Universidade Federal Fluminense (from Niteroi, in the Rio de Janeiro metropolitan area), which provided interns and researchers; a local development NGO called Kirwane (most of whose staff were from Rio de Janeiro), which provided a development vision and had already been conducting biodiversity-focused projects with communities in the region; the municipality’s Association of Women Workers (AMTMO), who was to be the main focus of the project; and the Mais Médicos program that had been established in the city, which
was to provide cooperation between Cuban physicians and the phytotherapeutic program. There were also several municipal agencies that pledged support for the pharmacy, including the secretaries of agriculture, health, and sanitation.

The meetings were focused on the planning of buying and installing technical equipment, and on the roles of all actors involved. The heart of the program was the AMTMO, as the women were to provide the labor and at least a basis of the knowledge of medicinal plants for the pharmacy and the garden. The AMTMO was comprised of women from quilombola and riverine communities, and it was thought that they would have the required experiential knowledge for planting the herbs of interest. Researchers from federal organizations were to use their technical knowledge of species and the production of pharmaceuticals, which ended up providing the structure for the program. The researchers used all five editions of the Brazilian Pharmacopoeia, as well as all four editions of the WHO medicinal plant monographs to structure their approach.

These meetings were mostly amicable, but ultimately reduced the knowledges and experiences of some of the actors involved. One example of this was a meeting held by planners of the Farmácia Viva program in Oriximiná. Around 10 Cuban doctors in the Mais Médicos program were invited to one meeting, as Ana perceived them a more “flexible” around the use of medicinal plants than Brazilian doctors. Ana and other researchers knew that the Cuban approach to medical care was more holistic, and it was thought that as outsiders they could approach issues of inequality and rural communities with a more objective eye. During the meeting, the Cuban physicians discussed how they were, in fact, trained in using plants as medicine, but had not been able to use that knowledge in their positions in Brazil.

The mood of the room during this meeting was almost tangible. The program, in many ways, depended on their cooperation and their efforts to integrate plants into their prescriptions.
The Brazilian researchers were conscious of this and approached the meeting almost as a sales pitch. Whereas the Brazilian researchers (again, all of whom were from Rio de Janeiro) were enthusiastic about the project and were attempting to impart the same excitement and hope onto everyone in the room, the Cuban physicians seemed much less energized. Kirwane representatives were also present at the meeting, never lacking the inspiration to talk about sustainable development and the importance of biodiversity in the lives of individuals from traditional communities. But the Cuban doctors held more much intimacy to the realities of the patients in Oriximiná and their healthcare needs, and seemed tired, if not more grounded. In the end, they agreed to cooperate with the program, although in that particular meeting no specific plans were arranged.

One meeting with the women from the AMTMO was quite different. There was a lively, if not informal exchange of information around medicinal plants that the women (primarily) held. The meeting was for the women to agree to their roles in the pharmacy, but it quickly became a session listing and comparing uses of plants. The researchers from Rio de Janeiro took notes of everything that the women said, which included dozens of plants that they knew about.

The results of the meetings, however, were telling. The plan of federal researchers was to focus on developing phytotherapeutics based on just nine chosen plants, none of which are specific to the Amazon region (although they are present and common there) but are common in Brazil as a whole and some in several other countries in the world. (The plants were rosemary, aloe, lemongrass, chapéu de Couro, curcuma, cumaruzinho, colônia, erva cidreira, and passionfruit). This was a far cry from the 242 species that Ana and Vitor catalogued in their study (out of which, importantly, only 15 of which were mentioned in the most recent edition of the Brazilian pharmacopoeia). The plants chosen for the municipality’s Farmácia Viva program
were selected not only because they are common in the city, as well as Brazil as a whole, but also because they were elaborated upon by the Brazilian federal government and WHO. This discrepancy between a pharmaceutical model of medicinal plants and the way plants were produced as healing agents within communities themselves, ended up being perhaps the most notable dynamic in Oriximiná’s the development of a phytotherapeutic program.

7.4 Conclusion

It is worth reconsidering my initial disorienting experiences around space, time, and travel upon arriving in Oriximiná to illuminate the process of reduction that underlies the phytotherapeutic program in the municipality. What does it mean when traditional medicine, reduced down in this case to nine plants (even after extensive ethnobotanical research had been done in the communities), is not used in traditional territory, or at the very least in a "traditional" context? Oriximiná – both its city center and its distant traditional communities – is above all a federal space in comparison to Santa Luzia and Baião. This is evident in terms of the kinds of policies implemented and exercised by communities themselves, and it is also evident in terms of the kinds of actors that mobilize projects in the region, who overwhelmingly arrived from the nation’s political, economic, and cultural center, Rio de Janeiro. But this federalization of Oriximiná does not act to expand or maintain the complexity of its space, but rather make it more digestible and consumable to a national and international audience, which includes a mining company, researchers, NGOs, and healthcare professionals. It is in this way that multiple hours of fluvial transportation can be reduced to a list of nine plants, for example.

Programs such as the Farmácia Viva initiative in Oriximiná exist precisely to shape the lived realities of quilombola individuals (not communities, an important distinction as they move away from communities themselves), who began to live in the urban limits of Oriximiná. It is, in
fact, part of a package of modernization based on the idea that quilombola individuals can maintain their “culture” while not having to rely on a lifestyle defined by their territory, which is under constant threat. Oriximiná serves as an example of how a nationalizing and internationalizing model of medicinal plants arrives in a relatively remote municipality and accompanies a push towards “modernization,” regardless of the strong presence of policies around traditional peoples in a place meant to preserve “traditional” lifestyles as defined by land occupation and use of natural resources. It is ironic, for example, that from Brazil’s largest cities, as well as from the capital of Belém, Oriximiná was the most difficult city to arrive to in the study, but its history with the federal government gave its phytotherapeutic pharmacy program a different, and less local character.

These changes, more specifically, represent a shifting of a conceptualization of black rights and black environmentality, which become no longer based on connection to territory as they had been in the late 1980s through the mid-1990s for the communities in Oriximiná. Political rights in the urban territory of Oriximiná include government housing, and the right to access pharmaceuticals (either synthetic or phytotherapeutic) and biomedical healthcare professionals. In the quilombola communities, however, such factors (type of housing and familial organization, healthcare decisions, and use of natural resources) are almost entirely decided by the political and social organization of the communities themselves and the rights around territory they have gained and fought for. At the time of fieldwork, for instance, there were no clinics within the communities, and forested areas were bountiful with medicinal plants. In contrast, Minha Casa, Minha Vida houses had no gardens, were uniform, and were small, encouraging small, nuclear families rather than the larger extended families often located in communities themselves. A notion of black environmentality is therefore transformed around a
locus that is no longer within the *quilombo*, but is instead within a nexus of policies themselves around a discourse of development and preservation of traditional knowledge. But, it is precisely these policies and this dislocation that *quilombola* communities in Oriximiná rely on in order to continually survive.
CHAPTER 8
CONCLUSION: PHYTOTHERAPEUTIC FUTURES AND PASTS

I approached this dissertation with two goals. The first was to argue that there is an environmental politic that manifests itself in particular ways in black Brazilian communities, which I refer to as black environmentality. The second was to document the process of how the pharmaceuticalization of medicinal plants occurs within black communities, especially in relation to the national and international policies governing that pharmaceuticalization, within this context of black environmentality. The conditions of slavery and post-slavery, and the subsequent processes of racialization through territorialization that have accompanied those conditions, have directly impacted the political economic structures formed around medicinal plants and communities’ relationship to plants (e.g., a spiritual connection vs. viewing plants as commodities). In the cases of candomblé practitioners in Rio de Janeiro and quilombola communities in Pará, black environmentality meant having to negotiate health, territorial, and socioeconomic rights under an umbrella of environmental policies, programs, and institutions. Contemporary politics around medicinal plants, the result of decades of legislation and international controversy in Brazil, were at the intersection of various policy sectors and became an avenue through which these communities attempted to negotiate a range of rights.

Black Spaces

The two kinds of spaces discussed in this study – the periferia and the interior – are spaces that lend themselves to both blackness and a reliance upon medicinal plants. In the cases
of both kinds of spaces, black populations were continually pushed out of economic centers
where hegemonic and white notions of Brazilianness thrived. Candomblé terreiros fought to be
recognized as part of the “public” that would have the right to use public natural spaces.

Oriximiná, the site of the first land rights granted to quilombola communities in Brazil, set a
precedent for the use of blackness, or at least a blackness, as a tool to negotiate territory and the
use of elements within a territory. The nationwide attention directed at quilombola communities
in Oriximiná led to a flux of researchers who were interested in the communities’ collective
knowledge of medicinal plants, which transformed into a public health program organized
around the development of phytotherapeutics. Campo Grande in Baião, on the other hand, no
longer able to rely on an economy based on fishing due to the presence of a hydroelectric project,
gradually turned to a more individualistic model of economic sustainability that was not in line
with quilombola legislation. An organized way of producing medicinal plant-based medicines
was just one possibility for survival in a space that was practically invisible to state and federal
government initiatives. In Santa Luzia, the shift from a slave economy, to an economy based on
exploitative middlemen, and finally to a cooperative economy (that still existed in competition
with Natura) also meant a shift in how crops and other natural products were cultivated and
extracted in order to maintain biodiversity in the region. All of the communities in the study had
to constantly renegotiate and re-envision what an ecology marked by blackness may look like in
a climate of piecemeal environmental, territorial, and health policies.

However, as this study demonstrates, such spaces are hardly as marginal as the labels of
periferia and interior suggest. Whereas rural communities in Pará are often considered
"isolated," when considered from the perspective of the international networks of which they are
parts of, they are far from isolated. When the purpose of quilombos and quilombola
communities, to settle in areas that were difficult for other to find and/or settle in, is considered, this fact is particularly interesting. It suggests that *quilombola* communities created non-hegemonic international networks despite the presence of larger globalizing projects, as well as have been newly “found” by a number of actors. In this study, the international linkages of *quilombola* communities included Italy (by way of missionaries and the Italian government), Peru (by way of the importation of a peanut), the Netherlands (by way of a researcher), Japan (by way of bioprospecting companies and descendants of immigrants), Cuba (by way of the *Mais Médicos* program), and Canada (by way of the Rio do Norte mining company), in addition to the global capital funneled through actors from Rio de Janeiro and São Paulo. The network presented earlier in this research from Rio de Janeiro, on the other hand, maintained ties to a more globalized network of human rights-based NGOs and to major political hubs of the African Diaspora, such as the United States and Colombia.

In all of the *quilombola* communities in this study programs around medicinal plants actively became intertwined with broader struggles and shifts in territorial rights and territorial occupation. Yet where policies around medicinal plants and traditional medicine seem to break down is precisely when notions of territory become more complicated, often as a result of the realities of the *periferia* and the *interior*. The current notion of territory as described in policies allows for little movement; once an individual or community moves, they often are moved to a system of private landownership by default. However in this case of black traditional communities, movement is almost inevitable, and there is no Afro-Brazilian community that is “indigenous” (in the strictest sense of the word) to a territory; they all moved from somewhere else. In the case of Oriximiná, Farmácia Viva would not be possible had it not been for other institutions supporting the movement of *quilombola* individuals to the urban center of Oriximiná.
Afro-Brazilian religions groups occupy multiple spaces for the practice of their religion, and movement must be constant for the livelihood of the religion.

*Politics and Hierarchies of Knowledge Production*

The communities in this study negotiated the recognition of their use of medicinal plants through various political rubrics, including those of “sanitation,” “territory,” and “solidarity economics.” In Oriximiná, phytherapeutic policies were inseparable from efforts towards socioeconomic development and a push towards modernity. In the end, the communities’ collective knowledge of medicinal plants was reduced down to just a few plants of interest by the phytherapeutic program set up in the city. In Campo Grande, policies around healthcare, let alone medicinal plants, had not arrived in a functioning way in the community. However, women in the community had over several years shown interest in organizing a traditional medicine pharmacy. But even support from the municipality did not ensure that such an initiative would work. In Santa Luzia, waves of pharmaceuticalization at the hands of ATAVIDA and Natura appeared in communities, yet a lack of consistent interest and support in grassroots efforts left Natura to be one of the most stable initiatives in the lives of community members. In Santa Luzia, too, federal policies were difficult to locate, and a political structure around medicinal plants was mostly shaped by Natura, regional NGOs, and a regional cooperative.

The approaches of Afro-Brazilian religious groups and *quilombola* communities in gaining legitimacy around their uses of medicinal plants varied. However, I argue that both approaches are rooted in particular constructions of black environmentality. *Quilombola* communities in Pará were automatically treated by governmental and nongovernmental institutions as stewards of the environment, much as indigenous groups are treated. Therefore, it
was almost unquestioned that programs around medicinal plants would be appropriate for such communities, even though they did not always prosper.

Afro-Brazilian religious groups, on the other hand, had to strategically fight for recognition as stewards of the environment, and demonstrated knowledge of medicinal plants was a tool for that appeal. Part of this perception of Afro-Brazilian religious groups as being separate from nature, even though their cosmology explicitly outlines beliefs around the natural environment, may be that such groups (at least in this study) live in urban areas, perceived as far from “nature” and certainly in opposition to popular notions of “traditionalism.” Regardless of the National Policy for the Integral Health of the Black Population’s objective of valorizing the knowledge of Afro-Brazilian religions, in relation to medicinal plants specifically, the healthcare practices and activism around healthcare existed largely outside of government-provided healthcare services and programs.

An important distinction that repeatedly appears in this ethnography is politics around medicinal plants as they are used within the two types of communities in this study (i.e., for the health of and use by the communities themselves), and politics around the communities’ knowledges of medicinal plants (i.e., whether or not the knowledge is legitimate, and how communities should be compensated for knowledge gained from them). The case of Pimenteira in Santa Luzia is illustrative. There are two sides to Pimenteira’s politicization of medicinal plants. The first is its relationship with Natura, with which the community had a partnership around the seed of murumuru. The second is through its involvement with the workers’ cooperative and the cooperative’s pharmacy, and by extension, its attempt to establish a community phytotherapeutic pharmacy. Pimenteira’s use of medicinal plants, therefore, exists
within a web of political economic factors that are both related to how individuals themselves use medicinal plants and how they distribute medicinal plants.

A worthwhile issue to raise is the fact that various institutions and institutional actors have interest in “incentivizing” or “valorizing” the knowledges and practices of this particular quilombola community, but that the community itself often does not seem to ultimately benefit from that interest. It was often the case that government researchers, both federal and state, act as prospectors in traditional communities in that in addition to having the goal of setting up social programs, they also have the goal of gathering and publishing information about medicinal plants. These networks, in the case of the communities in this study, have been established through extensive community and economy building initiatives in traditional communities. This took on different forms in the communities. Both Campo Grande and the communities of Oriximiná act as political laboratories for bioprospecting projects carried out by governmental actors. With the lure of economic independence and diversification, members of the communities make strategic alliances based on the natural resources within their territories, while contributing to Brazil’s larger project of securing sovereignty over its biodiversity. Campo Grande for example, with the introduction of the Peruvian peanut and the various projects that passed through it, was an experimental space in the absence of a solid notion of territory entrenched in quilombola policies.

Very rarely, or maybe just not often enough, were phytotherapeutics solely negotiated under the rubric of health in the communities of this study, especially health of the communities themselves (and not others). Just as communities may not benefit from the plants that they are cultivating and preparing, the way that their bodies actually benefit from medicinal plants is often completely separate from any institutional efforts organized within the community. In other
words, in all of the communities, community members continued to use medicinal plants much in the same way that they had before policies were enacted.

Cuban doctors, another staple across the communities in the study, occupy a unique position in the healthcare landscape of communities in Pará (I did not encounter any working in Baixada Fluminense in Rio de Janeiro). Participants in Oriximiná and Baião treated them as both outsiders without much grounding in Amazonian realities, and potential actors for cutting through old, ineffective systems of healthcare. Still, the reliance on Cuban physicians, especially in relation to at times fleeting medicinal plant programs, represents the disjointed nature of the healthcare landscape of Pará. The doctors have temporary appointments in communities, and the Mais Médicos program has been under scrutiny for not incentivizing Brazilian physicians to work in such positions.

With these contextual factors in mind, I argue then that medicinal plants in this case have more of a symbolic political role than a healing role and operate as a kind of currency for natural resources to be circulated throughout the region. This dual relationship with medicinal plants and the environment is a defining characteristic of black environmentality in that it highlights the dialectic between exploitation and autonomous creation. The communities in this study used policies in piecemeal ways in relation to their use of medicinal plants, many of which are not directly related to medicinal plants necessarily. In this way, communities strategically employ rhetoric in policies for political recognition and to claim their rights.

The approach of Oriximiná to the construction of not just a medicinal plant pharmacy, but the construction of the pharmacy alongside other governmental programs in the city that change the relationship of quilombola individuals to their communities, in relationship to how the women of Baião imagined creating their own pharmacy, is in informative and indicative of
the approach of many policies around medicinal plants. The communities in this study used medicinal plants not just because they were medicinal plants. It is true that one sentiment that carried across communities, institutions, and policies was that medicinal plants carried different effects than synthetic medications, namely that they were gentler and had fewer side effects, and were not accompanied by invasive methods of healthcare (such as surgery for gastrointestinal or heart problems).

But medicinal plants were more than that. Above all, medicinal plants were used because they were readily accessible in comparison to synthetic pharmaceuticals; in one’s home garden or a terreiro are perhaps some of the most accessible places to acquire medicine. Medicinal plants were also traded among community members and used as currencies that carried trust and assurance; they became the center of casual informational exchanged between women, the flexibility of such exchanges being the reason why over 200 plants can even be catalogued in such communities (in comparison to the hierarchical biomedically-oriented conversations around medicinal plants that yielded few plants of interest); they were quotidian in that they could easily be incorporated into one’s day as a tea or as a spoon full of the garrafada that is always in the refrigerator and never seems to expired; they allowed for an understanding of plants and nature in general that was not just medicinal but included notions of nutrition and the relationship between plants and animals; they were, very practically, a source of income for communities; they were a source of pride and ownership within women’s gardens; they became ways to track seasons and changes in climate and the environment; they were an art with infinite combinations and opportunities for surprises. Grassroots political organization around medicinal plants solidified the positions of power already held by many women in the communities by creating a space through which they could be recognized, could grow within their social roles, and could
exchange information among themselves. These factors are not as present in a biomedically-oriented medicinal plant pharmacy.

Othered Black Environmental Futures

If conversations around the environment, healthcare, and race, will always be at the center of politics in Brazil (as they likely will be, as evidenced by past political waves), I argue that the cases presented in this dissertation demonstrate that Brazil’s political future will be marked by the black environmentality practiced by African descendant labelled as “traditional” in a way that is explicitly ecological and gendered.

In one sense, the practice of black environmentality is in line with how others have theorized blackness in general in Brazil. Previous scholars have argued that blackness in Brazil is spatialized and territorialized (Vargas 2006; Carrill 2006; Perlman 1980): Blackness and black life is concentrated in the margins — in fields, favelas, quilombos, urban peripheries, maids’ quarters — but remains at the center of public imagination and fear. Others have argued that blackness is also performative, in that the participation in and display of religion, dance, “tradition,” any kind of public manifestation, food, and certain types of jobs all denote blackness in a country where race has been conceptualized as fluid (Romo 2010; French 2009; Selka 2008; Motta 2000). In other words, it is blackness as a practice (as opposed to a phenotype or descendancy, necessarily) that has been the concern of hegemonic power structures and has been subject to surveillance and violence.

Previous scholars have also noted that black political life in Brazil is gendered, and that black women have always been at the forefront of racial justice politics (Ribeiro 2008; Domingues 2007; Perry 2013). Many black political conversations, therefore, have centered around women’s health, violence against black youth (spearheaded by mothers), violence against
women, and women’s economic autonomy, especially in urban areas. But such gendered conversations around the rights of African descendant populations have stretched far before and beyond the current political moment in Brazil. There have been a host of women leaders who historically led quilombos beginning in the 1600s, such as Dandara dos Palmares, Aqualtune, and Teresa de Benguela, and remain in the imagination of black liberty as a whole (Santos 2017). Candomblé terreiros have, as previously mentioned, always been sites of political resistance and organizing, and an often-debated topic among scholars and activists has been whether the religion has a matriarchal power structure (Landes 1947; Romo 2010). Indeed, the most visible and revered figures in the religion are the mães of terreiros, but some scholars have argued that to simply label the entire religion as matriarchal ignores the internal power dynamics of particular terreiros and runs the risk of placing essentializing “Africanisms” on descriptions of the religion (Romo 2010; Matory 2005). Still, women’s strong presence and protagonism within the religion cannot be denied.

The communities in this dissertation performed their blackness in the form of stories around their histories with the lands that they occupied, and how they used natural resources on that land. It is their practice of a certain kind of blackness that gains government and nongovernmental recognition, both positive and negative. And the political activism of the women in this dissertation is undoubtedly within the same tradition as that which I’ve described above (see Arêda-Oshai 2017). The women worked within regional, national, and international networks of black women activists, organized through NGOs, social media, and travelling researchers in order to gain visibility and articulate their political concerns.

However, I use the term black environmentality to specifically describe the realities of “traditional” black communities. As I have described previously in this dissertation, much of the
literature on the construction of blackness in Brazil, especially in the political sense, has centered around black populations in a few urban centers, namely Salvador, Rio de Janeiro, and São Paulo. The construction and practice of blackness for populations considered by Brazilian law to be “traditionally” (both rural and urban) becomes characteristically ecological, especially in relation to health and healthcare, which results in a reframing of ideas around ethnicity, gender, and space.

For one, blackness in the Amazon region specifically, although existing within its own tradition, still becomes inextricably tied with indigeneity, versus blackness as defined alongside the whiteness of early European settlers and subsequent waves of European immigrants in the south and southeastern regions of Brazil (Sansone 2003; Salles 1971; Deus 2008). In the case of this dissertation, “indigeneity” implies not just ethnicity or descent, but more so connection and right to a territory and the resources within that territory. The rights of “indigeneity” is extended to African descendant populations throughout the Americas in disparate ways and can lead to differences in territorial rights, aid from the state, the ability to form alliances with NGOs, and ultimately how “autonomous” communities are (Hooker 2005; Ng’weno 2014).

Coupled alongside a notion of indigeneity, in the space of the Amazon, blackness is a much more bound condition of citizenship. In this context, political conversations become ecological, taking into consideration ethnicity and race alongside space and power, with natural resources as points of contention. In this dissertation, health is one such conversation that has been transformed into an ecological matter. I argue that mainstream approaches to blackness in Brazil, both in political and academic spheres, have perhaps most commonly been channeled into policies around healthcare and the continuation of black life, but mainly in urban areas and focused on the availability and quality of biomedical healthcare for black populations (Caldwell
Similarly, academic and political discussions around bioprospecting tend to discuss health as a pharmaceutical concern or bioprospecting as an economic matter, rather than how bioprospecting may affect, either directly or indirectly, the health of local populations that are involved in bioprospecting (Laveaga 2009; Hayden 2004).

But an ecological, and specifically a political ecological approach, to the study of health inequality and bioprospecting assumes that both people and plants are agential parts of the environment that interact through various systems, including those that are political economic and biological. I argue that black environmentality, as practiced by the traditional communities in this dissertation, is one such ecological approach. In this dissertation specifically, a refocus on the agency of actors within communities from this ecological perspective allows for a discussion of the role of women in particular and the gendered power dynamics around the knowledge and use of medicinal plants. In this case, women do not only occupy a certain political space (where previous studies on black politics in Brazil have placed their focus), they carry particular knowledges — medical and environmental — that give them a power that threatens hegemonic biomedical power structures propagated by policies. In the context of bioprospecting and emergent government programs around traditional medicine, knowledge is currency that the women in my research actively tried to use. However, whereas policies favored a vertically hierarchical structure of power (i.e., that there is an “expert” or a group of “experts” that should lead health and environmental initiatives), the women in this study overwhelmingly organized horizontally, where no definitive expert or prescribed and static body of knowledge and/or practices emerged. Because of these differences, this power and currency, as practical as it might have been, rarely translated into political economic stability for communities as a whole.
In addition to a general knowledge of both acute and chronic conditions, women in this study held a specific set of medical knowledge around reproductive and sexual health, which proved to occupy a significant part of men, women, and children’s lives. But women’s knowledges simply did not receive a stamp of full legitimacy in and of itself from government policies and programs. It had to be accompanied by biomedical expertise, which was often absent, but when present led to disagreements and cases of exploitation (in the case of women in Campo Grande, in Baião), a lack of sustained governmental support (in the case of Campo Grande and Pimenteira, in Santa Luzia), or the acknowledgement of only a small portion of the knowledge that women held (in the case of Oriximiná). In the one instance where women organized to establish a long-term grassroots pharmaceutical operation, in Santa Luzia, some of the women felt that the labor that they put into the operation did not pay off. In Oriximiná, the success of a medicinal plant pharmacy required substantial time away from traditional territories themselves, and participation in a more urban lifestyle. Ultimately, traditionalism and fair compensation for the women’s knowledge and labor seemed incompatible in all three of the municipalities in this dissertation. Such structural factors lead to women not being considered legitimate producers of knowledge.

Continuing to place women at the center of conversations at this intersection of environmental anthropology and medical anthropology raises the question of who knowledge is ultimately used for. In the imagined political future of the women actors in this study, that knowledge would first be used for their own communities, and then aggregated in order to make at least some profit for themselves at the local level. All of the women in this dissertation have begun to work towards that goal through the organizing of nonhegemonic regional, national, and international alliances, and the imagining of autonomous space and economics outside of
government granted rights. Yet still, the political futures for these communities, similar to their presents and their pasts, will likely be precarious. During fieldwork, a slew of political changes began to cause the populations in this study to rethink their positioning as traditional populations.

President Dilma Rousseff (from the Worker’s Party, or PT), was ousted in the first half of 2016 and replaced by her right-wing vice-president, Michel Temer. Almost immediately, Temer and his colleagues from the same and other right-wing parties began to propose a reversal of several policies that were in favor of the development of traditional communities and Afro-Brazilian populations. Temer halted the program *Farmácia Popular* within a year of being in office. In 2017 there was a threat to change the *Código Florestal*, which would open some reserve areas in the Amazon region to the use of private companies. The new president attempted to undo legislation around *quilombola* communities at the end of 2017, an extended process which ended in congress overturning his proposal in early 2018. A few impactful environmental disasters and assassinations of environmental activists, especially in the Amazon region, raised concerns about the negligence (and hostile position in general) of the federal government in political matters of the north of the country. A number of Afro-Brazilian religious leaders were murdered, and Evangelical politicians began to gain a voice on a national stage, spewing violent language against Afro-Brazilian religions. These political changes made the vulnerable political conditions of traditional black communities even more dire, arguably further reifying the legitimacy and urgency of the label. The knowledge and practice of using medicinal plants, therefore, continue act as both corporeal and political protection in the midst of this governmental uncertainty.
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