

**Bio-sociocultural aesthetics:
indigenous Ramkokamekra-Canela
gardening practices and varietal
diversity maintenance in Maranhão,
Brazil**

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Abstract

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This thesis is an attempt to bring to light the value and importance of gardening and varietal diversity maintenance in the indigenous Jê-speaking Ramkokamekra-Canela community of Maranhão, Brazil. Formerly a semi-nomadic community with small garden plots, the modern-day Canela have become subsistence horticulturalists with a dual garden plot system where species and varietal diversity thrive. Thus, the thesis seeks to understand this transformation through a focus on mythic, historical, and contemporary accounts of gardening activities and practices that appear to promote and maintain cultivated crop diversity. Through a comparison with other Jê-speaking communities in northeast and central Brazil, the thesis posits that Canela gardening and varietal diversity maintenance incorporate the transformation and continuity that are common aspects of Jê 'life-worlds.' Additionally, through an exploration of everyday gardening practices and individual and communal rituals in and around garden spaces, the thesis suggests that Canela gardening can best be conceptualized as a series of multi-sensory, embodied engagements between human gardener 'parents' and their growing plant 'children.'

In order to explore these engagements fully, the thesis draws on phenomenological (in particular that promoted by British anthropologist Tim Ingold) and other approaches that seek to question the boundaries between the biological, cultural, and social dimensions of life. It is argued that in the emergent Canela 'bio-sociocultural life-world,' certain relational pathways between and among human gardeners and cultivated plants become valued and meaningful through an 'aesthetics of landscape' that incorporates multiple sensory modalities. Thus, the 'bio-sociocultural aesthetics' theoretical approach is put forward as a comprehensive way of understanding the Canela life-world and the myriad human-nonhuman engagements that unfold through and within it.

*To my inxê, for her courage, and for showing me the endless beauty of her
plant 'children'*

And to Lããlãc, for the journey



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Map 1: Cerrado biome and Jê-speaking groups

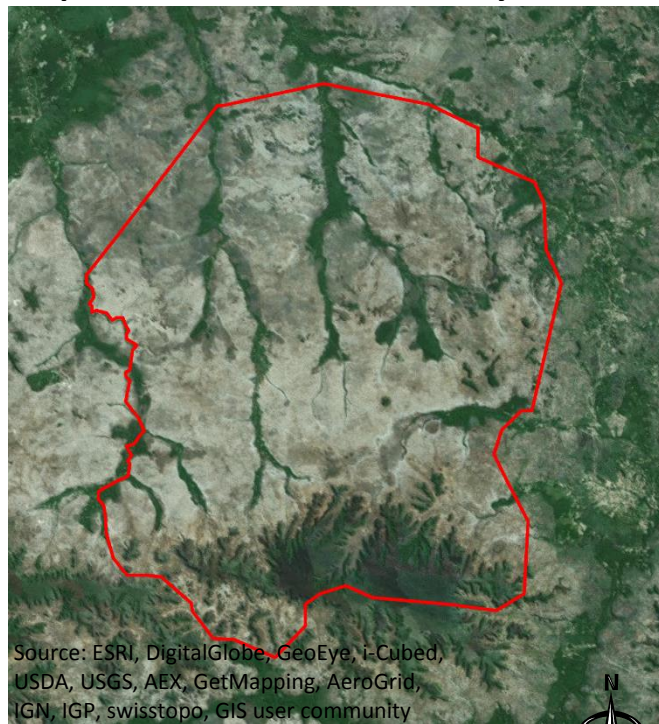


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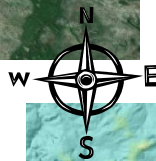


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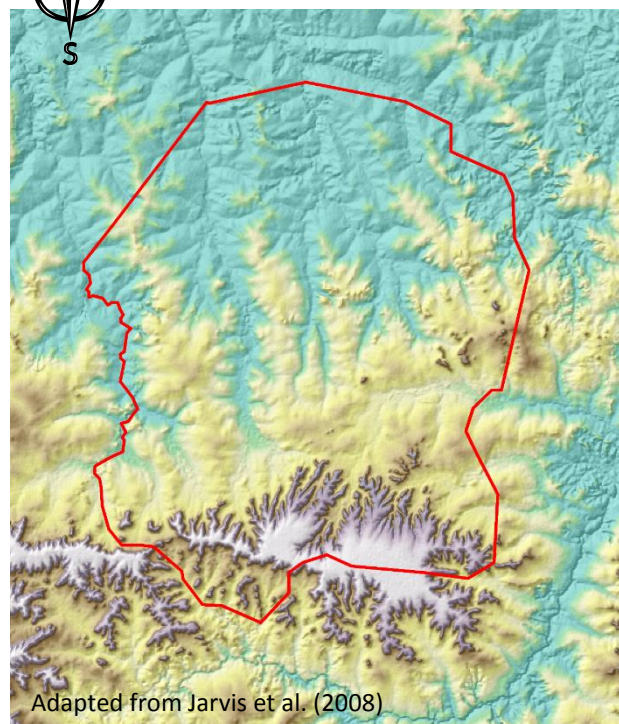
Map 3: satellite view of territory



0 10 20 KM

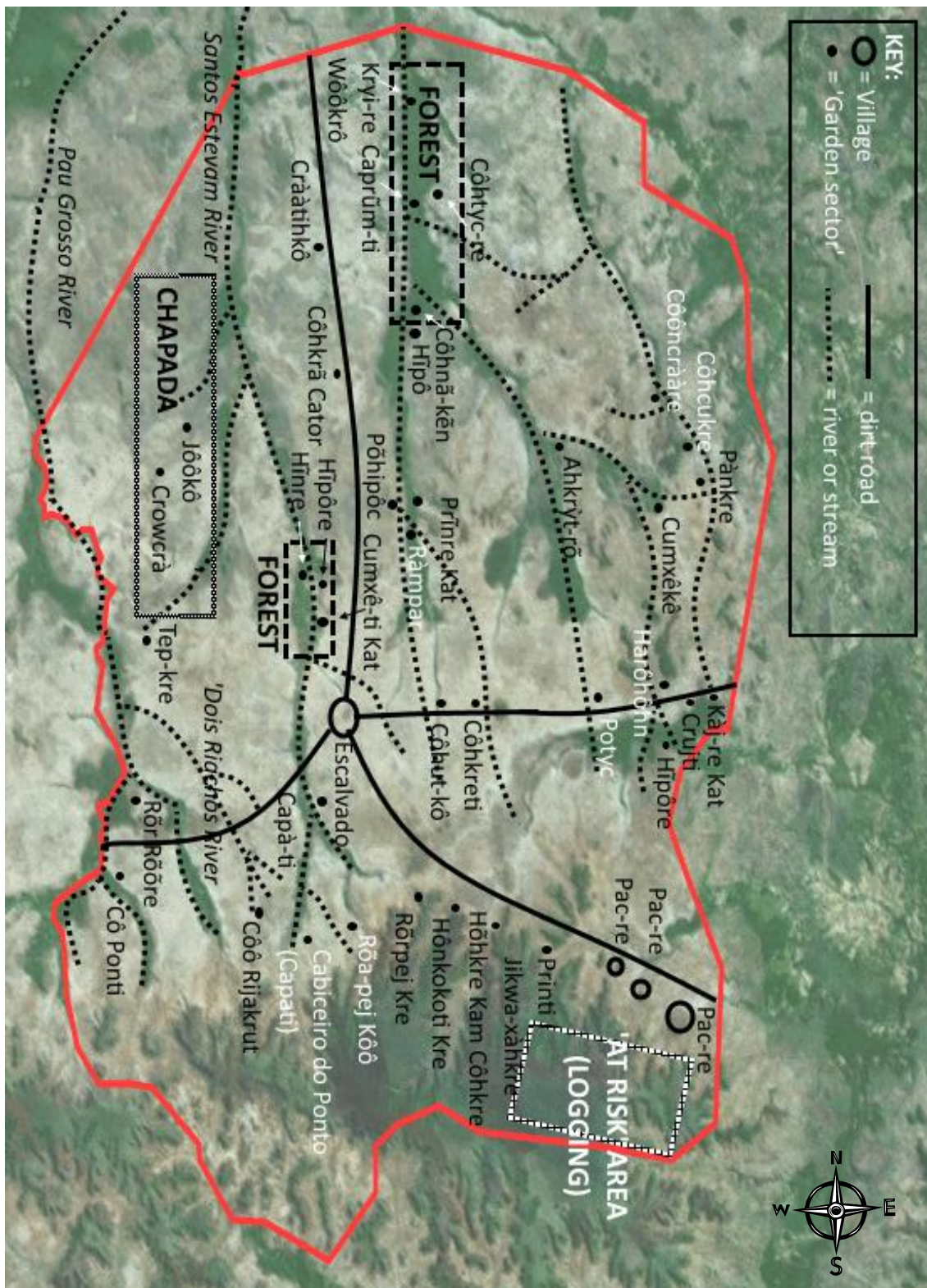


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0 10 20 KM

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Chapter 1

Placing the Ramkokamekra-Canela in the wider sociocultural and ecological context

Introduction

This research [on gardening] opened my eyes, my ears, and my mouth. My research, your research, is for me more than the light of the world! [Laughs] ... [And] I am very happy. I am going to stay happy all the time, every year; I am never going to feel weak, I am never going to feel sad. I want to be happy all the time, every year, every month. Do you know why? Because I have education! I have knowledge! ... I have to have courage, to have happiness, to have strength...and this work is very important for me. It is not negative; it is not false. It is true what you are doing. In my understanding, it is like this. It is very important; it is very *impej* for me.

-Liliana, February 2013¹

The indigenous Ramkokamekra-Canela of Maranhão state, northeast Brazil, are a community of gardeners. As subsistence horticulturalists, the Canela spend much of their lives working in their gardens and being nourished by their garden produce. Far from being solely a socioeconomic practice, however, gardening in the Canela community is valued and made meaningful for its combined ecological, biological, sociocultural, and cosmological importance. In this thesis, I explore the myriad and overlapping meanings and values that Canela community members give to gardening activities and garden

¹ Canela names have been changed from their originals throughout the thesis in accordance with the prior informed consent document that Canela research assistants agreed to verbally and/or in writing. Canela men and women typically acquire between 2-8 Canela names throughout their lives from their naming-uncle and naming-aunt, respectively (cf. Nimuendajú 1946: 77; see Chapter 4, p. 120). Parents usually give a child a Portuguese name as well which people typically use when conversing in Portuguese and interacting with outsiders (although they are increasingly using these names amongst themselves). Since Canela names may identify particular people more easily, I have chosen to substitute both Canela and Portuguese names for Portuguese pseudonyms in this thesis.

spaces within their territorial landscape. I posit that the Canela live in what I term a 'bio-sociocultural life-world' in which multi-sensory, embodied encounters between and among a variety of human and nonhuman beings are valued and made meaningful in diverse ways by those beings whose lives unfold in the life-world. This life-world incorporates Canela humans, whose lives unfold in village and garden spaces (and outside of the indigenous territory), as well as nonhuman beings such as supernatural entities, animals, objects and artefacts, and wild and cultivated plants. The thesis gives particular focus to the multiple species and varieties of plants that Canela gardeners cultivate and to the human-plant relationships that develop over time in the diverse spaces that make up the life-world. While historical records indicate that gardening was a marginal activity in the past, my fieldwork suggests that pursuing relationships with cultivated plants and engaging in gardening activities have become central components of what it means to be 'Canela' in the late twentieth and early twenty-first century. Thus, this thesis is about modern Canela 'identity' in a holistic sense, as the Canela people mediate a space for themselves to be gardeners in the savannah biome of twenty-first century northeast Brazil.

The above quote highlights some of the overarching themes that emerged throughout the fieldwork and that have taken shape to form this thesis. Firstly, there is an emphasis on engaging multiple senses – opening one's eyes, ears, and mouth to interact with and relate to another being. While in this case Liliana is speaking of her relationship to myself, the anthropologist, there are numerous examples in the thesis of Canela people seeking out multi-sensory engagements with other humans and nonhumans, especially cultivated plants. Conversely, there are also instances explored in Chapter 7 when encounters with certain beings, such as deceased Canela 'souls' and non-indigenous Brazilian neighbours,

are avoided due to the bodily harm that such relationships can cause. Whether pursued or avoided, embodied engagements between and among humans and nonhumans appear to inform much of Canela daily life and therefore form an ever-present theme throughout the thesis. Secondly, the quote sheds light on the importance of happiness and strength, known by the Canela term *ihȳi*, as opposed to experiencing sadness and weakness, or *ihpêc* in the Canela language. How these oppositional concepts shape everyday experiences, particularly working in garden plots, is a major focus of Chapter 5.

Related to the concepts of feeling happy and strong or sad and weak are the Canela terms *impej*, or that which is 'true,' 'original,' 'beautiful,' and 'good,' and *ihkên*, that which is 'false' or 'less than original,' 'ugly,' and 'bad.' Another pair of opposites, the concepts of *impej* and *ihkên* are integral to understanding Canela cosmological origins, socio-political organization, ethnobotanical classification of garden crops, and conceptualizations of individual and societal wellbeing. As such, I interweave this conceptual pair throughout the chapters and devote Chapter 8, the concluding chapter, to a detailed exploration of how these concepts shape the overarching Canela life-world. Thirdly, Liliana's quote brings to bear the importance of ecological learning and knowledge acquisition for Canela gardeners. Throughout the thesis and especially in Chapters 4, 5, and 6, I explore the ways in which Canela gardeners learn how to engage with the diverse soils, eco-regions, and types of gardens within their territorial landscape. Additionally, I examine the role of ethnobotanical classification in ecological learning and active 'knowing' (cf. Kohn 2002), as well as the value that Canela gardeners place on maintaining multiple crop species and varieties.

To give depth to the multi-sensory human-nonhuman encounters, experiences of 'wellbeing' and happiness (or the opposite), and ecological learning and 'knowing' that inform the Canela life-world, the thesis includes a combined mythical-historical approach to these themes in Chapter 3. I explore the dramatic changes that the Canela community have experienced from the earliest historical records of their existence in the seventeenth century to the present day, with a particular focus on their shift from being semi-nomadic trekkers with small mobile villages and gardens to their modern state as skilled horticulturalists living in a large permanent village. In addition, the historical record combined with mythical storytelling provides a fascinating picture of how the Canela have mediated engagements with those who are classified as 'Other' over time, including supernatural entities, historical figures, neighbouring indigenous communities, non-indigenous Brazilians, animals, and plants. As these myriad engagements have changed over time within the Canela life-world, so too have the values and meanings of such encounters shifted for the Canela community.

The nature of the Canela life-world is touched upon throughout the thesis, and I explore it in detail in Chapter 2. Drawing from the works of Ingold (2000, 2006, 2007a, 2007b, 2011, 2012a, 2012b, 2013), Pálsson (2013), Ingold and Hallam (2014), and Vergunst et al. (2012), I seek a definition of what I term the 'bio-sociocultural life-world.' I posit that this life-world is emergent and composed of 'becomings' (Ingold and Pálsson eds. 2013) or 'unfoldings' of human and nonhuman paths of life. Those intersections of life pathways that the Canela value and make meaningful, I hypothesize, comprise a Canela 'aesthetics of landscape' (Vergunst et al. 2012) that is multi-sensory and embodied. I return to and expand upon this theoretical discussion in Chapters 4 and 8, where I explore how the structure of the Canela life-world appears to unfold in dualistic and triadic ways.

In this chapter, I introduce the Canela in their sociocultural and ecological context, while also providing some background of my own research with them in 2012-2013. I explain my research methodology, including the qualitative and quantitative methods I employed throughout the fieldwork, and I examine the role of the anthropologist in the community, including those who preceded me. I take into account the rapidly changing field context in terms of the presence of money, governmental institutions, missionaries, and non-governmental organizations. Moving on from this brief description of my own experiences in the field, I compare Canela experiences of historical change and the shifting role of gardening with that of other indigenous communities in the Eastern Timbira linguistic subgroup and the wider Macro-Jê language stock to which the Canela belong. Drawing from the work of Gordon (2006), Ewart (2013), and others, I posit that the Canela share the capacity for transformation and change, especially with respect to gardening activities and knowledge, that appears to be common throughout Jê communities.

In terms of the community's ecological context, I provide a description of the savannah (Cerrado in Portuguese) biome in which the Canela territory exists, with a particular focus on the diverse flora, fauna, and eco-regions that comprise the largest savannah in the Neotropics (Simon and Pennington 2012: 711). I explore how the Canela engage with and conceptualize this diverse environment, including their ethno-classification of eco-regions and soil types, and I look at how Canela gardening and varietal diversity maintenance could potentially affect the Cerrado landscape. With the Cerrado being more rapidly deforested than the Amazon region (Klink and Machado 2005: 707), I posit that expanding our understanding of the role of indigenous communities such as the Canela in influencing or maintaining biodiversity in the region is of the utmost importance.

The fieldwork context: participatory methodology and the shifting role of the anthropologist

I conducted fieldwork with the Ramkokamekra-Canela community from April 2012 to March 2013, with a preliminary research visit in July 2011. During this first visit, I accompanied Dr William Crocker on his final fieldwork trip to the Canela village of Escalvado. As Dr Crocker has over 50 years of fieldwork experience with the Canela, I learned much from him during this visit and through our continued meetings and conversations since then. Upon his recommendation, I was ‘adopted’ by the well-known expert gardener Liliana and her matrilineal family who live on the western side of Escalvado village. My partner also travelled with me for this initial visit, and he was ‘adopted’ by the family of Marcelo, a male elder who lives on the eastern side of the village. This process was necessary to follow Canela marriage patterns, as marriages must follow the eastern/western conceptual division of the village to avoid incest (see pp. 115-116 in Chapter 4 for a detailed description of kinship and marriage patterns).

A main component of the ‘adoption’ was a ritual naming ceremony in the ceremonial centre of the village, although the Canela themselves are named in the home as infants. Early one morning, the male council of elders called my partner and I to the ceremonial centre, where we were ritually named – me by my Canela father’s sister (*tùy*), and my partner by his Canela mother’s brother (*kê*t). My partner was named Lããlãc, which means ‘thunder’ or ‘loud noise overhead,’ and my father’s sister named me Toaxêkwỳj (*kwỳj* is woman in Canela), which means either ‘woman running behind a man’ or ‘woman being chased by a man.’ From then on, my family and others in the village referred to me by this name only. To finalize our initiation into the community, our two families performed what

appeared to be a kind of hybrid girl's maturation ceremony and marriage ritual (cf. Crocker 1990: 107; see pp. 128-131 in Chapter 4). The women in each of our families painted us with black *jenipapo* and red *urucum* body paint, using the intricate designs reserved for 'unmarried' youths (because we do not have children, we were only partially considered 'married' in the Canela sense). As a substitute for the *beribu* manioc and meat pie normally made for marriage rituals, my family prepared enormous bowls of chicken and rice for the male leadership council to eat in the ceremonial centre. Then, in the full body paint and adorned with numerous beaded (*miçanga*) necklaces, my partner and I slowly walked from each of our respective houses to meet in the centre. With this symbolic gesture of introduction, I was then welcome to return to the village (albeit with a constant flow of gifts to exchange, as I discuss below).

In addition to initiating important relationships with Canela community members, especially with my matrilineal family, the first visit also laid the groundwork for the fieldwork in terms of methodology. I discussed my interest in Canela gardening practices with some community members, and found that they profoundly shared this interest and were eager to work with me on this topic. Fernando, a male elder who had worked with other anthropologists including Dr Crocker, showed me lists of varieties of maize, yam and other cultivars that he had comprised. Liliana, meanwhile, shared with me her assortments of beans and yam cuttings that she brought from her garden plots.

When I returned for the fieldwork in April 2012, I assembled a group of Canela gardeners with whom I conducted research that included Liliana, Fernando, and two other male gardeners, Renato and Wander. Drawing from Fernando's initial lists of cultivated crop varieties, as a group we compiled extensive lists in Canela and Portuguese of known

cultivated crop species and varieties grown in Canela gardens, as well as lists of tree species native to the Cerrado and *chapada* (see Appendices A and B [pp. 349-376]). To strengthen this quantitative data, I also conducted quantitative surveys with fourteen individuals (seven couples) on which cultivated crop species and varieties they currently or recently cultivated, using the lists compiled with the main research group. To compile these data, I employed the principals of ethnobotanical research methods, including 'freelisting' (Quinlan 2005; Martin 2005; Albuquerque and Lucena 2004). Owing to the fact that Canela gardeners are frequently acquiring new varieties and species from outside the village and sometimes appear to 'create' new varieties through outcrossing in garden plots (see pp. 169-170 in Chapter 5), I consider the ethnobotanical lists I compiled to be flexible and dynamic, and I term them 'living lists' (cf. Miller 2014).

Apart from these quantitative lists, the majority of data I collected were qualitative, through the anthropological research methods of participant observation and formal and informal interviews. I conducted on-going interviews in Portuguese with Canela vocabulary with the main research group and with individual members of the group, as well as with other expert gardeners and community members. While I audio-recorded most of these interviews, some of them took the form of informal conversations that I later documented through written notes. The topics of the interviews ranged from gardening techniques, garden layouts and locations, seed saving and exchange, and culinary and ritual activities involving garden produce, to more general aspects of Canela life including birth, childcare, ceremonial activities, shamanic experiences, the role of money and social assistance payments, and even forms of evangelical Christianity to which some people have converted.

In terms of participant observation, I participated and observed as much as possible during my time in the village, including visiting garden plots, surveying crops and cultivation techniques, documenting and observing planting, harvesting, and food processing activities, and participating in and documenting ritual singing, dancing, and feasting. As I lived in my family's home, I also engaged in the daily activities of eating, bathing in the stream, sorting seeds and cuttings, and chatting inside or in front of the house. I recorded these activities through written notes, audio- and audio-visual recordings, and photography. While one cannot possibly observe or participate in every aspect of a community's life-world in one year's time, my research and this thesis provide a snapshot of the Canela life-world that can expand our understanding of this community and its rich and emergent gardening practices.

Prior to and throughout the fieldwork, I took into account certain ethical considerations regarding the nature of my research and of the community members' participation. I obtained authorization to conduct the fieldwork from the Brazilian National Research Council (*Conselho Nacional de Pesquisa, CNPq*) and the National Indian Foundation (*Fundação Nacional do Índio, FUNAI*), and I received a research visa from the Brazilian Consulate. The Central University Research Ethics Committee (CUREC) approved my research plan and my prior informed consent letter for the research participants, and all the Canela participants signed and/or verbally agreed in an audio recording to this letter translated into Portuguese. Most Canela people, including men, women, and children, can speak and read Portuguese, and we therefore communicated in Portuguese with much Canela vocabulary and phrases that I learned throughout the fieldwork. I collected the ethnobotanical lists in Canela and Portuguese, and I have provided English translations as well (see Appendices A and B [pp. 349-376]).

As part of my ethical commitment to the community, I utilized a participatory approach to the research, encouraging the participants to voice their opinions and shape the research as it developed. In conjunction with this approach, I have adopted Crocker's (2007) term of 'research assistant' instead of the more traditional anthropological term 'informant'² to describe the community members with whom I worked. As Liliana's quote at the beginning of this chapter indicates, she appreciated the participatory research and told me it strengthened her commitment to gardening and seed saving. Later in that same conversation, Liliana said she would 'never leave the research that [we] did' and she would 'pass [it] along to my grandchildren.' In another conversation, she also referred to herself as an anthropologist, highlighting her confidence in the participatory research approach.

Liliana and the other community members with whom I worked were familiar with anthropologists visiting their village, and in many ways, they showed me what was expected of me as a fieldwork researcher living in Escalvado. Curt Nimuendajú (1946) was the first anthropologist to live and work with the Canela between 1929 and 1936, and William Crocker conducted his first fieldwork in 1957-1958, returning frequently over the past five decades until his final fieldwork trip in 2011. Meanwhile, a number of other anthropologists have worked with the Canela during this time and more recently, including Ladeira (1982), Rizzo de Oliveira (2005, 2007), and Panet (2010), among others who have researched the Canela and other neighbouring Timbira communities (cf. Sousa do Nascimento 2009; Siqueira Jr. 2007). Thus, the Canela are accustomed to having

² Crocker (personal communication), a WWII veteran, once explained his distaste for the term 'informant' because of its connotations that the research participants were 'informing' on their fellow community members in a clandestine manner.

anthropologists in Escalvado, particularly during festival periods when researchers and students frequently visit and observe the ritual splendour.

Nowadays, anthropologists, particularly foreign ones, are expected to contribute large amounts of gifts to their adoptive families and to the community in general. As my family members frequently told me, these gifts were to 'thank' and 'give happiness' to the people (*'agradecer e dar alegria ao povo'* in Portuguese). I was also expected to replenish the goods I brought after they had been distributed, so I made periodic trips by truck to the nearest town of Barra do Corda and sometimes by bus to the city of Teresina (in neighbouring Piauí state) to purchase more gifts for the community. The goods included: gardening tools such as machetes and axes; kilos of the small beads (*miçanga; ken-re* in Canela) that women use to make jewellery; yards of brightly-coloured cloth for women's skirts; cooking gas and cooking pots, pans, and coffee thermoses; other manufactured goods such as soap, shampoo, flashlights, batteries, scissors, nail polish, hair clips, hairbrushes, and toys for children; and foodstuffs including coffee, salt, sugar, rice, beans, noodles, cooking oil, *farinha* (toasted manioc flour), beef, and chicken.

While my family usually distributed most of these items amongst themselves, I also engaged in numerous gift exchanges with community members. Word would spread that I had gifts to exchange, and people, primarily women, would come to my mother's house to trade their beaded jewellery for soap, shampoo, nail polish, or even a small bag of beads, thereby continuing the cyclical nature of this exchange. Over the course of the year, I engaged in hundreds of these exchanges, so that I now have a collection of almost 300 pieces of *miçanga* jewellery. In addition, I paid the research assistants a daily wage

for their work, a system that Dr Crocker initiated³ and to which people have grown accustomed in the village. Once again, the wages were framed in terms of ‘thanking’ and ‘giving happiness’ to the research assistants, so that they would not think of me as being ‘stingy’ and therefore unfriendly.⁴

Despite the nearly constant flow of goods that I would bring, it became clear that my gifts would never satisfy Canela demand, and people sometimes told me that I had brought ‘only a little’ instead of the large amounts of gifts they had received from Dr Crocker. While it is true that Dr Crocker often purchased large items such as heads of cattle⁵ for the entire community, I suspect that Canela demand for outside goods far surpasses any supply that anthropologists or others can provide. This may stem from the effects of Indian Protection Service agents (*Serviço de Proteção aos Índios* or SPI, FUNAI’s predecessor) and the anthropologist Nimuendajú, who established relationships with the Canela in the 1930s and encouraged gift-giving and exchange, thereby exaggerating ‘monetary values...in Canela expectations’ (Crocker and Crocker 2004: 28).

My experiences of gift giving and exchange in Escalvado bear certain similarities to Gordon’s (2006) experience with the Xikrin do Cateté of Pará state, another Jê-speaking community. Although the Canela do not receive large payments from a multinational mining company as the Xikrin receive from Vale, they do appear to have a seemingly ‘infinite’ demand for manufactured goods that an anthropologist typically cannot meet

³ Dr Crocker typically paid his research assistants the equivalent daily wage that the Canela received to work on nearby farms owned by non-indigenous Brazilians. While this system of agricultural day labour is less common than it was a few decades ago, I also paid my research assistants this rough equivalent for their work with me.

⁴ The opposition between generosity (*hà?kayren*) and stinginess (*hõõtsè*) is conceptually significant for the community (Crocker 1990: 184). Chapter 8 (pp. 308-310) explores conceptual oppositions in more detail.

⁵ In 2012, the cost of one mature cow from a nearby cattle rancher was approximately BRL 1300-1600.

(cf. Gordon 2006: 53-55). While this demand for goods certainly shaped my fieldwork experiences, over time I was better able to understand the 'economy of exchange' and my role in it. It also provided me with a Canela perspective of travel, since many community members are themselves periodically traveling between Escalvado and Barra do Corda for various reasons, including collecting governmental social assistance payments and purchasing goods with the money. In fact, the local shopkeepers in Barra do Corda often helped me with the purchases, since they know which types of cloth the Canela women prefer when they come to shop in town. It is interesting to note that other outside actors who visit or live in Escalvado typically do not bring gifts with them or engage in gift exchange. FUNAI officials, FUNASA (National Health Foundation, *Fundação Nacional da Saúde*) health workers, non-governmental organization workers, schoolteachers, and missionaries did not engage in the same type of gifting as myself, nor did it appear that they were expected to (although I did hear a few complaints about the 'stinginess' of some of the missionaries). Perhaps stemming from the legacy of giving large gifts left by Nimuendajú and Crocker, gift giving and exchange has clearly become an established part of an anthropologist's role in Escalvado, and it was an integral part of my anthropological fieldwork.

Sociocultural context: historical change and gardening transformations in

Jê life-worlds

As part of the Macro-Jê linguistic stock, the Ramkokamekra-Canela share many sociocultural traits with and have undergone similar historical changes as other Jê-speaking communities that live in northeast and central Brazil. The Macro-Jê language

stock is commonly divided into the Northern and Western, Central, and Southern linguistic sub-groups, with Bororo sometimes included as a separate yet related language (Nimuendajú and Lowie 1937: 565-566; Maybury-Lewis 1979a: 4). Within the Northern-Western sub-group, there are two branches of Timbira languages – the Eastern Timbira branch including the Krahô, Krĩkatí, Gavião Pykobjê, Gavião Parkatêjê, Apaniekra-Canela, and Ramkokamekra-Canela⁶ communities, and the Western Timbira branch comprised of the Apinayé, although Coelho de Souza (2002: 218) argues that this community includes a combination of Eastern Timbira and Kayapó sociocultural and linguistic traits. As Maps 1 and 2 show (p. 6), all of these Timbira communities have legally demarcated territories in the northeast region of Brazil in the states of Maranhão, Tocantins, or Pará (cf. Ávila 2004; Instituto Socioambiental 2014). The Northern-Western sub-group also includes the Northern Kayapó, the Panará (of Southern Kayapó origin), and the Suyá (Kisêdjê), who live in legally demarcated territories throughout Pará and Mato Grosso states in northeast and central Brazil. The Central Jê sub-group includes the Xavante and Xerente, who live in territories in Mato Grosso and Tocantins (Nimuendajú and Lowie 1937: 566; Instituto Socioambiental 2014).

Jê-speaking communities are known in the ethnographic literature for their matrilineal residence patterns, circular or semi-circular villages, elaborate ceremonies, and a traditional trekking and horticulturalist subsistence economy with a ritual emphasis on

⁶ The Apaniekra-Canela share the same language and sociocultural traits as the Ramkokamekra-Canela, but each community considers itself a distinct group. In this thesis, I use 'Canela' to refer to the Ramkokamekra-Canela only, following Crocker's (1990, 1994, 2007) usage of the term. As Crocker and Crocker (2004: 12-13) point out, the origin of the name 'Canela' is unknown, but by the early nineteenth century local Brazilian authorities were commonly using this term to refer to the ethnic group. Nowadays, the Canela refer to themselves as 'Canela,' 'Ramkokamekra,' or '*mêhĩn*' (*mê* = plural form and *hĩn* = 'flesh') which translates as 'people' in their language. I explore the auto-denomination of *mêhĩn* throughout the thesis, and particularly in Chapter 7 (pp. 265-267) as opposed to the term *cupẽn* used to describe non-indigenous Brazilians and foreigners.

maize cultivation over manioc (Heelas 1979; Seeger 1981; Lea 2001). Much of the literature has focused on Jê conceptual dualisms, especially the common conceptual division between the male ceremonial sphere in the village centre and the female domestic sphere that comprises the 'peripheral' circle of houses (Maybury-Lewis 1979a: 9). In addition, the Timbira communities such as the Canela typically have radial pathways connecting the ceremonial centre with the concentric circle of houses in the village, seasonal moiety-based rituals, and ceremonial log racing (Azanha 1984: 3), although Ewart (2013: 62) notes that the Panará used to engage in log racing as well.

Jê-speaking communities have been the subject of anthropological inquiry for nearly a century (cf. Nimuendajú 1946; Nimuendajú and Lowie 1937), and ethnographies focused on Jê sociocultural systems have influenced the anthropology of lowland South America and the discipline as a whole (cf. Maybury-Lewis ed. 1979; Lévi-Strauss 1966, 1970). Major themes of this research include social and spatial organization, kinship structure and naming systems, moiety-based ceremonies such as male initiation rites, hunting activities, and more recently, a focus on socio-political organization and identity politics (cf. Maybury-Lewis 1967; Da Matta 1973; Seeger 1981; Lea 1986; Crocker 1982; Turner 1991, 1992; Fisher 2003; Graham 2005; Turner and Fajans-Turner 2006; to name a few). While these aspects of Jê society are undoubtedly important, the role of gardening practices within these communities has received less analytical attention, with only a handful of ethnographies focusing on the subject (cf. Heelas 1979; Ewart 2000, 2005, 2013; Posey and Plenderleith 2002). In this section, I explore historical and more recent accounts of gardening among a number of Jê communities in order to shed light on its shifting role and increased importance in modern-day indigenous Jê life-worlds.

There are few accounts of these communities before sustained contact with the Brazilian national society, but there are indications that Jê groups were semi-nomadic and engaged in warfare with each other and with other indigenous groups. Azanha (1984: 8-9) notes the Timbira affection for warfare, with Timbira groups openly engaging in combat with each other and with the Brazilian army and settlers throughout the first half of the nineteenth century. The Xavante and Kayapó also have long histories of intra- and inter-group warfare into the twentieth century (Garfield 2001: 74-75; Posey and Plenderleith 2002: 24).

As primarily semi-nomadic groups, Jê communities (and especially men) typically went on extended trekking hunting trips and both men and women maintained small gardens in their semi-permanent villages and/or along their trekking paths. According to Nimuendajú (1946: 57-58), gardening is a Jê tradition that dates back to at least the eighteenth century, and pre-contact Eastern Timbira gardens were most likely small and focused on crops such as maize, manioc, sweet potatoes and yam. A late eighteenth-century account of the Apinayé growing manioc 'on a large scale' may indicate that garden plots were sometimes larger as well (cf. Nimuendajú 1946: 58). Melatti (2007: 102) similarly argues that slash-and-burn or 'swidden' (*coivara* in Portuguese) agriculture is indigenous to the Amazon region, and that Brazilian settlers learned the cultivation method from neighbouring indigenous communities. Gardening was significant to Jê warfare strategy as well, with raiding enemy gardens for new crop species and varieties a common Kayapó practice into the early twentieth century (Posey and Plenderleith 2002: 24-27). The Panará also raided enemy gardens, which were seen as the source of valuable goods (Schwartzman 1988: 259).

While many Jê communities had intermittent contact with non-indigenous colonists from the time the Portuguese first arrived in 1500 and especially from the eighteenth-century onward when settlers began migrating inland (cf. Garfield 2001: 50), different groups began experiencing sustained contact with the larger Brazilian society at distinct points throughout their histories. The Eastern Timbira were some of the first Jê groups to engage in warfare with the Portuguese in the eighteenth century, and by the beginning of the nineteenth century the Brazilian government and settlers had largely encroached on their territory (Nimuendajú 1946: 3-4). The Canela entered into a peace treaty with the Brazilian government in 1814, although skirmishes with settlers continued for a few more decades (Crocker and Crocker 2004: 15-17; see pp. 75-76 in Chapter 3). The Krahô fought with the Brazilian army until the mid-nineteenth century, when they too were 'pacified' through a peace treaty (Azanha 1984).

Meanwhile, the Kayapó, Xavante, Suyá, and Panará remained as autonomous groups well into the twentieth century. The Kayapó were first contacted in 1938 by agents of the Indian Protection Service (SPI), and SPI agents established contact with and 'pacified' Xavante groups from the 1940s to the 1960s (Turner 1991: 286; Garfield 2001: 45). The Suyá and Panará were 'pacified' more recently in the 1960s and 1973, respectively, and their experience with contact resulted in massive population loss through disease (Seeger 1981: 53-54; Ewart 2000; 2013: 11-12). Along with sustained contact came the legal demarcation of indigenous territories (*Terras Indígenas*, TIs) by FUNAI and the Ministry of Justice, with the involvement of the National Institute of Colonization and Agrarian Reform (*Instituto Nacional de Colonização e Reforma Agrária*, INCRA). The demarcation process has undergone numerous legal changes since the 1970s and territories continue to be identified today. Currently, there are 693 legal TIs that comprise around 13 percent

of Brazilian territory (Instituto Socioambiental 2014). The Ramkokamekra-Canela territory, known as the TI Kanela, was demarcated in 1982, two years after the neighbouring Apaniekra-Canela territory of TI Porquinhos was established 45 kilometres to the east in Maranhão. Other Jê communities' territories have been demarcated from the 1970s through the present day, with the current Panará territory the most recently established in 2001 (Instituto Socioambiental 2014).

The legal demarcation of indigenous territories has, as Seeger (1981: 55-59) notes, assisted in the preservation of the sociocultural activities that are unique to Jê communities. Circular villages, socio-political organization led by a male council of elders, complex ritual ceremonies, and mythic storytelling remain important aspects of many Jê life-worlds, albeit with changes and modifications over time. The populations of Jê communities have grown as well, highlighting the groups' abilities to survive and thrive in the modern world. Although around eighty percent of their population was wiped out by disease post-contact in 1973, the Panará population now reaches over 400 individuals, close to their estimated pre-contact population size (Ewart 2013: 4, 12). The Suyá, who live in the Xingu Indigenous Park (*Parque Indígena do Xingu*, PIX), also lost around 90 percent of their population after contact in the 1960s, yet now comprise around 330 people (Seeger 1981: 54; Instituto Socioambiental 2014). Meanwhile, the populations of the Apaniekra-Canela, the Ramkokamekra-Canela, and the Krahô have grown to around 1,000, 2,100, and 2,400 people, respectively (Instituto Socioambiental 2014; IBGE 2010). The Kayapó and Xavante groups are comprised of multiple villages with total populations of more than 8,000 and over 15,000, respectively (Instituto Socioambiental 2014).

Legal demarcation has not stopped land disputes and territorial invasions from taking place, however, and Garfield (2001: 215) estimates that around 80 percent of recognized indigenous territories in Brazil suffer invasion by non-indigenous loggers, cattle ranchers, miners, and squatters, and by mega-development projects such as roads, hydroelectric dams, strip mines, and commercial agriculture. The high-profile case of the Belo Monte complex of hydroelectric dams and its effects on Kayapó and other indigenous and nonindigenous communities is a current example (cf. Severo da Silva 2012; Hernández and Magalhães 2011; Bingham 2010), as are threats to Xavante communities by cattle ranchers and industrialized soy plantations (Graham 2005, 2008). Although the Canela have not been affected by mega-development projects near their lands, during my fieldwork they were experiencing invasions from illegal loggers in the southeast region of their territory.

Another effect of legal demarcation has been the circumscription of indigenous subsistence livelihoods. For communities such as the Xavante, trekking seasons, formerly lasting for months at a time, had been reduced to a few weeks by the 1980s, and sedentary agriculture was becoming more prevalent (Flowers 1983). Gross et al. (1979) also recognized the impact of circumscription on traditional Jê hunting and gathering treks, claiming that most Jê communities rely on subsistence gardening activities much more so than they did in the past. Similarly, Kayapó warfare and raiding of enemy gardens have been replaced by peaceful intra- and inter-ethnic encounters and exchanges of crop species and varieties (Posey and Plenderleith 2002: 28). As early as the late nineteenth and early twentieth centuries, Melatti (1978: 46) states that the post-contact Krahô had begun shifting away from primarily subsisting on hunting and gathering to rely more on sedentary agriculture. By the mid-twentieth century, the Krahô had begun cultivating rice,

both for consumption and as part of FUNAI-led commercialization initiatives in the 1970s (Ávila 2004: 82). While the Canela previously relied on garden produce for only around twenty to twenty-five percent of their nutritional intake (Crocker 1994: 96; 2007: 33), in the mid-twentieth century they had increased the size of their garden plots (cf. Crocker and Crocker 2004: 34), and nowadays gardening is the primary subsistence activity (Chapter 3 [pp. 77-84, 87-88] explores the Canela history of gardening in more detail).

In addition to circular villages and socio-political and ritual-ceremonial similarities, therefore, many modern-day Jê communities appear to share an emphasis on subsistence horticulture activities. Jê communities typically perform rounds of slashing and burning plant debris to create new garden plots. The locations of garden plots vary among Jê groups, but tend to be further away from the main village space in more forested areas. Da Matta (1982: 41) describes Apinayé garden plots as being located on sloping hills near a river or a stream, and Heelas (1979: 245) notes how the Panará choose garden location based on the 'beauty' and therefore fertility of the soil. Canela gardeners have developed a two-garden system, maintaining plots in both forested and riverbank areas (see pp. 132-153 in Chapter 4). Garden layout also varies among different Jê communities, with the Panará and Kayapó known for their three-ring concentric circle garden layouts (Ewart 2013: 216; 2000: 25; Hecht and Posey 1989: 184-185) and the Apinayé, Suyá, Xavante, and Canela typically maintaining rectangular garden plots (Da Matta 1982: 40; Seeger 1981: 7; Maybury-Lewis 1967: 48).

Most of these communities grow similar crop species, including manioc, maize, beans, squash, sweet potatoes, yams, peanuts, and bananas, among others. Maize appears to be given particular ritual and cosmological significance across Jê groups (cf. Miller 2010,

2011). The crop is involved in male initiation and other life cycle rituals in Xavante and Kayapó societies (cf. Maybury-Lewis 1967: 42, 48; Hecht and Posey 1989: 182), and maize planting and/or harvest seasons are ceremonially celebrated in the Suyá, Apinayé, and Canela communities (cf. Seeger 1981: 64; Da Matta 1982: 68). While the Panará also have a ritual for the red maize harvest (Heelas 1979: 260, 302; Schwartzman 1988: 216-217), Ewart (2013: 226-227; 2000; personal communication) notes that the community places greater ritual significance on peanuts and directly connects them to human life cycles. The Canela also engage in ritual restrictions associated with peanuts, which I explore in Chapter 6 (pp. 239-240).

In terms of cosmological significance, there are many Jê origin myths that describe the introduction of horticulture, and especially maize, by mythical figures. The Timbira and Kayapó myths tend to attribute the origin of maize and/or horticulture in general to Star-Woman (cf. Wilbert ed. 1978: 209-215), and I explore the Canela version of this myth in Chapter 3 (pp. 92-99). A Mouse or Rat generally reveals maize and gardening to people in the Suyá, Panará, and other Kayapó myths (Seeger 2004: 26-27; Ewart 2000: 151-153; Wilbert ed. 1978: 215-227). While there are clearly differences in the garden layout, ritual significance, and cosmological basis of certain crops, the ethnographic literature indicates that gardening has played and continues to play an important role in Jê communities in the twentieth and twenty-first centuries.

Modern-day Jê gardening has certainly transformed from what it was a few decades, a century, or a few centuries ago, and more archaeological research is needed to shed light on the role of gardening in pre-contact Jê communities. Not only does gardening account for more of Jê subsistence and everyday activities than it did in the past, but the practice

has also been affected by multiple outside forces and by other indigenous and non-indigenous actors. Many communities lost a significant amount of aboriginal seeds over the past half-century due to relocation to new geographical areas, epidemics, and monocropping of introduced cultivars (cf. Crocker 1990; Seeger 1981; Ewart 2000; Ávila 2004). The Suyá and Panará, for example, were both relocated to the Xingu Park in the 1960s and 70s, and these moves combined with rapid population decline led to seed loss. While Seeger (1981: 105) identified a 'scarcity' of Suyá crops compared with neighbouring groups in the 1980s, it appears that by the 1990s they had recovered much of their gardening practices and were able to give maize varieties to the Panará, who lost their own during their relocation to the Xingu Park (Ewart, personal communication). Ewart (2013: 13) describes how the Panará continued to move throughout the park in search of 'good land for gardens' until they relocated to a part of the forest they used to inhabit and that became the TI Panará in 1998.

The Canela lost some of their maize and other crop varieties when they had to relocate to the Tupi-Guaraní-speaking Guajajara indigenous territory after the 1963 messianic movement that led to clashes with local cattle ranchers (cf. Crocker 1990: 95; see pp. 80-82 in Chapter 3). Nowadays, however, they maintain an incredibly diverse array of crop varieties, including those they received from the 'outside' and many others that they consider 'original' to their community (see pp. 218-219 in Chapter 6). While the Krahô experienced crop variety diversity loss after a FUNAI-led commercialized rice monocropping project in the 1970s, they recently 'recovered' a 'pre-Colombian' maize variety from the Brazilian Enterprise for Agricultural and Livestock Research's (*Empresa Brasileira de Pesquisa Agropecuária*, EMBRAPA) extensive seed bank (Ávila 2004: 82-84). This variety was originally collected from Xavante gardens in the 1970s, but the Krahô

have easily incorporated it as a 'legitimate' part of traditional gardening knowledge (Ávila 2004: 69). EMBRAPA and FUNAI appear to be playing an increased role in the recuperation of 'lost' crop varieties for Jê communities. In September 2012, for example, the members of the Canela and other Timbira and Jê communities travelled to Pará for a government-sponsored seed exchange, and the Canela brought back four new maize varieties to incorporate into their gardens (see Appendix A [p. 349]). Non-governmental organizations such as the Centre for Indigenist Research (*Centro de Trabalho Indigenista*, CTI) have also played a role in recuperating native fruit and other crop varieties for subsistence and commercialization purposes, particularly in Timbira communities.

Along with gardening activities, other aspects of modern-day Jê life-worlds also continue to transform in the wake of socioeconomic, socio-political, and sociocultural changes both within and outside the community. Increased access to money and manufactured goods have affected and been incorporated into patterns of exchange and ritual activities in many communities. Gordon's (2006) analysis of the role of money and manufactured goods in the Xikrin do Cateté community, a group linguistically and socio-culturally affiliated with the Kayapó, is an excellent example of how a Jê group incorporates and transforms 'outside' items into indigenous categories. For the Xikrin, Gordon (2006: 65, 294) argues, 'monetization and consumption seem to respond to Xikrin social mechanisms of reproduction,' and money in particular embodies the 'capacity for action and transformation.' Similarly, the Canela have incorporated money and industrialized goods into ritual and everyday social exchanges, with large items such as stoves, refrigerators, piles of cloth, and purchased foodstuffs now an integral part of many ritual ceremonies and ritualized relationships.

The presence of missionaries has also affected Jê life-worlds, and while little data is available on forms of Jê Christianity, there are indications that the Canela incorporate transformed versions of Christianity into their existing cosmological beliefs.⁷ Those Canela who are followers of the Assembly of God church that established itself in the village in early 2012, for example, appear to incorporate embodied understandings of ‘becoming’ Christian into Canela conceptualizations of the ‘soul,’ the afterlife, and being morally ‘good’ (see pp. 270-271 in Chapter 7). These examples of the interplay of Jê ‘tradition’ and change directly relate to Jê experiences with gardening, with groups such as the Krahô, Panará, and Canela incorporating ‘outside’ crop varieties and transforming them into valued insider ‘original’ or ‘legitimate’ categories.

Thus, it can be argued that despite centuries of dramatic changes to Jê communities, they have maintained their diverse capacities for transformation and incorporation of outside elements into inside ones. According to Ewart (2013: 232), ‘change and transformation are inherently part of *panará* sociality,’ and for other Jê groups such as the Canela a similar situation appears to unfold. This thesis explores the transformations and incorporations that are uniquely Canela, especially as they relate to gardening practices and emergent ecological knowledge or ‘knowing.’ In the concluding chapter, I return to a comparison of the Canela with other Jê communities in order to shed light on the unfolding dualistic and triadic structures of the transforming Canela life-world.

⁷ Silva (2006) provides a contemporary ethnographic account of Christianity among the Bororo community, who are closely related to Jê-speaking groups, and Arruti (2006) explores indigenous Christians in the Brazilian Northeast, although not from Jê communities. I intend to carry out further research on Canela forms of Christianity and embodied Christian experiences, thereby attempting to fill a gap in studies of native Christianit(ies) in lowland South America and beyond.

Ecological context: the Cerrado and its diversity

Similar to other Jê and Timbira territories in central and northeast Brazil, the Canela indigenous territory (TI Kanela) is located in the Cerrado, or savannah biome, one of the most biologically rich and most threatened biomes in the world (cf. Felfili et al. 2004; see Map 1 on p. 6). The territory itself comprises an estimated five to ten percent of the lands the Canela originally occupied prior to their ‘pacification’ in 1814 (Nimuendajú 1946: 64; Crocker 1994), and it is located in the interior of Maranhão state in the Brazilian northeast. Over half of Maranhão belongs to Brazil’s ‘Legal Amazonia’ (*Amazônia Legal*) region, and the state includes high dense Amazonian forests as well as Cerrado ecological zones.

At around 2 million km², the Cerrado comprises around 22 percent of Brazil’s territory and is the largest savannah in the Neotropics (W. Jepson 2005: 99; Simon and Pennington 2012: 711). It also has the most species richness and endemism of any Neotropical savannah, and has the richest flora of the world’s savannah regions with over 7,000 known species (Simon and Pennington 2012: 711; Klink and Machado 2005: 707). It is incredibly diverse in terms of eco-regions as well, with over 70 land systems identified in the biome based on climate, landscape, and soils (Felfili et al. 2004). Within the Cerrado biome, the ‘cerrado *sensu lato*’ eco-region is the ‘dominant savannah vegetation type’ (Simon and Pennington 2012: 712) and includes savannah woodlands or ‘cerrado *sensu stricto*,’ closed woodlands known as *cerradão*, grasslands, gallery forests, swampy palm areas, and dry seasonal forests (Felfili et al. 2004: 38; Hoffman 2000: 63). The biome also includes seasonal dry tropical forests and ‘mesic gallery forests’ near riverbanks (Simon and Pennington 2012: 712).

A number of studies have focused on how the vegetation native to the Cerrado *sensu lato* has become resistant to frequent fires and has adapted to the nutrient-poor soils and severe dry season of the biome. Results indicate that these native plants typically have a deep root system that helps prevent against drought and stores carbohydrates, thereby allowing for re-sprouting after periods of burning (Hoffman 2000: 67-68), and that the thick corky bark of many Cerrado plants and flowering induced by fire increases fire-resistance, among other factors (Simon and Pennington 2012: 713). The biological and ecological diversity of the Cerrado, including native plants that are highly adapted to the biome, make it a unique part of Brazil and the world that rivals the Brazilian Amazon region in terms of biodiversity (Simon and Pennington 2012: 712).

Over the past few decades, however, the Cerrado has been under increasing threat from deforestation associated mainly with large-scale cattle ranching and industrialized soy cultivation. According to Klink and Machado (2005: 707), during the past 35 years, over half of the Cerrado has been converted into pasture and agricultural lands for cash crops. Around 880,000 km² of the total area of the *Cerrado* has already been deforested, which is three times larger than the area deforested in the Amazon region, with around 500,000 km² converted into pasture using invasive species of African grasses (Klink and Machado 2005: 708). Feeley et al. (2009: 12384) estimate that the current rate of habitat loss for Cerrado plants is around 3.7 percent per year, and the rate of extinction for these species is two times higher than non-Cerrado Amazonian species. By 2050, they predict that habitat loss for native species will be between 70 to 100 percent in central Maranhão (Feeley et al. 2009: 12383), which is the same approximate area where the Canela territory exists.

Given these alarming statistics, it is important to collect current data on how local communities are interacting with the diverse eco-regions within this threatened biome. In one such study, Marimon and Felfili (2001) compare Xavante and non-indigenous settler uses of various plant species in the *pau brasil* (*Brosimum Rubescens* Taub.) forests in the Cerrado of Mato Grosso. The research indicates that Xavante communities value the forests as a whole, having multiple uses for many different species and expressing concern for conservation efforts, while the settlers are primarily concerned with logging the forests for commercial use (Marimon and Felfili 2001: 566-568). Thus, the researchers conclude that Xavante communities exhibit a 'closer link' with biodiversity than the non-indigenous settlers do (Marimon and Felfili 2001: 567).

While only 4.1 percent of the Cerrado is comprised of demarcated indigenous territories, compared to the 17.7 percent of the Amazon rainforest (Klink and Machado 2005: 709), the study mentioned above indicates that indigenous uses of and engagements with the Cerrado biome could provide keys to better understanding local biodiversity maintenance (and loss). For the Canela, life unfolds in the Cerrado landscape through daily engagements with the local flora and fauna in diverse eco-regions. People admire the vast, open savannah dotted with scrub bushes, small thick trees, and termite mounds, and they often comment upon the beauty of these vistas. Crocker (1990: 188; personal communication) describes how Canela community members felt 'despondent' after they were forced to temporarily relocate to the gallery forests of the Guajajara indigenous territory in 1963, as they longed for the 'beauty of the savannahs.' There are accounts of the Xavante and the Kayapó describing their savannah landscapes in similar ways (Maybury-Lewis 1974; Anderson and Posey 1989). Similarly, the classification of the savannah into multiple eco-regions appears to be common among these three groups.

The Xavante classify their lands into eight environmental zones (Marimon and Felfili 2001: 566) and the Kayapó divide their environment into 14 types of 'agricultural' land (Posey and Plenderleith 2002: 188; Hecht and Posey 1989; Anderson and Posey 1989).

My Canela research assistants, meanwhile, identified nine distinct eco-regions or 'land types' within their territorial landscape. As Table 1a (p. 39) shows, there is a rough correspondence between these land types and the Cerrado *sensu lato* eco-regions described above. The Irom, or savannah, consists of more open grasslands and 'protects' the native animals who live there, including peccaries (Crôre in Canela; *Pecari tajacu* L.), coati (*Nasua*), tapir (*Tapirus*), and a type of deer (*veado-mateiro*; possibly Carà in Canela; *Mazama americana*) that is native to the Cerrado.⁸ Canela men occasionally go on hunting expeditions in the Irom region as well as in the Pàrkô or 'closed *chapada*' that is 'half-forest' with clay soils and some tree cover. Peccaries can be found in the middle of the Pàrkô, and armadillos (Awxê; *Euphractus sexcinctus* L.) stop to give birth under the trees and brush. The clay soils also facilitate cultivating garden plots in this land type.

My research assistants described the 'open *chapada*' or Põ, which covers much of the Canela territory, as 'preserving everything,' both native flora and fauna. Native trees such as *piqui* (Prĩn in Canela; *Caryocar coriaceum* Wittm.), types of *puçá* (Crĩĩn-re and Crotot-re; *Mouriri*), *bacuri* (Cũmxê; *Platonia insignis* Mart.), *mangaba* (Pênxôô; *Hancornia speciosa* Gomes), and *jatobá vaqueiro* (Tecrêj; *Hymenaea* L.) grow well here. Animals that live in the Põ include another type of native deer (Po or *veado-campeiro*; *Ozotoceros bezoarticus*), a large native bird (Mãã or *ema*; *Rhea americana* L.), a smaller native bird (*siriema*; *Cariamidae*), a South American fox (Xoti; *Pseudalopex*), and a native hawk (Hàc).

⁸ See Appendix C (pp. 377-378) for a list of Canela names for native fauna in these various eco-regions.

The Põ area can sustain some crops with its sandy soil, but the Ivëntũm, Iromtũm, and Pjêhtũm land types are better suited for cultivation with their varying levels of forest cover and fertile soils. While all of these areas are classified as ‘forest’ and ‘serve well’ for gardening, the Ivëntũm is known as the ‘live forest’ and the Iromtũm and Pjêhtũm are known as ‘older’ areas with more mature trees.

Meanwhile, the Coh-cahêhnã riverbank areas have even more fertile soils and are ideal for riverbank garden plots, with both forest and riverbank plots integral to Canela gardening practices (see pp. 132-153 in Chapter 4). Fernando describes this land type as ‘feminine’ in that it ‘grows, sustains, and protects’ the crops planted there. Perhaps highlighting the importance of gardening to Canela use and conceptualizations of the environment, the Hipêj land type refers to ‘old’ second-year garden plots that have already been cleared and do not have ‘any more forest.’ While only a few new crops are typically planted here, women can collect the bitter manioc varieties that they planted during the previous year, and the roots (*manaíba* or *maniva* in Portuguese) feed *paca* (*Cuniculus paca* L.) and agouti (*Dasyprocta*) rodents long after gardeners leave the area to lie fallow. In this way, Lílana describes how the Hipêj ‘sustains’ the wild animals that come to feed there. Finally, the ninth eco-region, Caxàt-re kô, is the ‘real forest,’ and with its dense forest cover, it is generally not used for hunting and only occasionally for gardening.

Within this schema of land types, my research assistants also identified ten different types of soil that they grouped into pairs, as seen in Table 1b (p. 40). While each pair can sometimes be found in the same land type, the soils are not paired according to geographical location but rather because they are ‘similar’ and work together as a ‘couple.’ As Fernando explained to me, the soils are ‘couples’ similar to a husband and

wife or 'friends' (*companheiros* in Portuguese). He compared the soil pairs to Sun and Moon, who are mythically linked together as 'friends,' and to Caxêtkwỳj (Star-Woman), the mythical figure who introduced horticulture, and her husband Tyc-ti (see pp. 90-95 in Chapter 3 for these myths and pp. 308-315 in Chapter 8 for a further exploration of Canela conceptual pairs).

Fernando: On earth, everything is a couple. As with Moon and Sun, Sun and Moon, like a type of 'spouse' or *companheiro*.

Me: Are the soils *companheiros*?

Fernando: Yes, just as Morning Star [Star-Woman] and Small Star [Tyc-ti] are also *companheiros*, it is like this. Here on earth, these soils that we are talking about, they are all types of couples, and that is why things begin like this. They help one another, as with human beings – the wife helps the husband, and the husband helps the wife.'

The Pjê pej or 'good soil,' for example, is found mainly in the Ivěntũm forest and is ideal for cultivating many crops, while its pair Pjê kên is the opposite – it is 'weak soil' that cannot sustain gardens, and it can be found anywhere in the territory. Pjê pej also responds well to fire, and according to my research assistants, it is 'better' after the burning (*queimada* in Portuguese) performed before planting a new garden (see pp. 190-192 in Chapter 5). The pair of Pjê-rerec and Pjê tỳj also appear to be opposed, with the former being 'very soft earth' in which some crops can grow, and the latter being 'hard clay' that is not used for gardening.

Some types of clay and sand are suitable for crop cultivation. For example, the type of red clay known as Pjê caprêc is mostly located in the hills surrounding the village and can sustain some crops. Meanwhile, the Pjê xôm sandier soil is typically located in the Põ or *chapada*, and gardeners usually grow varieties of cashew, coconut, and common bean in it. This pair can also be found in some of the forested land types, and both the clay and the sand are said to 'secure' the growing crops. The Carêc type of clay that is whitish in

colour can also ‘secure’ crops, as can Awrerec, the ‘soft earth’ that is its pair. Both types of soil are wetter than the other couples are, with Carêc having a muddy consistency and Awrerec resembling the irrigated soil created by the non-indigenous *cupên*. Awrerec is especially fertile, and varieties of banana, sugarcane, pineapple, squash, rice, and sweet potato grow well in it. My research assistants describe the fertility of Awrerec as similar to a woman who ‘produces’ many children, and they give a similar description to Awpêê and Amcô, the pair of especially fertile soils located in the Coh-cahêhnã riverbank areas. Awpêê in particular is known for ‘protecting’ Canela gardeners and ‘helping with survival,’ as crops can be planted and harvested earlier in it than in the soils of the forested regions. Amcô is described as being akin to its pair, and it can sustain squash, watermelon, maize, banana, sugarcane, and sweet and bitter manioc. By utilizing this soil couple, Liliana assures me, gardeners and their families will ‘have food all the time’ and ‘never experience hunger.’

Table 1a: classified eco-regions in the Canela territory

Name of eco-region in Canela	Portuguese translation	English translation
Põ	<i>Chapada</i>	Type of dry, sandy area
Pàrkô	<i>Chapada fechada</i>	In-between sandy and forested area
Irom	<i>Cerrado</i>	Savannah
Ivêntũm	<i>Mato vivo</i>	‘Live forest;’ forested area
Iromtũm	<i>Mato velho</i>	‘Old forest;’ more mature trees
Pjêhtũm	<i>Terra velha</i>	‘Old land;’ similar to Iromtũm
Hipêj	<i>Capoeira</i>	‘Old’ second-year garden area
Coh-cahêhnã	<i>Beira do brejo</i>	Riverbank area
Caxàt-re kô	<i>Mato mesmo</i>	‘Real forest;’ most densely forested

Table 1b: classified soil types in the Canela territory

Name of Soil Type in Canela	Description
Pjê pej	'Good soil' found mainly in Ivëntũm forest
Pjê kên	'Weak soil' unsuitable for gardening
Amc3	Fertile soil near the riverbank - Coh-cahêhnã
Awpêê	Especially fertile soil near the riverbank - Coh-cahêhnã
Pjê caprêc	Red clay soil found in surrounding hills
Pjê x3m	Sandy soil mainly in P3 – suitable for some crops
Carêc	'Mud rain' – clay mixed with water – suitable for gardening
Awrerec	Fertile 'soft earth'
Pjê tỳj	Hard clay – less suited for cultivation
Pjê-rerec	'Very soft soil'

From these descriptions of the nine eco-regions and ten types of soil, it becomes clear that gardening is a central component of Canela environmental classification. Types of land and soil are often identified based on their ability to sustain gardens, and the differentiation of seemingly similar fertile soils and forested areas attests to the importance the Canela give to understanding their environment in relation to gardening. Map 5 of the Canela territory (p. 8) highlights the attention given to gardening areas as well. The village of Escalvado, where the majority of the population lives, is placed in the centre of the map, perhaps highlighting the central significance of the village in the Canela territorial landscape, a hypothesis that I explore in Chapter 4 (pp. 154-158).

Apart from Escalvado and the series of old villages in the southeast part of the territory, the majority of the areas named on the map refer to 'garden sectors' (*seitores da roça* in Portuguese). Most of the sectors where forest gardens are cultivated lie in the northeast, where there is a particular area of Ivëntũm forest, and in the northwest, where part of the P3 *chapada* area lies. My research assistants identified ten main garden sectors for forest gardens, displayed in Table 2 below (p. 42). There are some other forest garden sectors in

the southwest such as Capati (Cabiceiro do Ponto; see Map 5 [p. 8]) as well. Riverbank garden plots can be cultivated near any riverbank, although they are typically located within easy walking distance to Escalvado village. The rivers shown on the map include the Dois Riachos (Two Streams), Pau Grosso (Thick Stick), and Santos Estevam, among other smaller streams throughout the territory. The Pau Grosso and Santos Estevam rivers eventually join past the Canela territory to form the Corda River, after which the town of Barra do Corda is named.

In addition to marking out village, forest garden, and riverbank garden areas, my research assistants included in the map an 'invaded area' of what they termed 'virgin forest' (most likely the Caxat-re kô land type) that is being illegally logged in the southeast part of the territory. According to them, non-indigenous *cupên* are illegally logging *ipê*, *pau d'arco* (both from the *Tabebuia* genus), and other native tree species in the hillside forests with the assistance of a few Canela community members. There is also an area known as Côhcacrojre, or Soturna, that my research assistants said was being 'rented' out to non-indigenous families for agriculture and cattle ranching, although it is unclear who was involved in this endeavour or its legality.⁹ While my research assistants were troubled by the illegal logging and told me that the male leadership council was concerned as well, they also explained that discussing these issues was 'life-threatening' and that even local FUNAI officials were afraid of getting involved (see pp. 262-267 in Chapter 7 for an exploration of conceptualizations of danger throughout the Canela territory and beyond).

⁹ I suspect that 'renting' out areas of legally demarcated indigenous territories to non-indigenous people, especially for commercial purposes, is illegal, but I was not told enough about this situation to be able to assess its legality.

Table 2: main forest garden sectors in the Canela territory

Canela Name	Portuguese Name
Põhipôc	Campestre
Hĩpô	Lagoa do André
Prĩre Kat	Pé de Piqui
Ràmpar	N/A
Côhnã-kẽn	Passagem de Pedra
Caprũm-ti	Baixão Fundo
Kryi-re Wôôkrô	Aldeinha
Capà-ti	Ponto Velho
Cuhcaprêc-ti	Brejo Vermelho
Cumxê-ti Kat	Baixão Preto

In these ways, a picture emerges of how the Canela engage with the diverse Cerrado landscape through the classification and demarcation of land and soil types. The diversity of the Cerrado is reflected in the Canela classification schema, with a wide variety of native flora and fauna growing and living in the distinct eco-regions and soil pairs. The ethno-classification also reveals how the Canela use and manage their environment, with different areas and types of soil utilized for hunting and gardening. Similar to the Xavante case described above, it appears that Canela conceptualizations and use of the Cerrado landscape exhibit an intimate understanding of and appreciation for biodiversity in its myriad forms.

Throughout this thesis, I explore the ways in which the Canela value their local biodiversity, especially as related to cultivated plants. At the same time, it is important to recognize the real threats to this biodiversity that the Canela territory is currently experiencing, and which may increase dramatically in the future if statistical estimates are correct (cf. Feeley et al. 2009: 12383). As with other areas of the Cerrado, including where other indigenous territories are located, the Canela territory is under threat from the

illegal logging and cattle ranching mentioned above, and industrialized soy plantations are increasingly encroaching on the territory as well (cf. Rizzo de Oliveira 2005, 2014). Since the interior of Maranhão is a threatened biodiversity 'hotspot' (Felfili et al. 2004), and the Canela intimately engage with their landscape on a daily basis, how community members experience and understand this biome is crucial to local and regional conservation and environmental management efforts.

For the Canela, the local landscape appears to be conceptualized and managed largely through the lens of gardening practices, and therefore this thesis focuses on biodiversity as it relates to gardening and cultivated crop species and varieties. It is important to note, however, that in a landscape as diverse as the Cerrado, cultivated crops can often be outcrossed with their wild relatives, leading to interesting biodiversity maintenance strategies by indigenous horticulturalists. The Cerrado is one of the 'centres' of diversity for manioc (*Manihot* sp.), for example, and researchers have documented how indigenous communities utilize bitter, sweet, and wild manioc in this biome and elsewhere in the wake of habitat loss that is threatening wild manioc varieties (cf. Klink and Machado 2005: 709; Nassar 2002; Nassar and Hashimoto 2006; Rival 2001; Rival and McKey 2008). With eighteen named manioc varieties, including two that are classified as 'half-sweet/half-bitter' (see Appendix A [pp. 350-351]), the Canela may incorporate wild species into their manioc cultivation as well, although further research is needed to verify this. There are stronger indications that Canela gardeners may utilize wild species of bean from the *Phaseolus* genus in their gardens, perhaps outcrossing them with cultivated bean varieties and therefore increasing genetic diversity of their crops (cf. Harris, personal communication).

While further research is needed on this aspect of Canela gardening, my current research points to concerted Canela efforts to maintain and even increase diversity using wild crop species native to the Cerrado biome. Whether with wild or cultivated crop species, other native flora and fauna, or types of land and soil, Canela management of the local territorial landscape can provide a deeper understanding of the larger ecological context of the Cerrado and its biological diversity. As Fernando eloquently states:

‘We have to preserve [our environment] ...now we are learning and seeing – look, we have to keep planting and cultivating for our generation and the future. The *buriti* [*Mauritia flexuosa* Mart.] that I planted in my garden will be there for my family to eat. In this way, people are remembering and planting, not only to use everything up [all at once]. We shall see.’

Conclusion

Through a focus on the sociocultural, ecological, and fieldwork context, this chapter has provided some background to understanding the indigenous Canela life-world in the twenty-first century. In all of these contexts, the Canela have experienced and continue to experience processes of transformation and incorporation, creating the dynamic and vibrant community of gardeners that exists today. Similar to other Jê communities, the Canela have socio-culturally transformed from semi-nomadic hunter-gatherers with some gardening activities to sedentary subsistence horticulturalists who place great value and importance on their garden plots and the cultivated plants growing there. They have modified their relations with outsiders as well, moving away from warfare to engage in largely peaceful exchanges with other indigenous groups and with non-indigenous Brazilians and foreigners for cultivated crop varieties, cattle, and a wide variety of manufactured goods. Through exchange and daily engagements with ‘outside’ elements,

non-Canela persons and things have become incorporated into the Canela life-world, while the Canela remain 'traditionally' Jê in many sociocultural and socio-political ways. In addition, the Canela penchant for incorporating the 'outside' into the 'inside' appears to be common among Jê communities, as Ewart's (2013) research on the Panará suggests. From an ecological perspective, the Canela continue to engage with and value their Cerrado landscape, despite the serious threats of deforestation and habitat loss that are rapidly transforming this biome and its biological diversity. They have incorporated diverse land and soil types into their ethno-classification schema, and they engage with and modify their landscape through the management of these types of land and soil. There are even indications that Canela gardeners are transforming the landscape at a genetic level, through the outcrossing of cultivated crop varieties with each other and their wild relatives (cf. Harris, personal communication). For an anthropologist such as myself, these sociocultural and ecological transformations and incorporations shaped the fieldwork context and allowed me to experience a slice of the modern Canela life-world. Similar to the Canela, I experienced the continuity and change involved in modern Canela ceremonial activities, as seen in my ritual introduction into the community; in patterns of consumption and exchange as evidenced by the flow of gifts I was expected to contribute; and in the increasing value and conceptual importance given to gardening and ecological knowledge, seen in my research assistants' focus on classifying and understanding their environment.

In the remaining chapters, I further explore the processes of Canela continuity, transformation, and incorporation, especially as they relate to gardening activities and practices that have become conceptually significant in modern Canela experience. To

complement the sociocultural and ecological background of the Canela community in this chapter, in Chapter 2 I provide the theoretical background of the thesis, including recent theory on landscape, aesthetics, phenomenological experience, and human-nonhuman engagements. Drawing from the works of Ingold (2000, 2011, 2012a, 2012b, 2013), Pålsson (2013), Ingold and Hallam (2014), Kohn (2002, 2007), and others (Marchand 2014; Lave 2011), I suggest that the most fruitful way of analysing modern Canela gardening and human-environment relations is through the phenomenological approach of exploring the emergent pathways and ‘foldings’ (cf. Vergunst et al. 2012: 6-8) or ‘unfoldings’ of a variety of human and nonhuman lives. Rather than analysing Canela ‘society,’ which connotes a static, fixed entity comprised solely of human relationships, I posit that the Canela live in what I term a ‘bio-sociocultural life-world’ that emerges over time and involves multiple actors both human and nonhuman, Canela and ‘non-Canela,’ thus allowing for the transformation and change that this chapter highlights. Within this life-world, I suggest that the especially meaningful and valued engagements among humans and nonhumans form part of a multi-sensory and embodied ‘aesthetics of landscape’ (Vergunst et al. 2012). I present working definitions of both of landscape aesthetics and the ‘bio-sociocultural life-world,’ and I attempt to combine them into a theoretical approach that I term ‘bio-sociocultural aesthetics.’

Chapter 3 moves on to explore the Canela life-world as it emerges in combined historical and mythical ways. A particular emphasis is given to Canela engagements with ‘others’ as seen in history and myth, including other indigenous groups, non-indigenous Brazilians, supernatural entities, animals, plants, and objects or artefacts. Through historical and mythical accounts, I suggest that the processes of continuity and transformation within

the Canela community, especially as related to gardening practices, take shape and become apparent.

In Chapter 4, I examine the emergent conceptual and spatial structures of the Canela life-world in relation to village and garden spaces. I explore how life is lived in the village, including the socio-political and communal ritual activities that take place in the conceptually male ceremonial centre and the everyday activities and more individualized rituals that occur in the conceptually female outer circles of houses. I posit that the ceremonial centre and outer circle of houses, which exist in a dualistic relationship indicative of many Jê villages, exhibit the continuity of the Canela life-world despite the dramatic historical changes explored in Chapter 3. Moving outward from these village spaces, the chapter examines Canela life pathways in the riverbank and forest garden spaces, both of which are integral to Canela gardening practices and that appear to exist in complement to one another. The overlapping yet distinct forest and riverbank gardening seasons, garden layouts, and techniques and practices for planting, tending, and harvesting are explored in this chapter, in order to shed light on the lived experiences of Canela gardeners in these two types of garden plots. To conclude the chapter, I focus on the conceptual relationship among the village, riverbank garden, and forest garden, and suggest that the three spaces exist in a triadic relation to one another that forms the overarching structure of the Canela territorial landscape.

Chapters 5 and 6 further explore the lived experiences of Canela gardeners – Chapter 5 in relation to gardening expertise and ecological knowledge acquisition and transmission, and Chapter 6 in relation to human-plant engagements throughout the life course. Chapter 5 begins with a case study of three expert Canela gardeners and their matrilineal

families, and includes the specific ways in which these gardeners conceptualize and utilize their cultivated crops and garden plots that set them apart as 'experts' in the community. How these gardeners value their gardens and the crop varietal diversity within them is given particular emphasis. The chapter then moves on to explore how one becomes a Canela gardener, with a particular focus on the gendered ways that boys and girls learn gardening practices and ecological knowledge from adult men and women. Drawing from Ingold's (2000), Lave's (2011), and Marchand's (2014) overlapping yet distinct approaches to knowledge transmission, I explore the ways in which novice boys and girls become 'enskkilled' in gardening through verbal and nonverbal learning from their elders. I posit that becoming a Canela gardener is a creative and improvisational process that incorporates developing affectionate relationships with cultivated plants, a process that I term an 'education of affection,' a twist on Ingold's (2000) 'education of attention.'

Chapter 6 goes on to explore these affectionate human-plant relationships in more detail, by focusing on how human and plant life cycles become intertwined in multi-sensory and embodied ways. I examine how Canela gardeners aesthetically engage with and value their crops through ethnobotanical classification of multiple crop species and varieties, ritual singing and food sharing, specific food and sex restrictions tied to human and plant life cycles, and harvesting rituals that celebrate the end of the plant's life and its readiness to be consumed by humans. In these myriad ways, I posit that affectionate human-plant relationships form part of the 'aesthetics of landscape' and are therefore central to understanding the modern Canela life-world.

While multi-sensory, embodied relationships between Canela gardeners and cultivated plants are integral to the emergent Canela life-world, so too are shamanic engagements

with plants, especially with the Plant-People ‘master spirits’ that only appear to those who have developed specific shamanic perceptual abilities. Chapter 7 explores shamanic experiences with Plant-People and with other nonhuman beings within the Canela life-world. It begins with an examination of the village and forest spaces in which shamanic encounters with nonhuman beings occur, including deceased Canela and non-indigenous ‘souls,’ animals, plants, and objects or artefacts. I posit that another triadic conceptual relationship exists among the village, distant forest spaces (including some forest gardens), and more distant non-indigenous towns with respect to Canela understandings of danger and dangerous relationships. In parallel to processes of learning how to garden described in the previous chapters, the chapter moves on to examine how one develops the heightened perceptual abilities necessary to become a shaman and interact with both dangerous entities such as Canela and non-indigenous ‘souls’ (*mẽkarõn* and *pehjarohiti*) and with affectionate, friendly beings such as the Plant-People. I explore the role of the Canela shaman as mediator between human and nonhuman beings, which is common for shamans across much of lowland South America. What may be distinctly Canela, I posit, is the shaman’s intimate and affectionate engagements with Plant-People ‘master spirits’ who appear as beautiful women and handsome men. Thus, I conclude that shamanic encounters with nonhuman ‘others’ once again highlight the conceptual significance of cultivated crops in the Canela life-world of today.

Finally, in Chapter 8, I examine the overarching structures of the life-world in more detail. Comparing my ethnographic material with the data available on other Jê-speaking communities, I expand upon my hypothesis that the Canela life-world incorporates both dualistic and triadic conceptual structures. In particular, I examine how the dualistic concepts of *impej*, or that which is ‘true/original,’ ‘beautiful,’ and ‘good,’ and *ihkên* (‘less

original/false,' 'ugly,' and 'bad') take shape in Canela conceptualizations of space, the environment, human-plant relationships, and of cultivated crop species and varieties. I posit that these opposed concepts, and the related terms of *ih̄t̄yi* ('strength,' 'health,' and 'happiness') and *ih̄p̄êc* ('weakness' and 'sadness'), are central to understanding the multi-sensory 'aesthetics of landscape' that is distinctly Canela. To conclude the thesis as a whole, I ponder the analytical usefulness of the 'bio-sociocultural aesthetics' theoretical framework in light of the Canela ethnographic material. I hypothesize whether the dynamic framework can potentially lead to new ways forward in phenomenological approaches to landscape and human-environment engagements, and to ethnobotanical approaches to local environmental knowledge acquisition, transmission, and maintenance. I explore how the merging of these two approaches would look, as a possible 'ethnobotany of the senses' or 'sensory ethnobotany' in which ecological knowing comprises a series of embodied sensory experiences that emerge over time, in diverse life-worlds such as that of the Canela.

Chapter 2

Theoretical approach: combining the ‘bio-sociocultural life-world’ and the ‘aesthetics of landscape’

Introduction

For the Canela, life unfolds along simultaneously symbolic and material pathways that link together distinct village and garden spaces and along which engagements among a variety of human and nonhuman beings emerge. While this thesis seeks to understand all sorts of human-nonhuman engagements relating to the Canela community, it gives particular focus to how human gardeners interact with and make sense of their relationships with cultivated plants within the emergent and transformational world in which the Canela live. How and why the Canela have become a community of skilled gardeners who maintain and appreciate biodiverse garden plots throughout their recent history are major questions that this thesis seeks to address, and in this chapter, I provide a theoretical framework that helps address these issues in an innovative and exploratory way. Rather than conceptualize the Canela community as an unchanging ‘society’ composed solely of human community members that stands in contrast to an equally static ‘nature’ in which the environment and cultivated plants exist, I posit that myriad human and nonhuman beings interact and co-exist in an emergent ‘life-world’ that is both biological and socio-cultural.

I explore a working definition of what I term the Canela ‘bio-sociocultural life-world’ in the first section of this chapter, drawing from and expanding upon Ingold and Pálsson’s

(eds. 2013) concept of 'biosocial becomings' and Hallam and Ingold's (eds. 2014) focus on processes of growth. Through an examination of these and other works, particularly those of Ingold (2000, 2006, 2007a, 2007b, 2008, 2011, 2012a, 2012b, 2013), I suggest that a phenomenological approach provides a useful theoretical background for understanding human-nonhuman engagements and the co-emergence of beings and their surroundings (the 'environment' or 'landscape') that are vital to Canela lived experience. Additionally, in this section I explore how the combined 'bio-sociocultural' phenomenological approach expands our understanding of being (or becoming) and learning in the Canela life-world. I examine how theories on 'dwelling' (cf. Heidegger 1971; Ingold 2012b: 204) in a world that is ever-unfolding and becoming 'enskilld' through certain relational practices (cf. Ingold 1996; Lave 2011: 152) can shed light on Canela experiences in their territorial landscape, including learning how to garden and to engage with diverse species and varieties of cultivated plants.

Moving on from a conceptualization of a 'bio-sociocultural life-world' that is inherently dynamic and transformational, in the second section I explore how certain relational experiences among humans and nonhumans within the life-world become valued and meaningful over time. I suggest that for the Canela life-world, value forms part of an 'aesthetics of landscape' (Vergunst et al. 2012) that is multi-sensory, embodied, and similar to the life-world itself, is emergent over time and through space. To develop this concept, I begin by searching for working definitions of 'landscape' and 'aesthetics,' drawing from the works of Berleant (2002, 2005), Kohn (2002, 2007), and Ingold (2011, 2012b), among others. Examining the phenomenological approach to both landscape or environment and aesthetics, I posit that 'landscape aesthetics' allows for a more comprehensive understanding of Canela conceptualizations of value as tied to embodied,

multi-sensory experiences within village and garden spaces. In addition, I explore whether the notion of value as understood within the 'aesthetics of landscape' concept links together the biological and the sociocultural in an analytically useful way, thereby enriching the concept of a 'bio-sociocultural life-world.'

To conclude the chapter, I postulate a theoretical approach that combines the 'aesthetics of landscape' and the 'bio-sociocultural life-world' into a single framework. This framework, which I am loosely terming 'bio-sociocultural aesthetics,' seeks to bring together theories of phenomenological emergence and conceptualizations of embodied, multi-sensory aesthetic and moral value in an integrated, dynamic way. While the phenomenological approach, especially that of Ingold (2000, 2011), is typically 'non-representational' and therefore does not deal directly with symbolism or metaphor, I posit that a 'bio-sociocultural aesthetics' would perhaps better address the tension between the symbolic and the material precisely through its focus on emergent, embodied valued and meaningful experiences. By focusing on human and nonhuman experiences of embodied aesthetic-moral value that unfold over time, I suggest that the framework allows for a holistic, combined understanding of the biological/ecological/material and the sociocultural/symbolic as a seamless whole. And while this thesis focuses more on Canela human experiences of value, particularly as related to cultivating plants, I suggest that cultivated plants' own valued and meaningful experiences can hopefully form part of the 'bio-sociocultural aesthetics' framework in future studies, as they too are living inhabitants of the Canela life-world.

What is the 'bio-sociocultural life-world?'

To live is to radiate.

-Canguilhem (2008 [1965]: 113-114); cited in Pálsson (2013: 27)

In this thesis, I am employing the concept of what I term the 'bio-sociocultural life-world' to encompass the combined Canela nature-society-culture that emerges alongside and through human and nonhuman life processes. There have been numerous anthropological approaches to addressing or overcoming the nature-culture or nature-society divide in the last few decades, many of which have advanced scholarship of human-environment engagements in significant ways (cf. Ellen 1996; Descola and Pálsson eds. 1996; Latour 1993, 2005; Balée 1998; Hornborg 2009; Descola 2013a, 2013b). The phenomenological approach of Ingold (2000, 2013) and Pálsson (2013), however, appears to allow the most analytical room to simultaneously address biological and social processes. Instead of redefining or realigning 'nature' and 'culture,' Ingold (2000: 9) calls for the abandonment of both concepts to focus instead on the synergy of continuously coming-into-being organisms and their environmental surroundings. In his later work, Ingold (2013: 11) furthers this approach by emphasizing the processual 'becoming' of organisms and their 'zone of interpenetration' (the environment).

In this view, the organism is defined as the 'locus of growth within a field of relations traced out in flows of materials,' and is therefore best understood by what it *does* – its active process, rather than by any sort of pre-formed discrete 'essence' or genetic makeup (Ingold 2013: 8,10). Drawing from recent developments in the natural and social sciences, including molecular biology, neuroscience, philosophy of mind, and social-cultural anthropology, Ingold (2013: 9) argues that all life is social and biological, and that the

social and biological are 'one and the same,' as part of the emergent, relational pathways of life. Thus, humans are not conceptualized as static 'beings' with discrete boundaries but rather as 'biosocial becomings' that emerge along 'trajectories of movement and growth' (Ingold 2013: 8-9). While Ingold's (2013) discussion deals mainly with human life processes, Pálsson (2013: 27-28) briefly mentions the importance of animal 'becomings' later in the same volume, and I posit that the conceptualization of life 'becomings' could be extended to plants and perhaps to objects, artefacts, and supernatural beings as well. Indeed, in another recent work, Ingold (2012a: 14) emphasizes the processual relationships among humans and nonhumans, who 'mutually respond to each other's presence' in lives 'lived in correspondence' with one another. These biological-social correspondences among a variety of human and nonhuman 'becomings' are what create and shape the emergent 'life-world,' which is a 'meshwork' of human-nonhuman pathways across time and space (cf. Ingold 2007a, 2008).

The focus on relational processes instead of static systems is a key aspect of Ingold and Pálsson's (eds. 2013) 'biosocial becomings' and of my approach to the Canela 'bio-sociocultural life-world.' It is important to acknowledge the influence of Marxist theories of praxis on analysing the processual, relational nature of human communities. Pálsson (2013: 22-23), for example, incorporates Marx's conceptualization of human beings as the 'ensemble of social relations' to expand on the notion of human becomings. In a similar vein, Lave (2011: 2) roots her social practice theory, which is a 'theory of relations,' in a Marxist historical-materialist understanding of praxis, which she defines as 'collective doing...part of the lived-in world' (Lave 2011: 152). By approaching her study of apprenticeship in this way, Lave (2011: 151-152) focuses on the changing, processual, and historical aspects of the 'lived-in world,' as well as the 'situated activity' of people and

things which are constituted in their relations to one another. Historical-materialist Marxist approaches tend to focus on the relations of production, or 'making' things or persons. As Lave (2011: 35-36) states, the most productive question for her research is, 'what is the process by which something is produced?' With the 'something' referring to 'relations of learning and teaching...knowledgeable skilfulness, or engagement in mature practice' (Lave 2011: 35).

While explorations of processual, relational 'making' are undoubtedly important to understanding diverse human (and nonhuman) experiences, Ingold and Hallam (2014: 17) point out that processes of growth often become secondary to processes of making in recent anthropological studies of human-nonhuman or person-thing relationships. Similar to Ingold's (2013) combining of the biological and social, Ingold and Hallam (2014: 5, 20) suggest bringing together growing and making into studies of 'growing-in-making' or 'making-in-growing' which would emphasize the intertwined, emergent processes of organisms and artefacts. Ingold (2013: 7) also emphasizes the importance of exploring 'ontogenesis,' or the 'fluxes and flows of materials entailed in growing and making.' Approaching gardening activities and human-plant relationships as emergent processes of biosocial growing-making is especially important, since Ingold and Hallam (2014: 17-18) identify a particular lack of gardening studies that fully account for humans and plants as living, growing organisms rather than as solely fabricated artefacts. Thus, this thesis attempts to address this gap through its focus on the parallel and overlapping processes of human and plant growth and engagements throughout their life courses (see Chapter 6, especially pp. 228-246, for a particular exploration of parallel human and plant lives).

The 'life-world' of Canela humans, cultivated plants, and a variety of other beings (or perhaps 'becomings') consists of pathways, or 'lines' in Ingold's (2007a) terms, on and through which humans and nonhumans grow, change, and live their intertwined lives. Drawing from Canguilhem's (2008 [1965]: 113-114) concept of the 'milieu' as discussed by Pálsson (2013: 26-27), the 'life-world' takes shape by humans and nonhumans 'radiating' along their developmental pathways. Over time and across space, these diverse beings become embedded in the 'life-world,' and a phenomenological approach conceptualizes this being-in the world as the 'propensity to dwell...to make one's way through the world and make oneself at home in it' (Vergunst et al. 2012: 3). The concept of 'dwelling' in the world stems from Heidegger's (1971) seminal essay 'Building, dwelling, thinking.' In it, Heidegger (1971: 145) argues that humans are fundamentally 'dwellers' who 'spare and preserve' the earth by setting it free into its own 'presencing.' In this sense, dwelling is coming-to-be with and alongside surroundings that are ever-unfolding, or as Heidegger (1971: 181; cited in Ingold 2012b: 204) describes, participating in the 'worlding world.' Drawing from Heidegger, Ingold (2011: 114) similarly focuses on how the earth is 'earthing,' or 'continually growing and sprouting as a melange of material flows, practical activities, perceptive observations and personal stories, and its shape is woven from all these.'

Conceptualized in this way, then, the Canela 'life-world' is dynamic and transformational, and is never wholly complete. While certain dualistic and triadic structures appear to have emerged as part of this life-world, which I discuss in Chapters 4 and 8 (pp. 154-158; 303-311), they continue to transform and change over time along with the myriad human and nonhuman beings that make up this emergent world. It is therefore not contradictory to explore simultaneously phenomenological transformations and material-metaphorical

structures, for both are incipient to and unfold within the Canela 'life-world' (cf. Ingold 2011: 69).

Within the world that is continually coming-into-being, life processes of growth and decomposition are similarly emergent. The exact conceptualizations of 'life' within the 'life-world,' however, require closer examination here. As is commonly found among indigenous communities in lowland South America and throughout the world (cf. Praet 2013: 193), for the Canela life is not a given state of being but rather requires ongoing embodied effort on the part of myriad humans and nonhumans. This point of view can be termed 'animist,' which Ingold (2011: 69) describes as conceptualizing life 'not as an emanation but a generation of being.' He cites Scott's (1989: 195) quotation of an indigenous Cree community member that life is 'continuous birth' to underscore the importance of emergence and becoming in the 'animist ontology' (Ingold 2011: 68-69). For Praet (2013: 192,199), 'so-called animistic' communities conceive of life as fundamentally restricted and conditional, yet also open and available to beings that may not be included as being 'alive' in a Western framework. Canela conceptualizations of life can be understood in this way, especially through Praet's (2013: 191) emphasis on the degrees of 'animacy' for the diverse beings whose lives unfold in the 'life-world.'

Similar to Nuckoll's (2010) approach to the Runa of Ecuador, I suggest in Chapter 7 (pp. 297-299) that the Canela employ a 'scalar view' of animacy or life that includes living and deceased Canela (*měhĩn*) and 'white' (*cupěñ*) people, animals, plants, Plant-People 'master spirits,' and objects or artefacts. All of these beings and their interactions with one another make up the emergent 'life-world' and possess varying degrees of 'life' or 'animacy' that change over time through processes of birth, growth, and decomposition

or death. Unlike many other indigenous peoples in lowland South America and beyond, however, the Canela do not appear to base these conceptualizations of the living or animate on a shared 'spirit' or 'soul' (Chapter 7 [pp. 295-299] explores the implications of this conceptualization in detail). Rather, it appears that the Canela understanding of 'life' is similar to a phenomenological one – grounded in the active, embodied perceptual activities and capabilities of diverse humans and nonhumans while dwelling in the earth.

How these myriad human and nonhuman beings come to know about the world in which their life pathways unfold is of particular interest to this thesis as well. A phenomenological approach to learning is grounded in the active perceptual relationships that develop between and among humans and nonhumans (or persons and things). According to Merleau-Ponty (1974 [1947]: 197), perception is located in the body and is the foundation of 'all rationality, all value, and all existence.' Similarly, Casey (1996: 18) argues that perception is all encompassing, with the whole body sensing through its multiple sensual modalities. Through multi-sensory bodily experiences, then, processes of learning and knowledge acquisition, or active 'knowing' (cf. Kohn 2002), form and take shape over time and in particular spaces. Ingold (1996: 40; 2000: 21) terms this type of active learning and knowledge transmission 'enskilment,' wherein novices develop their capabilities through verbal and nonverbal perceptual experiences with experts such as 'showing.'

Learning in this sense is a process of discovery involving both nonverbal, hands-on experience and verbal performances of these experiences that can be conceived as an 'education of attention' (Ingold 2000: 22, 167). Knowledge, or experiences of coming-to-know, are therefore grounded in specific 'bio-sociocultural' relational contexts that arise

through situated 'life-worlds.' Based on her 'critical ethnographic practice' study of Liberian tailors' apprenticeship, for example, Lave (2011: 156) adopts an understanding of apprenticeship as a changing process of 'coming to inhabit the practice and its conception of the world.' Marchand (2014: 185) similarly stresses the importance of the processual nature of woodworking for apprentice and master English woodworkers, although he goes beyond understanding apprenticeship solely in terms of relations of production (cf. Lave 2011: 35) to emphasize how training '*grows* the body and mind of the learner.' Additionally, he incorporates creativity and improvisation into the learning process of becoming a skilled woodworker, arguing that 'growth and development into mastery are equally marked by an ability to respond effectively to the unexpected and to improvise creatively in the face of the unforeseen' (Marchand 2014: 195).

These approaches to apprenticeship or 'enskilment' provide fresh insights into my exploration of the Canela coming-to-know their 'bio-sociocultural life-world,' particularly through learning how to grow and maintain biodiverse garden plots. In Chapter 5 (pp. 185-197), I give particular focus to the multi-sensory embodied experiences of Canela novice and expert gardeners that processually emerge in specific village, riverbank garden, and forest garden spaces, and to the creativity and improvisation that appears to be a hallmark of childhood learning and becoming a skilled gardener in adult life. Through a focus on the specificities of gardening experiences within the Canela life-world, I also expand on some of these theories and reformulate Ingold's (2000: 22) 'education of attention' to an 'education of *affection*,' which, I suggest, better incorporates gender and empathetic human-plant engagements into Canela learning how to garden. Overall, throughout the thesis I attempt to take into account the ongoing processes of growing and making that are incipient in the Canela 'bio-sociocultural life-world,' with the hopes

of 'bearing witness to... "how the world becomes a world"' (Ingold 2012a: 10; citing Merleau-Ponty 1964: 181).

What is the 'aesthetics of landscape'?

Understanding how diverse human and nonhuman beings come to dwell in and know the Canela 'bio-sociocultural life-world' provides a starting point for further exploration into how they value and make meaningful their unfolding engagements through and in the 'life-world' as well. In short, what I am searching for here is a theoretical background for exploring multi-sensory, embodied notions of value in specific ecological-sociocultural contexts, or what Vergunst et al. (2012: 8) term the 'aesthetics of landscape.' Firstly, let us examine the terminology, since the concepts of 'landscape' and 'aesthetics' have multifaceted and dynamic histories. The term 'landscape' is typically associated with sixteenth- and seventeenth-century Dutch realist painters who attempted to represent reality through landscape paintings that separated the art object from the observer (cf. Hirsch 1995: 7-8). This notion of landscape centres on the visual appreciation of 'nature' from the perspective of an observer removed from the direct experience with and in the land.

While this conceptualization of landscape continued to inform Western philosophy and art well into the twentieth century, Ingold (2012b) points out that there is an even older meaning of the term prior to its appropriation by Dutch landscape painters. Etymologically, Ingold (2012b: 197-198) notes, the term originates from the Old English *landskap*, with *-skap* meaning to shape; thus, he states, 'a landscape is literally a land shaped.' Situating the landscape in the Medieval agrarian way of life, Ingold (2012b: 199) argues that the term 'earth-sky-world' is more appropriate for describing the experiences

of nomadic pastoralists and hunter-gatherers in their shifting surroundings. Whether this shift in terminology applies to the Canela, who have embraced a horticultural way of life and left behind a largely semi-nomadic hunter-gatherer existence, is an interesting question that would be useful to explore in future research. It does appear, however, that Canela gardening practices 'shape' the land in ways that are new and different from past hunting and gathering experiences (see Chapter 3 [pp. 77-84, 87-88] for a historical account of these changes).

The meanings associated with landscape in the late twentieth and early twenty-first centuries have shifted considerably from the association with Dutch painters to incorporate 'culture' (Sauer and Leighly 1963); 'cultural processes' such as history, identity, home, and community (cf. Hirsch 1995: 5; Stewart and Strathern 2003: 3-4); and historical processes that reveal material and symbolic aspects of the landscape itself (Rival 2007: 88). In the phenomenological approach, however, the material and the symbolic, as well as the biological/ecological/physical and the social/cultural/metaphorical, come together under the conceptualization of landscape as the 'gathered' or 'gathering' earth, with no separation between its material 'essence' and its symbolic expression (cf. Vergunst et al. 2012: 3; citing Heidegger 1978 [1971]). Conceiving of landscape as a gathering of diverse persons and things and their relational pathways allows us to move away from treating landscape as an 'object of study' to understanding it as 'a way of reckoning – summing up – the temporal, relational qualities of the world' (Vergunst et al. 2012: 3). In this sense, then, landscape is inseparable from the beings that inhabit it; it is the 'domain of entanglement' (Ingold 2000; 2006: 14) or the 'weave of human [and nonhuman] life' (Berleant 2002: 9).

The concept of 'aesthetics' has a similarly complicated history, being associated with varied and multiple meanings over time. While Berleant (2002: 3) points out that Kant, the 'founder of modern aesthetic theory,' based his philosophical inquiries on the aesthetic properties of 'nature,' subsequent philosophers and art critics defined 'nature' as separate from 'art' and its aesthetic appreciation. In this view, which Berleant (2002: 5) identifies as the 'contemplative model,' the observer visually contemplates the representational art object, epitomised in the Dutch landscape paintings discussed above. Thus, aesthetics is conceptualized as a way to assess an objectified representation of 'nature' or 'natural beauty' through 'disinterested contemplation' that is primarily visual or aural in the case of music (cf. Berleant 2002: 5). In the nineteenth and early twentieth centuries, the 'active model' (Berleant 2005: 6) of aesthetics took shape as a critique of the contemplative model, and stressed the importance of multiple sensory modalities when perceptually experiencing the art object. While this model is often associated with Merleau-Ponty's (1974 [1947]) phenomenology of perception, Berleant (2005: 9) notes that it has been criticized for focusing on human perceptual experiences at the expense of nonhuman ones.

Responding to this lack of analysis of nonhuman experiences, recent phenomenological approaches to aesthetics continue to incorporate multiple sensory modalities without restricting perceptual capabilities and value judgements to humans alone. Ingold (2000: 166-167) explains his approach to perception as a multi-sensory experience wherein beings, objects, or events are perceived for what they 'afford' to the human and nonhuman perceivers. Meanwhile, Kohn (2002, 2007) focuses on human and nonhuman multi-sensory perceptual aesthetic experiences specific to communities in the Amazon region, and argues that mindful and empathetic encounters between and among a variety

of beings make up the collection of 'selves' that constitute the Amazonian environment (Kohn 2002: 72, 111; 2007: 4). For Kohn (2002: 70), aesthetics can be defined as a 'system that attaches particular values to experience in ways that affect experience.'

While this understanding of aesthetics incorporates multiple senses and both human and nonhuman perceptual experiences, I suggest in this thesis it is more analytically useful to move away from the concept of an aesthetic 'system' to one that focuses on the emergent, unfolding nature of these experiences through and in the relational landscape. Thus, expanding on Kohn's (2002: 70) definition, I provide here a working definition of 'aesthetics' as an ongoing series of relational, multi-sensory perceptual pathways between and among human and nonhuman beings that are subsequently valued and made meaningful by human and nonhuman participants. Given the emergent conceptualization of the landscape through which these pathways unfold, it follows that the valuing of certain relational pathways over others will affect future perceptual engagements and in this way, shape the 'life-world.'

Through this working definition, aesthetic value has an ethical or moral component tied to which perceptual experiences are valued and the meanings attached to this valuation. Aesthetics and ethics have often been tied together in the past, as seen in Kant's (2007 [1790]) philosophical investigations in the *Critique of Judgement*. Some more recent philosophers, however, have argued that aesthetic and ethical value should be kept separate due to the 'autonomy' of aesthetics (Brady 2002: 118) or because aesthetic and ethical values do not always overlap (Rolston 2002: 129). It appears to me that aesthetics and ethics are bound up together in understandings of relational, perceptual value regardless of whether they always directly correspond with one another.

Additionally, while aesthetics and ethics may overlap less in certain relational worlds, in the Canela 'life-world' aesthetic and ethical or moral value closely correspond, as is the case with many lowland South American indigenous communities. According to Turner (1995: 149), the Kayapó equate aesthetic and moral value in relation to cleanliness, with dirt on the body seen as 'aesthetically unbecoming [and] actively antisocial and even dangerous' to the individual and entire community. Similarly, Grant (2012: 74) describes how the Nivaclé indigenous community in Paraguay ties together aesthetic appreciation and morality into conceptualizations of communal and individual learning and work. Clean paths in the village are conceived as 'aesthetic places' and their maintenance is 'integral' to Nivaclé morality, with beauty of the path and the person linked to bodily knowledge of how to work together to maintain aesthetic-moral places in the community (Grant 2012: 74-75, 78). Canela combined aesthetic-ethical conceptualizations of the body, work (especially working in the gardens), and of village and garden spaces bear certain similarities to the Kayapó and Nivaclé examples, as Chapters 4, 5, and 6 (pp. 135-136, 172-174, 235-236) explore in detail.

According to Vergunst et al. (2012: 9), aesthetics and ethics are integral to understanding the landscape, particularly pertaining to varying conceptualizations (depending on particular 'life-worlds') of how the landscape should be 'bound up with ideas of appropriate relations and actions.' Thus, the 'aesthetics of landscape' as they understand it can be conceived as aesthetics 'grounded in relations with landscape...closer both to the embodied person and to the flows of sociality within which they are living' (Vergunst et al. 2012: 8). Once again, there is a focus on the processes and practices, or the 'folding' and unfolding (cf. Vergunst et al. 2012: 8), that emerge through and in the landscape.

There is also an emphasis on the potentiality or immanence of engagements with the landscape and aesthetic-ethic valuation of such experiences.

Taking this understanding of the 'aesthetics of landscape' one step further to incorporate nonhumans (who may well be conceptualized as 'persons' – see Chapter 6 [pp. 244-247]), I suggest a working definition of the 'aesthetics of landscape' as: a way of approaching the world in which conceptualizations of value flow from aesthetic-ethic embodied perceptual engagements between and among humans and nonhumans within and through the ever-unfolding landscape. While the concept of the 'bio-sociocultural life-world' provides a way to *describe* the emergent world in which Canela humans and nonhumans live and grow in simultaneously biological and sociocultural ways, the 'aesthetics of landscape' is the primary way in which these diverse beings *approach* and make sense of the life-world as it unfolds through complex and transformative processes.

Conclusion: seeking a 'bio-sociocultural aesthetics' dynamic framework

If we bring together the concepts of the 'bio-sociocultural life-world' and the 'aesthetics of landscape' into a theoretical framework that I am terming 'bio-sociocultural aesthetics,' what would this framework look like? I suggest that a 'bio-sociocultural aesthetics' theoretical approach would focus on the phenomenological emergence of particular biological-sociocultural contexts while at the same time seeking to understand how inhabitants of these contexts make sense of and value their engagements with each other and their unfolding surroundings in embodied, multi-sensory ways. At first glance, this framework may seem to draw solely from phenomenology, and would therefore reinforce the ongoing tension between phenomenological and structural approaches to human-

landscape engagements that Vergunst et al. (2012:11-12) describe. While this theoretical approach does focus primarily on how individual humans and nonhumans experience the landscape rather than on a certain 'restricted' conceptualization of landscape that is socio-culturally specific (cf. Hirsch 1995: 3; in Vergunst et al. 2012: 12), I posit that it remains possible and even necessary to explore the dynamic structures that emerge in certain 'life-worlds' through and alongside individual perceptual experiences.

With the Canela 'life-world,' certain dualistic and triadic structures that have emerged throughout mythic-historical processes are crucial to understanding the Canela world and their 'aesthetics of landscape.' These structures are not static, unchanging entities; instead, I explore the changing and transformational nature of Canela dualisms and triads throughout the thesis and especially in Chapters 4 and 8 (pp. 154-158, 303-311). This is not to say that there is no tension between the phenomenological and the structural in my theoretical approach, but rather that the ongoing tension between different ways of understanding the Canela life-world can be useful toward advancing new and innovative theories, as Vergunst et al. (2012: 12) suggest. In addition, I posit that approaching these tensions through a single theoretical framework of 'bio-sociocultural aesthetics' allows for a more integrated understanding of how individual perceptual experiences that are valued and made meaningful in turn form and shape biological and socio-cultural structures over time and in particular spaces in the unfolding landscape. The purpose of this thesis, then, is to shed light on these complex processes in the ever-changing Canela 'life-world,' which will, in turn, provide a creative and exploratory approach to understanding gardening practices, biodiversity maintenance, and ecological learning and knowing in the Canela life-world and beyond.

By exploring the processual nature of Canela gardening activities and their aesthetic-moral value in combined mythic-cosmological, sociocultural, and ecological-biological terms, the theoretical framework of 'bio-sociocultural aesthetics' brings together and goes beyond the material/symbolic dichotomy as well as the phenomenological/structural one. The framework dually focuses on emergent growth and developmental processes, or the 'materials' of bio-sociocultural life, as well as on multi-sensory perceptual experiences, or the 'symbolic' expressions and understandings of such materials. As Ingold (2013: 18) explains, 'biosocial life is a meshwork of materials endowed with properties of vitality and movement.'

Yet to understand this 'meshwork of materials,' we must look towards processes of movement and growth (cf. Hallam and Ingold eds. 2014) *and* recognize the importance of imaginative perception, or 'existential involvement in the sensual world' (Ingold 2012a: 3). This is because, as Ingold (2012a: 14) points out, in perception and imagination one is participating 'from within in the perpetual self-making of the world.' The perceivers and imaginers in the unfolding Canela 'life-world' are comprised of diverse humans and nonhumans. While the majority of the thesis focuses on Canela human engagements with each other and with nonhuman cultivated plants, in Chapter 7 (pp. 268-275) I also explore the role of deceased Canela and 'white' 'souls' (which are considered different types of beings), living 'white' people, animals, and objects or artefacts.

When developing a dynamic theoretical framework such as this, however, it is important to recognize its limits given the data available, and to search for new ways forward that go beyond this thesis. Although my fieldwork focused on gleaning insight into cultivated plants' combined ecological-sociocultural behaviour from my observations and those of

my Canela (human) research assistants, I recognize that there are limits to this approach in terms of more fully understanding the perceptions and 'values' of plant species and varieties themselves. New research into plant senescence or 'plant-thinking' is providing innovative research methods on how to approach these difficult questions (cf. Hartigan n.d.), and I intend to incorporate these methods into future fieldwork with Canela people and plants. Since Canela human gardeners have developed intimate engagements with their cultivated plants through a process that I term an 'education of affection,' though, in this thesis I focus on the voices of expert Canela gardeners (and shamans) who can bring us closer to understanding their own and their plant 'children's' points of view. In this way, the 'bio-sociocultural aesthetics' framework is open-ended and allows for its own transformation and change as new data comes to light, just as the 'life-world' it seeks to explore changes as it unfolds over time.

Chapter 3

Myth and history – transformations and continuity of Canela engagements with ‘Others’

Introduction

Over the past 200 years of sustained contact with the larger Brazilian society, the Canela life-world has dramatically transformed in sociocultural, socio-political, cosmological, and ecological ways. At the same time, the modern-day life-world retains some important continuity with the past, and the processes of continuity and transformation shape who the Canela are today. In this chapter, I explore these processes of stability and change as they emerge in historical and mythical accounts. In particular, the chapter focuses on how the Canela have mediated complex interactions with ‘Others,’ including other indigenous groups, non-indigenous Brazilians, and nonhuman supernatural entities, animals, plants, and artefacts or objects.

In the first section, I examine the historical accounts of the Canela from the seventeenth and eighteenth centuries to the present day, available mainly in Nimuendajú (1946), Crocker (1990), Crocker and Crocker (2004), and Azanha (1984). In these accounts, the transformative changes to the Canela life-world become apparent, particularly in how Canela engagements with different types of ‘Others’ have shifted over time, from warfare and strife with indigenous and non-indigenous neighbours in the eighteenth and nineteenth centuries to peaceful, albeit largely unequal and dependent, relationships

with non-indigenous Brazilians and the modern nation-state today. I give particular focus to the changing relationship the Canela have had with their territorial landscape, as their subsistence activities have shifted from semi-nomadic hunting and gathering treks and the maintenance of small gardens to modern-day subsistence horticulture and permanent settlements. While Chapter 1 discusses this transformation across many Jê-speaking communities, this section explores the specificities of the Canela historical context and searches for a better understanding of how the Canela have become a twenty-first century community of horticulturalists with incredibly diverse garden plots.

To complement and expand upon these historical accounts, the second section of the chapter explores the mythical accounts of the changing Canela life-world and its inhabitants, whether human or nonhuman, Canela or non-Canela. I examine the origin myths of Canela people and the village space, of horticulture in general, including most crop species and varieties, and of particular crops such as peanut, sweet potato, and *urucum* (annatto). These myths highlight the importance of nonhuman 'Others' such as supernatural entities and animals to the ongoing creation of the Canela life-world, including the village and garden spaces, and of humans themselves. Other myths included in this section also shed light on human-animal engagements and the integral role of nonhuman beings in human processes of active learning and knowing. I especially focus on the origin of horticulture myth, which highlights the importance of embodied, multi-sensory engagements with the landscape and cultivated crops as the primary way to learn how to garden. In addition, this myth sheds light on the interplay of myth and history, particularly on the continuities and transformations of Canela relationships with their

non-indigenous 'white' neighbours known as *cupên*.¹⁰ I compare the version that I recorded to earlier ones in order to better understand the mythical origin of gardening and the ways in which this particular myth remains especially significant for Canela gardeners today.

In the conclusion, I go further in my exploration of the interplay of history and myth through an examination of the story of Ahkwêê, the 'culture hero' who placed the Canela in their current situation of poverty and marginalization after they declined his offer to make them 'rich' and 'white.' Simultaneously conceptualized as a Canela shaman, the nineteenth-century emperor of Brazil Dom Pedro II, the conquistador and 'discoverer' of Brazil Pedro Álvares Cabral, and Jesus Christ, Ahkwêê is a complicated figure whose role in the Canela mythic-historical past warrants further exploration and who continues to shape modern-day Canela life experiences. By comparing the versions I recorded with earlier ones documented in Nimuendajú (1946) and Crocker (1990), I suggest that mythic storytelling simultaneously gives continuity to the Canela life-world while providing a space for transformations to emerge and flourish. I posit that both historical and mythic understandings of the past are necessary to understand the present-day Canela community, especially the modern importance of subsistence gardening. Finally, based on the mythical and historical accounts provided in this chapter, I suggest that modern-day gardening is a crucial example of the overlapping continuity and change that have emerged as part of the Canela life-world and provides a new and transformative way to interact with 'Others,' especially cultivated plants.

¹⁰ Following other ethnographies of lowland South America (cf. Albert and Ramos 2002; Lasmar 2005), the term 'white' here refers not to a specific skin colour, but rather serves as a gloss referring to the category of non-indigenous Brazilians or foreigners. As is common with indigenous communities in Brazil, the Canela use the terms *cupên* and '*branco*' ('white person' in Portuguese) interchangeably.

Historical accounts: the seventeenth century to the present day

Although there are few historical records available that describe how the Canela and other Timbira groups lived prior to sustained contact with Portuguese and Brazilian settlers, Crocker and Crocker (2004) provide a brief account of how these groups most likely organized and interacted with each other pre-contact. At the beginning of the eighteenth century, they estimate that there were around 30 to 50 tribes of ‘peoples like the Canela’ that had population sizes ranging from around 1,000 to 2,000 living between the eastern Parnaíba and western Tocantins Rivers in northeast Brazil (Crocker and Crocker 2004: 11). Known as the ‘Timbira’ by Portuguese settlers, the groups most likely referred to themselves as the *mẽhĩn*, which translates as ‘people’ (literally *mẽ* = plural form, *hĩn* = ‘flesh’). They regularly engaged in warfare with each other during the dry season months, and would usually attack an ‘enemy’ tribe using wooden clubs and bows and arrows (Crocker and Crocker 2004: 11). While some of the skirmishes did not result in many deaths, other attacks undertaken specifically for ‘revenge’ were typically meant to kill as many men, women, and children in the enemy’s village as possible (Crocker 1978).

It is interesting to note that destroying enemy’s gardens was most likely not part of this inter-tribal warfare, and that the skirmishes generally did not occur during the planting season because, according to some, bows and arrows did not function well in the heavy rains (Crocker 1978). Thus, even at this time when Timbira groups were semi-nomadic and primarily hunted and gathered for subsistence, it appears that their small garden plots were given some sort of conceptual significance. Not much is known about these small garden plots, other than that they were probably cultivated in forested areas near streams, using fire and stone axes to clear the brush for a new plot (Crocker and Crocker

2004: 12). While it is unclear whether Crocker and Crocker (2004: 12)'s claim that the 'savannahs were too sandy to be cultivated' is supported by ethno-historical accounts of pre-contact gardening, perhaps the Timbira groups of this time did not cultivate gardens in these areas. Nowadays, however, certain crops are cultivated in garden plots created in the savannah land type (Põ in Canela; see Chapter 1 [pp. 36-37, 39]), perhaps displaying another transformation of gardening practices over the past few hundred years. In addition to warfare, certain tribes created alliances and traded with each other, although Crocker and Crocker (2004: 11) note that a group's allies could not be relied upon in times of warfare with another tribe.

According to Nimuendajú's (1946) seminal ethnographic work on the Eastern Timbira, initial encounters with the Portuguese colonial government and military, settlers, and missionaries began in the seventeenth century, when the Portuguese built a fort near São Luis, Maranhão in 1624 after they had expelled the French from this port city (Nimuendajú 1946: 3). Indigenous peoples in the area were subjected to slave raids, as the Portuguese sought to capture these people and sell them into slavery in São Luis. Missionaries established missions near the Tupi-Guaraní-speaking Guajajara community by the mid-seventeenth century, although they most likely did not contact any Timbira groups during this time. The Portuguese continued to attempt colonizing Maranhão and the rest of the northeast throughout this century, and by the eighteenth century, more colonial settlers were moving to the area as well.

The first mention of the Timbira and their fighting prowess in Portuguese written accounts dates from 1728, displaying the ongoing tensions between the Portuguese and the indigenous communities whose lands they continued to invade (Nimuendajú 1946: 3).

Nimuendajú (1946: 2-5) discusses the waves of military and settler colonization coming from four different geographical starting points to converge on the Timbira territories – from São Luis in the north, Pará in the west, Goiás in the south, and Bahía in the southeast. Over time, many of the settlers formed ‘quasi-military’ (cf. Crocker and Crocker 2004: 11) groups known as *bandeiras* that engaged in skirmishes with the different indigenous groups in the region. While the indigenous groups often defeated the *bandeiras*, the settlers typically responded by enticing them to enter into false treaties, only to subsequently massacre the community or sell its members into slavery. Indeed, Nimuendajú (1946: 4), citing Ribeiro (1841 [1819]), states that ‘the Indian Wars were due to the colonists’ craving for slaves rather than to the need of opening up new territories.’ And although the colonial government had banned the slavery of indigenous peoples, the settlers often claimed that the Timbira groups were ‘Botocudo Indians,’ which were allowed to be enslaved by an 1808 royal decree (Nimuendajú 1946: 4; Crocker and Crocker 2004: 15).

With these different waves of settlers encroaching on their territories, and killing and enslaving their people, many Timbira tribes began entering into peace treaties with various governmental or settler groups at the beginning and through the middle of the nineteenth century. A trader established ‘peace’ with the Krahô as early as 1810 (Nimuendajú 1946: 3), and by 1814 the Canela entered into a treaty with a *bandeira* group of settlers after suffering a serious defeat by the neighbouring Fox (Tsoo-khãm-më-?khra) tribe (Crocker and Crocker 2004: 15). Nevertheless, the settlers deceived the Canela in 1815 by leading them to Caxias, a town near the border of Maranhão and Piauí, in order to infect them with smallpox. The Canela responded by stealing cattle and raiding the settler’s gardens, although many of them were caught and beaten. The rest of the group

fled to the Alpercatas hills in the interior of Maranhão (see Map 2 [p. 6]), in close proximity to their current demarcated territory (Crocker and Crocker 2004: 15-17).

Much of the Canela population were wiped out by massacres, enslavement, and disease, so that by 1820 they most likely numbered less than 100 people (Crocker and Crocker 2004: 11). Similarly, Nimuendajú (1946: 4) notes that by the mid-nineteenth century, 'the resistance of the Timbira, weakened by war and disease, perceptibly waned.' With the establishment of Barra do Corda about 40 miles north of where the Canela were residing in 1841 and its growth into a town by the 1870s, they became 'surrounded' by Brazilian settlers and attempted to engage in peaceful relations with their non-indigenous neighbours (Crocker and Crocker 2004: 19). This was not a 'true and honest peace' for many Timbira groups, and although the Canela engaged in some economic exchanges with the settlers, ongoing tension between indigenous peoples and the non-indigenous 'pioneers' ensued (Nimuendajú 1946: 4; Crocker and Crocker 2004: 20).

In the late nineteenth and early twentieth centuries, some Timbira groups had been reduced to such small numbers that they began joining other Timbira communities. According to Crocker and Crocker (2004: 12), the Canela community of today conceptualizes themselves as being the descendants of five Timbira groups – the Ramkokamekra (Mõl-tũm-re), Mud (Karë?katêyê), Boar (Krôô-re-khãm-më-?khra-re), Piranha (Apaniekra), and Fox (Tsoo-khãm-më-?khra) peoples. While there are historical records of the Fox group joining the Canela in 1900, Crocker and Crocker (2004: 20) estimate that the Mud and Boar peoples became incorporated in the early nineteenth century, shortly after the 1814 'pacification' of the Canela by settlers. These alliances sometimes led to internal divisions, however, an example being the schism between the

Ramkokamekra-Canela and the Fox-Canela between 1903 and 1913 resulting from a sorcery accusation. Meanwhile, the tense 'peace' between indigenous communities and settlers continued to erupt into violence such as the 1913 massacre of the Kenkateye-Canela by settlers who were upset at this group's theft of their cattle (Crocker and Crocker 2004: 22-24). By the 1920s, the Canela were united again and living near the Santo Estevão River (Santos Estevam in Map 5 [p. 8]) in an area within the boundaries of their current territory.

The historical record indicates that as the Canela became more circumscribed within their current boundaries, hunting and gathering were no longer feasible subsistence strategies alone. It is interesting to note that while some communities in Maranhão such as the Tupi-speaking Guajá experienced what Balée (2013: 73) terms 'agricultural regression' post-contact with Europeans, the Canela and other Timbira communities appeared to be undergoing the reverse process as they moved from being semi-nomadic trekkers with small gardens to becoming more sedentary horticulturalists. While groups such as the Guajá became more nomadic to 'avoid subjugation' by non-indigenous colonial and post-colonial forces (Balée 2013: 74), the Canela had become 'surrounded' by these forces and therefore adapted to their newfound sedentism in what appears to be fundamentally 'Canela' ways.

As a result, it appears that gardening was becoming a more important subsistence activity during this time, with the Canela periodically moving their villages every several years along the river to create new riverbank garden plots (Nimuendajú 1946: 59). While Nimuendajú (1946: 59-60) only mentions garden plots near riverbanks, possibly indicating that forest plots were not cultivated during this time, he does state that individual families

occasionally maintained two separate plots simultaneously. When Nimuendajú conducted his fieldwork from 1929 to 1936, he documented the matrilineal system of garden ownership that still exists today, noting that every adult married woman owned a plot and some unmarried women as well. The gendered practices of demarcating, planting, tending, and harvesting plots also bear certain similarities to those I documented during my fieldwork – namely the men clearing the land for a new plot, both men and women planting, and weeding and harvesting reserved mainly as women’s work (Nimuendajú 1946: 59; see Chapter 4 [pp. 137-148]). By this time, the Canela had been using metal axes acquired from settlers for around 100 years, replacing the pre-contact stone axes.

Gardens included a wide variety of species, which the Canela divided into ‘aboriginal’ and ‘introduced’ after contact, and these divisions still hold today (see Chapter 6 [pp. 218-219]). Aboriginal species included maize, yam, sweet potato, bitter and sweet manioc, ‘horse bean’ (the *Pànkryt* category of today), arrowroot, gourd (Cuhkõn Cahàc squash of today), bottle gourd (Cuhkõn), ‘ground nut’ (peanut, Caahy), *kupá* (*Cissus* L.), cotton (Caxàt), and *urucum* (Nimuendajú 1946: 58). Thus, Nimuendajú (1946: 61) notes that although neighbouring settlers often mocked the Canela for their lack of industry and thievery, in the 1930s they were obliged to ‘acknowledge publically that the Indians had planted considerable crops’ when the Canela brought ‘horse loads’ of manioc flour from their gardens and ‘saved’ the townspeople of Barra do Corda from famine.

Other changes in the early-to-mid twentieth century included the increased presence of non-indigenous people in and nearby the Canela lands. In addition to Nimuendajú’s presence in the 1930s, the SPI, the predecessor of FUNAI, established a post near the

community in 1938 (Crocker 1994: 94). Among other influential changes such as encouraging the monetization of performing festivals and selling artefacts, Nimuendajú encouraged the SPI to hire one of his Canela research assistants, thereby initiating a tradition of Canela employees of the SPI and later FUNAI that continues today (Crocker and Crocker 2004: 28). As was standard practice for SPI agents throughout Brazil, they engaged in a paternalistic relationship with the Canela, providing them with manufactured goods such as cloth, shotguns, gunpowder, and staple foodstuffs, and establishing a school where they taught community members Portuguese and the rhetoric of the 'civilized' Brazilian nation-state (Crocker and Crocker 2004: 29; Devine Guzmán 2013: 31).

This era of SPI policy throughout Brazil was marked by 'facilitating the economic integration of...[Indians] in the final stages of de-Indianization' (Devine Guzmán 2013: 32, citing a teacher in the 1940s Canela SPI school). Thus, while the SPI intended to protect the Canela from violent attacks by nearby settlers, they also encouraged a march towards 'civilization' that would necessarily mean abandoning indigenous traditions to become a fully 'acculturated' Brazilian national. Crocker and Crocker (2004: 24-28) lament the decline of certain Canela sexual practices that the SPI (and apparently Nimuendajú) shunned during this time.¹¹ The hunting and gathering subsistence livelihood was also

¹¹ Some community members continue to engage in extramarital 'affairs,' especially during festival periods, but the practice of young people having sexual intercourse with elders of the opposite sex has declined, as has much of the 'sequential sex' between one ceremonially important 'girl associate' and a group of men (cf. Crocker and Crocker 2004: 24-28). During my fieldwork, young people discussed having extramarital affairs in the forest as part of the final festivities of the male initiation ritual period. At the end of this period, one of the male plaza groups was also said to invite a young woman into the forest to have sequential sexual intercourse with all the men. While Crocker (1990) and Crocker and Crocker (2004) do not categorize this activity as 'rape' and point to their accounts of women 'enjoying' sequential sex in the past (Crocker and Crocker 2004: 126-129), during my fieldwork Canela women discussed both positive and negative sexual experiences with me. Some women discussed their unwanted experiences of sexual violence, and one woman recounted hearing about how the sequential sex was a 'painful' experience for a woman. She also told me that a German woman working for a non-governmental organization had engaged (or had been

discouraged, and as previously noted it was becoming logistically unfeasible now that the Canela were living on less than 20 percent of their original lands (cf. Crocker 1994: 94).

By the mid-twentieth century, SPI policy shifted from attempting to completely assimilate indigenous populations to trying to 'improve' them, while also recognizing their 'right to live according to traditional customs' (Devine Guzmán 2013: 136). This initiated a period of encouraging indigenous populations to be 'self-reliant,' which, for many Jê communities such as the Canela, meant a focus on commercialized agriculture projects in order to be economically 'productive' members of Brazilian national society (cf. Devine Guzmán 2013: 114; Ávila 2004). As Crocker and Crocker (2004: 29), note, however, by the mid-1950s, the Canela had become accustomed to relying on the SPI for many manufactured goods and foodstuffs, and the male leadership council was not able to successfully organize the younger male age groups to cultivate large commercial garden plots. While commercialized agriculture did not really take off during this time, the Canela continued to maintain smaller garden plots for subsistence. It is unclear when the practice of maintaining both a riverbank and forest garden plot began, although Crocker mentions each at different points in his extensive writings (Crocker 1990: 95; Crocker and Crocker 2004: 59; Greene and Crocker 1994).

One factor that profoundly affected Canela gardening practices (and their entire way of life) was the messianic movement of 1963, which resulted in the community's four-year relocation to the neighbouring Tupi-speaking Guajajara indigenous territory from 1964 to

forced to engage; the distinction was unclear) in the sequential sex in the 1990s. The Canela woman encouraged me to stay away from the male plaza group in the forest so that they would not 'grab' me for this purpose. Thus, it seems to me that nowadays there is a distinction between the extramarital affairs, which appear to be consensual and voluntary, and the 'sequential sex' that does not always appear to be 'voluntary' for women. For a comprehensive discussion of changing Canela attitudes to and experiences of sex for both men and women, see Panet (2010).

1968. The movement began with Maria Castelo Khêê-kwỳj, a Canela woman who claimed that her foetus was the sister of the culture hero Awkhêê, and that with her birth Awkhêê would return and bring a 'new world order' dominated by the Canela instead of the non-indigenous *cupên* or whites (cf. Crocker and Crocker 2004: 30-31). Maria Castelo encouraged a faction of the community to celebrate in preparation for the culture hero's return, and for this ongoing festival period, her supporters took many cattle from nearby cattle ranchers' farms, thereby instigating the ranchers to attack the Canela. Crocker (personal communication) describes how the ranchers burned down the village and attempted to kill 'as many Canela as they could,' although most people were able to escape through a stream and were then protected by the SPI agents from Barra do Corda. Some of my research assistants were present during this attack, and they informed me that the ranchers killed a few Canela before the rest of the community escaped. They described how the community had to abandon the village and garden plots as they fled the attack. Upon their initial relocation to the Guajajara territory, the Canela became 'demoralized' and did not engage in hunting or cultivating gardens, although later on some of the younger men began cultivating crops in the gallery forest soils, which they found more fertile than those in their territory (Crocker and Crocker 2004: 32).

Under the guidance of the SPI and its successor FUNAI (which replaced the SPI in 1967), small family groups began returning to the Canela territory between 1966 and 1968, and the community built Escalvado village in 1969, where they continue to reside today. A FUNAI post was also established in the Canela territory near the village at this time. Descriptions of the community's gardening practices post-relocation paint a devastating picture. Crocker (1990: 95) mentions that the community lost their four varieties of 'aboriginal' maize as well as cotton and 'probably peanut' during the relocation. My

research assistants also lamented the loss of seeds during this time, although they recount how they acquired some seeds from their Guajajara ‘neighbours,’ including the ‘Guajajara Tree Bean’ (Pàt Juhtöi-re Pàràre/Pryjĩ; Pryjĩ = ‘Guajajara’; see Chapter 6 [p. 219]). When they returned to their abandoned garden plots, some bitter manioc and pineapple were still growing there, especially in the Põhipôc or Campestre area (see Map 5 [p. 8]). Liliana was a young girl when the messianic movement occurred, and her family was one of the first ‘courageous’ ones to return to the Canela lands because, she said, the gallery forests ‘frightened’ them and the family wanted to return to their gardens. Although Liliana told me that many white people had stolen the Canela manioc crops, her family had a white ‘friend’ (*compadre*) who told his neighbours to stay away from their manioc, and as a result some of the crop was still left when they returned to their Campestre plot.

As the community returned and engaged in daily life in their longed-for Cerrado once again, gardening appears to have gained importance in both subsistence and commercial ways. Crocker and Crocker (2004: 33-34) discuss the difference between the ‘agricultural’ and ‘messianic solution to the future,’ arguing that the agricultural way forward was initiated by younger men who had cultivated crops in the Guajajara forests and now wanted to farm for commercial purposes, as opposed to the messianic approach that centred around mythical transformations of social relations. My research assistants described a similar dichotomy that has manifested itself over the past few decades, especially during the smaller messianic movements that occurred in the late 1970s, 1982, 1987, and 1997.¹²

¹² Rizzo de Oliveira (2007) describes and analyzes the 1963 messianic movement and two others in 1980 and 1984 in the context of development projects within and nearby the Canela territory. It appears that the 1984 movement is the same one described by my research assistants as occurring in the late 1970s.

During these movements, however, an opposition emerged between gardening for *subsistence* purposes (rather than commercial ones) and relying on messianic predictions. According to Liliana, the leaders of all but one of these movements called on the Canela people to abandon their garden plots, bring their harvested crops and hunted game as gifts to the leader, and undertake ongoing, almost frenzied feasting and festivities. In 1982, the leader Reinaldo told the community that garden work no longer mattered, for the world was going to end. If anyone continued cultivating garden plots, Reinaldo said he would 'stop the rain,' since he controlled the weather. Similarly, Liliana remembers a period of hunger after the 1970s movement, since the leader Marcelo convinced everyone to leave their plots and bring food to the forest for festivities. In 1997, Nilton also told people to stop working because they were only 'waiting for death' and the end of the world to come. Nevertheless, an opposition remained during these times that preferred to stay near their garden plots and continue cultivating them. Liliana's classificatory maternal grandfather Jacinto resisted the 1982 movement by staying in his garden away from the frenzy in the village, and despite Reinaldo's threats of stopping the rain, Liliana recounts that there were heavy rains that year and her family's gardens produced abundant harvests.

Thus, it appears to me that the opposed attitudes toward the future of the Canela life-world were more about messianic fervour versus subsistence gardening, not commercial agriculture. I suggest that those who engaged in gardening throughout the movements were expressing their valuation and appreciation of their own familial gardens and cultivated crops, not of large commercial farms 'based more on the backland [non-indigenous Brazilian] way of life' (Crocker and Crocker 2004: 34). By this time in the Canela life-world's history, it appears to me that subsistence gardening had become just as

'authentic' of a transformation as the messianic movements, both of which emerged over time and as responses to the growing dependence of the Canela on non-indigenous actors, whether SPI or FUNAI agents, cattle ranchers, or anthropologists. As Rizzo de Oliveira (2007: 209) argues, the 'messianic expectation' of the Canela 'emerged through their need to understand the processes of change within which they were inserted.' While the messianic movements presented a more passive approach of waiting for cosmological intervention to change the circumstances of dependence, subsistence gardening offered a more active way of resisting dependence on outside actors by engaging with the local Cerrado landscape and providing food for one's family.

From 1969 to the late 1990s, the Canela were establishing a more sedentary way of life, focused on one large permanent village of Escalvado and relying on garden plots for the majority of their nutritional intake. The Canela territory was initially demarcated in 1971 and approved in 1982, marking a significant legal victory for the community while also formally circumscribing their lands to around 5-10 percent of what they formerly occupied (cf. Crocker 1994, 2007). During this same period, some kind of messianic movement occurred in every decade, thereby highlighting the ongoing tension between the messianic and subsistence gardening approach to shaping the rapidly transforming Canela life-world, including how to deal with increased dependence on outsiders.

Indeed, this era was marked by the ever-increasing presence of outsiders in Escalvado, including missionaries, anthropologists, non-governmental organization workers, and governmental workers from FUNAI, FUNASA, and the local townships (*municípios*) of Barra do Corda and Fernando Falcão. From 1968 to 1990, missionaries Jack and Josephine Popjes from the Summer Institute of Linguistics lived in Escalvado and translated the Bible

into Canela, while also writing down the first comprehensive grammar of the language (cf. Crocker and Crocker 2004: 35; Popjes and Popjes 1986). Crocker continued his fieldwork trips during this time as well, and initiated his diary programme in 1966, in which Canela research assistants periodically sent him written or audio recordings recounting their daily lives (Crocker 2007: 35; this programme ended in early 2013). Meanwhile, FUNAI officials continued their presence in Canela daily life by building a schoolhouse, infirmary, and a FUNAI post in Escalvado in the mid-1970s and early 1980s (Crocker and Crocker 2004: 35). By the late 1990s, the National Health Foundation (FUNASA) took over the medical support of Escalvado with a health post in the village staffed by two nurses who came from other parts of Maranhão. In 1999, the township under which the Canela territory resided changed from Barra do Corda to Fernando Falcão, another town near the village. This new township became responsible for staffing the Canela primary school, which Crocker and Crocker (2004: 37) describe as being staffed by both Canela and non-indigenous teachers with lessons in Canela and Portuguese.

In addition to various outsiders living and working in Escalvado, the Canela encountered new modes of transportation between the village and neighbouring towns – by truck on roads first constructed in the late 1950s, and by airplane using the small landing strip the SIL missionaries built in 1969 (although this latter mode of transportation was typically reserved for medical emergencies; cf. Crocker 1990: 86). Men (and some women) received rides from non-indigenous truck drivers to engage in day labour on nearby farms, an activity that is no longer common, and to visit nearby towns to purchase and beg for manufactured goods. In all of these ways, then, the Canela life-world began to incorporate people and things from the outside, which transformed daily life and the meanings and values attached to various engagements with the ‘Other.’ Instead of engaging in warfare

with or fleeing from non-indigenous people as they had done in the eighteenth, nineteenth, and early-to-mid-twentieth centuries, the Canela in the late twentieth century engaged in more peaceful relationships with non-indigenous Brazilians and foreigners, albeit of a largely dependent nature.¹³

In the twenty-first century, the nature of Canela relationships with 'outside' people and things continues to change in myriad ways. Some community members have become involved in local politics, running for representative (*vereador*) and other positions in the Fernando Falcão township elections. Crocker and Crocker (2004: 39-40) discuss the first time that two Canela men ran for office in opposition to each other in 2000, and by the local elections of 2012 during my fieldwork there were five Canela men running, four for representative positions and one for vice-mayor on a white man's mayoral ticket. While none of these candidates won in 2012, their candidacy in different political parties that gave material items such as cattle to their Canela supporters created some tensions in the village during the electoral season.

Another significant change in Canela engagements with the government has been the introduction of conditional cash transfers (CCTs) to impoverished people throughout Brazil. Bolsa Escola (School Grant) was established in 2001 along with other aid programmes to benefit the poor, and in 2003-2004 the government consolidated and expanded these to form Bolsa Família, a programme that benefits mainly poor women with young children who fulfil certain health and educational requirements (cf. Ansell and

¹³ This is not to say that violent incidents between the Canela and the local whites have completely ceased. According to my research assistants, some whites killed a teenage Canela boy as recently as 2005, in retribution for the 2002 killing of a white man by a Canela one (who immediately fled the area). I explore the role of violence and danger in the Canela life-world and its association with white people and places in Chapter 7 (pp. 265-267).

Mitchell 2011: 305, 308). Many Canela women currently benefit from the monthly stipend that Bolsa Família provides them and use the money to purchase foodstuffs, soap, cloth, and other manufactured items in town. While my research on this subject indicates that some women appear to feel empowered by this money, others are sometimes convinced to enter into debtor-creditor relationships with people both within and outside the village using their Bolsa Família debit cards as collateral (cf. Miller 2013).

Some Canela men and women are becoming more involved in missionary work inside and outside of Escalvado as well. While a German family from the SIL has been living in Escalvado and doing linguistic work in Canela since the early noughts, in February 2012 the Assembly of God church from Belém, Para built a church on the western side of Escalvado and a missionary soon followed in April of that year. People from a few Canela families, including my own adopted one, have become key actors in this church and they have plans to expand their influence to the eastern side of the village. My brother-in-law Vítor received training in Belém and now serves as the church pastor, holding frequent services for adults and children in a mix of Canela and Portuguese. These more recent examples highlight the ongoing tension between concerted Canela efforts to shape their own life-world and their continued dependence on outsiders for political support, monetary assistance, and institutional religious backing, among other things.

Gardening, meanwhile, continues to play an increasingly important role in the subsistence and survival of the twenty-first century Canela life-world. Rather than having been replaced entirely by purchased foodstuffs or commercial agricultural efforts, subsistence gardening remains the primary way that Canela families feed themselves and exists alongside the presence of manufactured food items and more commercialized garden

plots. Gardening activities display some important continuities with the past, including the cultivation of many of the same 'aboriginal' and 'introduced' species, a similar gendered division of labour, the use of riverbank areas for garden plots, and even the use of a similar digging stick that Nimuendajú (1946: 58-61) documented in the 1930s. There also appears to be significant transformations of gardening and its value in the community over the past two hundred years of sustained contact with the larger Brazilian society. My fieldwork indicates that garden plots are most likely larger than in the past, are now located in both riverbank and forest areas, and include a wider variety of cultivated crop species and varieties than they did a half-century, century, and certainly two centuries ago. In terms of the value of gardening and garden plots, the Canela of today appear to identify themselves as gardeners and appreciate those community members who can maintain large, 'beautiful' plots with a diverse array of crop varieties and species (see Chapter 5 [pp. 164, 174-176, 178-181]). They also appear to engage with cultivated plants in intimate, embodied ways that were not documented in the past, although there may be a longer history of these relationships than the available ethnographic material allows (cf. Nimuendajú 1946: 60; see Chapter 6 [pp. 228-235]).

Thus, gardening seems to be a prime example of both the stability and change of the Canela life-world, and in this way, a further exploration of gardening can perhaps shed light on larger processes of transformation and incorporation that the community has experienced and continues to experience today. Additionally, I would argue that subsistence gardening has become one of many ways that the Canela deal with their unequal yet dependent relationship with outsiders. While some of the myths in the next section underscore Canela dependence on the 'Other,' especially whites, a common mythic theme that also emerges is the 'originality' of gardening to the Canela life-world,

a conceptualization that my research assistants echoed when they described gardening as something truly 'Canela' that people can value and appreciate.

Mythical accounts: origins of people, places, rituals, and things

In the previous section, I explored the stability and transformation of the Canela life-world through historical accounts written by outsiders such as colonial authorities and anthropologists. Through a focus on mythical storytelling, this section provides an opportunity to view continuity and change from the Canela perspective, thereby giving us further insight into the myriad ways in which the life-world has emerged into what it is today. The myths included here focus on the origins of the diverse human and nonhuman beings, ritual activities, and objects and artefacts that comprise the Canela life-world. The complete versions of these and other myths I recorded can be found in Appendix D (pp. 379-451). Here I include shortened versions of the mythical stories except for the origin of horticulture myth, which is included in full due to this story's centrality in understanding the origins and transformations of Canela gardening practices.

While many of the myths presented here shed light on the interplay of myth and history, they should not be considered as chronologically ordered, but rather as existing in a mythical time period of the 'ancestors,' those people who lived 'long ago' or 'in the beginning.' Similar to other lowland South American communities (cf. Viveiros de Castro 1998, 2011), the Canela say that in this mythical past, humans and nonhuman beings could more easily converse with one another than today, when only experienced Canela shamans (*kay*) can listen to and understand the voices of animals, plants, and objects or artefacts (see Chapter 7 [pp. 281-287]). The end of this period came after the 'great fire,'

a mythical event that resulted in animals becoming ‘mute’ and unable to communicate with humans who do not possess shamanic abilities (see Appendix D [pp. 412-414]). Thus, the origin myths describe a period in which humans easily communicated with nonhuman animals and supernatural entities, and acquired many sociocultural materials and activities from these nonhuman beings, thereby shedding light on the role of nonhumans in the emergent and transformative Canela life-world.

In the Sun (Pýt) and Moon (Putwrè) myth, for example, the supernatural entities of Sun and Moon create the Canela people and the conceptual division between the western and eastern sides of the village. The story begins with Sun and Moon coming down from the sky to live on the earth, and through a series of adventures (or misadventures), Moon continuously ‘hinders’ Sun and his activities. In the three versions of the myth that I recorded, Moon is always ‘following’ Sun and disturbing him. When Sun orders tools such as Machete and Axe to work garden plots by themselves without human intervention, Moon disturbs them and they never work of their own accord again. When Sun creates a way for humans to ‘bury’ their dead near the foot of a tree that will never really let them die, Moon ruins this plan by creating burials in the earth, thereby making human bodies remain dead. Moon always wants what Sun has and trades his lesser items for those of Sun – whether it is *buriti* fruit that is not soft enough, capybara meat that is too tough and skinny, or a red hat from Woodpecker that is too hot. Moon disturbs everyone, including the *buriti* palm and Tortoise, and he even sets fire to the *chapada* grasses with Woodpecker’s red hat.

Nevertheless, Sun and Moon remain formal friends, or *hapĩn* in Canela (sometimes translated as *compadre* in Portuguese). One day they travel to the stream together to

make children. The elderly storyteller Leandro tells this part of the story (the full myth is in Appendix D [pp. 379-384]):¹⁴

Then, they went to the stream. Sun said, 'we are going to make our children. Let us go to the stream.' Sun jumped into the stream, and two children came out. Their hair was beautiful – smooth, and very white! Moon also jumped into the stream, and two children came out – with ugly, unruly [curly] hair! Moon said, 'let us trade our children, *compadre!*' Sun responded, 'no, these are my children! You keep your children, and I keep mine.' 'Okay, let us go into the sky.' They went into the sky, and Sun said, 'are you going to watch over the day or the night, for you to walk in?' '[I will walk] by day, and you will pass through the night,' Moon said. Moon did not let Sun take the day. 'No,' Sun said. 'This [time] you are not going to pass over me. I am going to watch over the day, because you are worthless [and you will] change overnight. If not, you are going to end our brothers, our people! When they walk at night, in the full moon, the people will say, "let us go at night time, the full moon is coming!" You will be on the other side of the world, and the people will be happy. Not from me, I do not have the happiness of life. You will make the people happy. During the new moon, the people will yell and live with you; they will be yelling and living with you, and tell you they are alive.' Moon watched over the night, and Sun did not let Moon watch over the day. Moon creates the night and makes it dark, but he does not give much.

Fernando describes the origin of Canela people in a similar way, albeit with slightly different details:

They say that Moon's children do not have smooth, shiny hair, but Sun's children have shiny hair. Sun invited Moon to the stream. Then, Sun said, '*compadre*, let us create our children!' 'Yes, it is good!' said Moon. 'Look, look over there,' Sun said. He dove into the stream, came out, and his child came out with him, accompanying him. Sun did this a second time, and again; four times he did this, and he created four children. Sun told Moon, '*compadre*, do it too!' Moon dove into the stream, and his child came out with him, but with ugly/untidy [curly] hair. Moon dove, created another one, and they all had the same hair. 'All is well; we both created four children,' Sun said. ... They say that Moon's children have ugly/unruly hair, and Sun's children are much prettier!

Sun's 'prettier' children, Fernando explains, live in the western side of the circular village, known as Pýt cjęt xà in Canela, or the place 'where the sun sets,' while Moon's 'uglier' children live in the eastern side, the place 'where the sun rises,' or Pýt já pōt xà. The people who come from Sun and Moon exhibit some similar characteristics as those of the

¹⁴ For additional versions of this and other Canela myths, see Crocker (1990: 303-306), Nimuendajú (1946: 243-249), and Panet (2010: 291-293).

supernatural entities, although Fernando tells me that Sun's children are 'more similar' to Sun than Moon's children are to Moon. Sun's children are associated with the concept of *impej*, that which is 'beautiful,' 'true/original,' and 'good,' while Moon's children are linked to the opposite concept of *ihkên*, or that which is 'ugly,' 'less true/false,' and 'bad.' Additionally, this mythically grounded west-east division informs Canela matrilineal residence and marriage patterns, with men and women required to marry an opposite-sex partner from the opposite side of the village as their own natal home to avoid committing incest (Chapter 4, especially pp. 125-132, explores matrilocality, kinship and marriage in more detail). While there is a moral component to this division, with Sun's children conceptualized as more beautiful, 'better,' and sometimes even more truthful than Moon's, through kinship and marriage both types of people are necessary for the reproduction and continuation of the Canela life-world (see Chapter 8 [pp. 312-322] for a further exploration of the *impej/ihkên* division in its multiple forms). In this myth, then, the supernatural entities of Sun and Moon actually create Canela 'human society,' including the categories of people and geographical spaces they should occupy.

Similarly, in the origin of horticulture myth a supernatural being, Caxêtikwỳj ('Star-Woman'), 'discovers' the variety of edible forest fruits and cultivated crops for the Canela people and introduces horticulture to the community. Unlike the Sun and Moon myth, however, in this story the Canela engage in active processes of learning from Star-Woman, who came down from the sky to share her ecological knowledge. Leandro, who was around 89 years old in 2012, told me that he learned this mythic story from his 'very old grandfather' Lauriano when he was alive, indicating the longevity of this particular rendering of the myth. It follows here:

Tyc-ti is Caxêtikwỳj's husband. Caxêtikwỳj chose Tyc-ti to be with him, teach him, and show him the food of the forest, because the 'ancient' Indians [ancestors] did not know about this food. Caxêtikwỳj came down from the sky and turned into a small frog, and sat on top of Tyc-ti's stomach. He threw the frog off his stomach, and Caxêtikwỳj, as a frog, fell to the ground. When Tyc-ti was sleeping, she sat on top of his stomach once again, and he threw her off him – this happened two times. Caxêtikwỳj then said to him, 'why do you not like me?' Tyc-ti responded, 'I did not know; you are a person!' Caxêtikwỳj told him, 'Yes I am; I came down from the sky. My name is Caxêtikwỳj [*Estrela Dalva*, Star-Woman]. You can call me this, and now let us get together!' The two of them got together [slept together], and they talked about many things; they were talking and talking. Afterward, Caxêtikwỳj advised Tyc-ti: 'you should hide me again, wherever you want, in secret, so that no one sees me.' Tyc-ti responded, 'I have my sheath for storing arrows, I will clean it out so that you can hide in there.' He removed the bow and arrows, and put Caxêtikwỳj inside. It was becoming light outside; the day was almost dawning. Tyc-ti took Caxêtikwỳj with him, and she was hidden inside the Cuhkõn-ti [or Cuhkõn Pàt-wỳ] gourd. He hid her, and carried the gourd around with him.

All morning, Tyc-ti opened the lid of the gourd, saw Caxêtikwỳj, and laughed. He laughed for her, and she laughed for him. She liked him, and he liked her too – they both liked each other. Tyc-ti's youngest sister saw him laughing into the gourd, and thought, 'my brother is opening the lid of this gourd and laughing all the time; I do not know why.' When the day dawned, everyone began eating rotten wood, which was the people's food. The Indians ate this rotten wood; it was soft enough to eat. They did not know about 'good' food. Afterward, Tyc-ti went to his house, which was large and long. He advised his sisters, 'do not tamper with this gourd, it is beautiful! I am going along with my group to search for a log.' Tyc-ti and his 'brothers' [from the same male age-group] went hunting for rotten wood to eat. They sat, they thought. Meanwhile, everyone [in the house] saw this gourd. Tyc-ti's sister opened the lid and looked inside, but when Caxêtikwỳj saw a different face than Tyc-ti's, she hung her head in shame. She hid in the gourd once again. When Tyc-ti arrived, he opened the lid and saw that Caxêtikwỳj was still hanging her head. Tyc-ti said, 'who tampered with my gourd?' His sister replied, 'it was me.' 'Did you see the nice thing there?' Tyc-ti asked. 'Yes, I saw, her face is pretty,' responded his sister. Tyc-ti told Caxêtikwỳj, 'do not be angry, do not be upset with your youngest sister.' Caxêtikwỳj responded, 'now, with the afternoon arriving, I will come out, for everyone to see me.' Tyc-ti asked his sister to bring a mat for him and his wife to sleep on. 'I will remain lying on the ground itself, next to the fire,' he said. Later in the afternoon, Caxêtikwỳj came out of the gourd and sat on a log in the doorway of the house. She was beautiful, with white, almost clear-coloured skin and very long hair that was very pretty. There she was, in the house. The 'brothers' said, 'we do not know where her tribe comes from; she is so white!' Tyc-ti's sister said, 'no one knows. Only they know [Tyc-ti and Caxêtikwỳj].'

The next morning, at seven in the morning, Caxêtikwỳj said to her husband, 'let us go bathing. Bring the large basket.' They came to the stream and saw a large amount of *tucum* [*Bactris setosa*; Rõnti or Ronre in Canela; a type of native palm] fruit. 'Pick this *tucum*,' Caxêtikwỳj told Tyc-ti, and he did so. She began chewing it, and asked him, 'are you going to eat it?' 'No, if I eat that, I will die,' Tyc-ti answered. He did not want to eat it; he became angry. 'No, you will not die. This is what feeds you; it is your food. I am going to find everything for you to know about,' Caxêtikwỳj told him. She gave him the *tucum* fruit, and he chewed it, swallowed it, and found it tasty. Once they were in the water, there were many *buriti* [*Crowa*; *Mauritia flexuosa*] palms next to the stream. Caxêtikwỳj gave the *buriti* fruit to Tyc-ti for him to taste it as well. Again, Tyc-ti said, 'I am not going to eat this because it is raw, and very red.' Caxêtikwỳj told him, 'no, it is not raw; it is fruit,

buriti fruit! People are not accustomed to eating it; you do not know. I am still going to find other fruit in the *chapada*, and in the forest.’ Caxêtikwỳj gave Tyc-ti the fruit for him to swallow, and he liked it. She made juice, and showed him how to drink it.

Another day, Caxêtikwỳj took Tyc-ti to a different stream. They went into the stream, and there were many ears of corn falling into the water. Tyc-ti asked her, ‘what is in here, these tall stalks and big ears?’ ‘It is maize!’ Caxêtikwỳj told him. ‘This is what I am finding/discovering for you all to know about. Let us go to the village, to show people.’ They had to roast it, because it was still raw. There were so many ears of corn, and they arrived to the house with all the ears. Caxêtikwỳj’s sisters-in-law were seated, and she told one of them, ‘my sister-in-law, this is food; it is an ear of corn. I am going to roast it for you to see.’ Caxêtikwỳj said this; she had this knowledge. Together, they made a grater to grate the ears of corn. Then, they made a fire, roasted the ears, and ate them. All the sisters-in-law were chewing the food. ‘Are you seeing it; is it tasty?’ Caxêtikwỳj asked. It was so tasty! ‘You have never seen this; it was I who discovered it, and I still have other things to discover,’ Caxêtikwỳj told them. ‘The fruits of the riverbank, and there are other plants too.’

Caxêtikwỳj grated the ears of corn, made an earthen oven, and brought the maize husks with her as well. She wrapped the grated maize meal in the husks, covered them, and baked them in the oven. When it started smoking, she opened the oven. Everyone smelled the nice smell of the maize *beribu* pie, and thought it was beautiful. She distributed the pie to the children and to the adults, in the same house. In the afternoon, the men’s groups put the pies in the village street and performed the log racing. Everyone was together. One grandson, a little boy, took a piece of the maize pie and began eating it. ‘What are you eating?’ people asked him. The little boy ran away and sat [near Caxêtikwỳj]. In this way, everyone found out about Caxêtikwỳj. People said, ‘Caxêtikwỳj is finding this food for us to know about! We are going to cut down the maize tree; it is very tall and is heavy with ears of corn.’ The next morning...the Indian, he never learned to be intelligent, he did not know, and he asked the ‘Christians’ [non-indigenous ‘white’ people] to cut down the maize tree. The ‘Christians’ took the largest ears of corn, and left the smaller ones for us. That is why the whites plant maize with large ears, and the Indians plant maize with smaller ears, because the ‘Christians’ stole the large ears and left the smaller ones.

Another day, Caxêtikwỳj said, ‘let us go to the forest so I can show another fruit to you.’ It was *mangaba* [Pênxôô; *Hancornia speciosa*]; it was a large, tall tree with fruit this size [about the size of a fist]. Caxêtikwỳj was in the forest and presented the *mangaba* tree to the people, saying, ‘this is for you all to know about and to eat. Stop eating rotten wood; that is not food! This is the food that I came here for everyone to know about.’ An Indian climbed up the tree to cut down the fruit, and it fell to the ground. They collected all of it. Caxêtikwỳj herself showed them how to do everything – how to make the earthen oven. They dug a hole and arrived with the *mangaba* fruit. ‘Light this earthen oven,’ Caxêtikwỳj told them, and when they heated up the stones, Caxêtikwỳj took off the stones and put water in the hole. She heated it up, and put in the fruit, which turned soft that very moment. When she was done teaching them, Caxêtikwỳj took away the cooked fruit and returned to the village. They made the food, ate it, and enjoyed it. ‘[Look at] all of my discoveries of these fruits of the forest! Stop eating rotten wood now; do not remember it anymore,’ Caxêtikwỳj told the people.

On another day, she said, ‘let us go again to the forest, so that I can show you another fruit.’ She took only women with her, and there were many of them. They arrived in the forest, and there were many sweet potato vines, right there in the forest. She started

digging up the potatoes, and the women took them back to the village. They made another earthen oven and baked the sweet potatoes, and after cooking them, they were soft as well. All the teachings of Caxêtikwỳj, everything that she taught them, the ‘ancestors’ learned as well.

Another day, Caxêtikwỳj showed them sweet manioc in the forest. There was so much of it! They harvested the sweet manioc, and they ate it – it was tasty. Caxêtikwỳj showed them bitter manioc too, and told them, ‘this bitter manioc is not for making *beribu* pies. The sweet manioc is feminine, and the bitter manioc is masculine. You cannot make pies with the bitter manioc, only with the sweet manioc – [because] it is a woman. Bitter manioc is a man; it is bitter, and if you make pies with this, it will kill you and you will die. You have to grate it, squeeze it in the *tipiti*, and make *beiju* [a type of pancake] or *farinha* [toasted manioc flour] with it and you can eat it this way.’ She showed all of these crops for the Indian to know about. Slowly, they became accustomed to this new food; they began to know about it until they knew everything well. Caxêtikwỳj told her husband, ‘I am going now. I only came to show this food to you all for you to learn about it. Now I already showed you everything. I am going to return to the sky.’ Tyc-ti did not want to let her leave. ‘I am going with you,’ he said. ‘No, you are not,’ she told him. Nevertheless, he convinced her, and Caxêtikwỳj took Tyc-ti with her to the sky. She told him, ‘let us go together. They already found the fruits in the forest, and the food from the crops as well. They will make gardens and harvest the crops – the *maniva* [roots] of sweet manioc. They will plant sweet potatoes, and *buriti*, and watermelon, and all the seeds.’ Caxêtikwỳj went into the sky with her husband.

As noted in Chapter 1 (p. 29), the origin of horticulture myth is common among Jê-speaking communities, with either Star-Woman or a mythical mouse or rat introducing maize and other crop species to the human community (cf. Wilbert ed. 1978: 209-227; Ewart 2013: 205-207). A common thread among these mythical stories is the process of ecological learning and knowing that the supernatural entity initiates. In the myth above, as in other versions described in Wilbert (ed. 1978: 209-211), Nimuendajú (1946: 245), and Crocker (1990: 304), the Canela are eating rotten wood before Star-Woman’s arrival from the sky. According to Leandro, this is because they do not ‘know about “good” food.’ Star-Woman knows this, and states that her purpose is to ‘discover’ various cultivated crops and fruits of the forest and show these foods to her Canela husband and the rest of the community.

Rather than bringing these items down from the sky, however, she *shows* the Canela people that the fruits and vegetables already growing near their village are edible in multi-sensory, embodied ways. Every time she gives her husband Tyc-ti a new fruit or vegetable to try, his sensory capacities are described in detail – how he swallows, tastes, and experiences the food. When Star-Woman first prepares the maize *beribu* pie, the emphasis is on how the people smell its ‘beautiful’ smell and see the little boy eating and enjoying a piece of it.

In addition, Star-Woman engages in embodied demonstrations of how to harvest the crops and prepare the delicious food. She teaches women how to dig up sweet potatoes in the forest, and she shows people how to build an earthen oven by digging a hole and heating stones to roast the sweet potatoes and *mangaba* fruit that she collects. There are also direct verbal messages that she communicates to the people, such as the gendered categorization of sweet and bitter manioc and how the two crops should be prepared differently. It therefore appears to me that Star-Woman is conceptualized as the first expert gardener, who passes on her extensive horticultural and ecological knowledge to the ‘ancestors’ through embodied nonverbal and verbal teachings. This type of embodied learning and knowing, I posit, are tied to Star-Woman as their mythical originator as well. Canela gardeners of today appear to pass along gardening expertise in the tradition of Star-Woman, through active processes of multi-sensory, embodied learning and knowing (which I explore in Chapter 5 [pp. 185-186]).

If we compare this version of the myth with earlier ones recorded by Nimuendajú and Crocker, certain continuities and transformations emerge. In Nimuendajú’s (1946: 245) account of Star-Woman, she only shows the Canela people maize, harvesting the ears of

corn and wrapping the maize *beribu* pies in wild plantain or banana leaves (*sororoca*; *Heliconia* sp.), known as Acahôc Pej in Canela, which women continue to use when making *beribu* pies today. Four maize varieties are attributed to her discovery, at least three of which are currently cultivated today, including 'True/Original Maize' (Põhy Pej-re), 'Large White Maize' (Põhy Jaka-ti), 'Large Mixed-Colour Maize' (Põhy Tohrom-ti; referred to as *põhjtó'rómre*, perhaps a smaller type), and what Nimuendajú (1946: 62) terms *põhjkreakáre*, perhaps referring to 'Small Maize' (Põhy Kryi-re) (see Appendix A [p. 349] for list of varieties). Meanwhile, Crocker (1990: 304) states that Star-Woman showed people 'maize, other vegetables, *buriti* palm fruits, and, in effect, all foods except wild game,' which is similar to the understanding of Star-Woman's role that I encountered during the fieldwork.

Leandro specifically mentions the fruits of *tucum*, *buriti*, and *mangaba*, as well as maize, sweet potato, and sweet and bitter manioc in the above myth, and my research assistants describe how Star-Woman showed the ancestors nearly every crop species and variety they grow today that is not classified as 'introduced' from their white neighbours. Renato told me that the ancestors cultivated 'all the seeds,' and Liliana agreed, adding that the 'painted' varieties of fava bean,¹⁵ some of her favourites, have been around since the arrival of Star-Woman. My research assistants also informed me that Star-Woman taught people the 'plant categories' and 'indicated the names' of species and varieties that gardeners continue to use today. Thus, it seems that Star-Woman is recognized today not only as the 'discoverer' of different crop species, but of their named varieties and of the importance of maintaining varietal diversity as well. As Renato told me while we were

¹⁵ Following the Canela usage, here the term 'fava' refers to the indigenous category of Pànkryt beans, not all of which belong to the *Vicia faba* species (see Chapter 6 [pp. 211-212]).

discussing varietal diversity, 'even today, we continue learning from Star-Woman,' indicating that her teachings about cultivating many crop species and varieties remain significant in the modern Canela life-world.

In addition, a comparison of different versions of the Star-Woman myth sheds light on the interplay of mythical and historical time and events. While white people are not involved in Nimuendajú's or Crocker's versions of the story, Leandro included them in his telling, calling them 'Christians' and describing how they 'stole' the larger ears of corn from the Canela, leaving them with the smaller ears. He explains that this theft took place because the Canela, having 'never learned to be intelligent' (and presumably unable to cut down the maize 'tree' themselves), asked the whites to cut it down for them, thereby inviting the whites onto their lands and showing them the precious food that Star-Woman had discovered. It is interesting to note that in the versions of this myth recorded in other Jê and Timbira communities, the people often cut down the maize 'tree' themselves without assistance from outsiders (cf. Wilbert ed. 1978: 213-214).

Therefore, it is possible that Leandro's inclusion of white 'thieves' in his story underscores Canela dependence on their non-indigenous neighbours and the inequality between the two groups, both of which are realities that have been prevalent throughout the history of contact. Indeed, Canela gardeners sometimes rely on whites to borrow or rent agricultural machinery that they cannot afford themselves, and they marvel at how the whites 'create' the machines, perhaps mirroring Leandro's description of 'unknowing' Canela who had to rely on whites to cut down the maize tree. There are also stories of whites stealing crops from Canela gardens, as seen in the experience of Liliana and her family described in the previous section (p. 82). In these ways, Leandro may be

incorporating Canela experiences with whites in the more recent and distant past into his mythical storytelling.

Whether Star-Woman herself is conceptualized as a 'white' person should also be considered, since Leandro makes it clear that she has very white, almost 'clear-coloured' skin. Nimuendajú (1946: 245) also mentions Star-Woman's 'light' skin, and how it contrasts with that of Tyc-ti's, whose name literally means 'big and black' in Canela. It is important to note, however, that Star-Woman is never categorized as *cupẽn*, which the Canela use to describe non-indigenous Brazilians and foreigners. Rather, she is a supernatural being who came from the sky and has returned to it as the Morning Star (*Estrela Dalva*), which could refer to the planet Venus.¹⁶ Thus, it seems that Star-Woman's skin-tone has less to do with any human 'ethnicity' or 'race' and more to do with her conceptual opposition to her husband – she has beautiful hair and skin, while he is described as being so ugly that no Canela woman would marry him (Chapter 6 and 8 [pp. 225-227, 314-315] further explore this oppositional relationship).

While Star-Woman is commonly understood as the 'discoverer' of nearly all crop species and varieties, the myth of the brave warrior Pàrpajõi-te describes an alternative origin for particular crop species and varieties. Throughout this myth, the warrior travels extensively and encounters a variety of nonhuman beings, including Great Owl, Monkey, Black, Spotted, and Red Jaguars, and even a giant bat-like beast known as Xêp Catia ('Large Bat') or Cupẽn Xêp ('Enemy/Other Bat'). In Leandro's telling, all of these encounters are violent, with Pàrpajõi-te attacking and being attacked by the different animals. When he

¹⁶ While Crocker (1990: 312) states that Star-Woman and Tyc-ti became the stars Castor and Pollux in the Gemini constellation, my research assistants described them as becoming *Estrela Dalva* (Morning Star, which often means Venus) and *estrela pequena* ('small star'). I am unsure to which celestial object the latter refers.

encounters Giant Armadillo (Awxêti) in the forest, however, their exchange is peaceful and friendly:

Pàrpajõi-te travelled again. Afternoon arrived, and he came to Giant Armadillo's [Awxêti]'s garden. Pàrpajõi-te entered his house and sat down. Giant Armadillo arrived and was afraid of Pàrpajõi-te, and Pàrpajõi-te was afraid as well, because Giant Armadillo is huge. They both were afraid of each other. Giant Armadillo said, 'let us sleep here together. You will lay next to the fire on one side, and I will lay on the other side. We will talk until dawn. I am going to tell you about a place that you should know about. There is a place that is very valiant; it is masculine, and they do not let people pass by.' 'I am going to sleep now,' Pàrpajõi-te said, 'but I will not bother you.' 'Neither will I bother you,' Giant Armadillo responded. 'We are going to be real friends, *kêt-ti* [grandfather/uncle] and *tàm'tswè* [named grandchild/nephew].' Giant Armadillo put sweet potatoes in the ashes of the fire, and when they were cooked, he took them out and gave one to Pàrpajõi-te for him to eat. Pàrpajõi-te ate it, and found it tasty. 'Tomorrow I will give you seeds [and cuttings] to take with you and plant in your garden. This here is good food. Feed yourself with seeds,' Giant Armadillo said. In the morning, Giant Armadillo and Pàrpajõi-te entered into an agreement with each other. They did not fight. Giant Armadillo packed up some seeds [and cuttings] for Pàrpajõi-te, giving him sweet potato, peanut, pink maize, white maize, and red maize. Giant Armadillo packed up all of these seeds for him, and said, 'look, you are going to spend the night in Xêp Catia [Cupěň Xêp]'s garden.'

Instead of fighting with each other, the warrior and Giant Armadillo become 'real friends,' and Giant Armadillo shows his friendship by informing Pàrpajõi-te of the dangerous area where the Cupěň Xêp beasts live and by giving him various seeds from his garden. Similar to the Star-Woman myth, there is a focus on sensory engagement with the newfound food – in this case, when the warrior eats and enjoys the sweet potato that Giant Armadillo cooked for him. Fernando recounted this part of the myth on two separate occasions, and both times, he emphasized the visual appreciation of Giant Armadillo's garden and seeds by Pàrpajõi-te. In all three versions, Giant Armadillo also teaches the warrior about the cultivation and processing of his crops in embodied ways. Fernando describes the warrior's encounter with Giant Armadillo in terms of learning how to garden:

The warrior, Pàrpajõi-te, walked around in the forest to fight/do battle. He killed some animals, and walked around. It became late afternoon and he could not return [to the village]. He found Awxêti. They say that he arrived there and Giant Armadillo was weeding

his garden. Pàrpajõi-te said, 'Hopââ [Hello]!' and Giant Armadillo responded, 'Hopââ!' Pàrpajõi-te said, 'I have been hunting, and it is already getting dark. I am looking for a place to sleep.' Giant Armadillo responded, 'my nephew, I am here working, and I have a house. You can sleep with me, in my house. Let's go home.' He took Pàrpajõi-te to his house. Giant Armadillo cultivated peanut, and he showed it to Pàrpajõi-te. He was weeding the area where he planted peanut, and he showed Pàrpajõi-te. At home, he lay down and made the fire, and Giant Armadillo lay on one side and Pàrpajõi-te lay on the other. They talked as we talk to each other. In the morning, Giant Armadillo said, 'nephew, I am going to get those seeds for you to cultivate.' They say that Pàrpajõi-te received peanut seeds in this way. They say that Giant Armadillo grew them.

Here, we can see that Giant Armadillo taught the warrior how to weed and take care of the peanut crop by performing these activities himself. Similarly, in Leandro's telling, Giant Armadillo teaches Pàrpajõi-te how to consume sweet potato by preparing it in front of him. These embodied experiences of showing the novice how to grow and eat cultivated crops are also primary ways that elder Canela gardeners teach the younger generation of today (see Chapter 5 [pp. 185-197]). It is worth noting that while Leandro includes varieties of pink, white, and red maize in Giant Armadillo's garden, the other versions I recorded centre on the acquisition of peanut and sweet potato only. Despite the fact that Star-Woman is said to have showed the Canela 'all the seeds,' peanut and sweet potato (and their varieties) are sometimes directly associated with Giant Armadillo. Renato told me that Giant Armadillo was a 'hard worker' who gave peanut and sweet potato to the *mẽhĩn* (Canela), and for this reason, the Canela continue to cultivate these crops today. Even today, he said, armadillos living in the Cerrado enjoy eating sweet potato and they will try to eat the crop growing in forest gardens, thereby highlighting the link between mythical storytelling and modern-day ecological knowledge.

While the interaction with Giant Armadillo appears to be the central point of this story, we should also briefly consider the warrior's encounters with the other animals. Leandro describes how every time Pàrpajõi-te comes across another animal, he asks himself, 'What

tribe is this?’ and discovers the houses, villages, and gardens of the different animals. In one of Fernando’s versions, he calls Owl Cupẽn Pãã (‘Enemy/Other Owl’) and describes their village as one in which ‘everyone sleeps too much.’ The Cupẽn Xêp are especially interesting, as they are described alternately as ‘beasts,’ ‘bats,’ ‘giant monkey-like people,’ and ‘bat-people.’ Fernando painted a vivid picture of these beasts: ‘They say it is a giant beast, with huge teeth, and a huge wingspan!’ he told me, and added that they cut down the forest with their razor-sharp teeth that resemble knives. While the term *cupẽn* is used nowadays to refer to non-indigenous people, it literally means ‘enemy’ or ‘other.’

In this myth, then, it appears that different types of animals are conceptualized as different ‘enemy’ tribes with their own ways of life that are similar to yet distinct from the Canela. In Fernando’s telling, the Owl tribe sleeps during the day and makes bows that Pàrpajõi-te steals from their house. Leandro describes how the menacing bat-like beasts grow gardens, yet unlike the Canela, they tend them at night time. The Canela warrior engages in violent attacks with these enemy animal ‘tribes,’ and while he hunts down and kills some of them, the typical hunter-prey relationship is sometimes reversed, as when the bat beasts are hunting him down. When the jaguars are attacking him, Pàrpajõi-te yells, ‘this paw of yours is trying to catch prey, but I am not prey, I am a person!’ In these ways, the myth sheds light on the shifting predator-prey relationship between the Canela and animals, who are conceptualized as beings with social groups that are similar to yet ‘other’ than the *mẽhĩn*, the ‘real people.’ The warrior’s relationship with Giant Armadillo stands out, then, due to the friendship and process of multi-sensory learning that it embodies.

Another myth in which the Canela learn about cultivated plants from an animal is the story of Macaw, as recounted here by Leandro:

One day, an Indian was hunting and became lost in the forest; he did not know in which direction lay the village. He climbed up a tree and slept there. In the morning, Macaw sung a song. The Indian who was in the nest in the top of the tree saw him and said, 'oh, how good that you talked to me! I am close to the village; I will come down and go there now.' Then Macaw growled, 'rrrrr!' and came close to the man. 'You are lost. I will yell; you will accompany me, and I will show you the road leading to the village, and you will arrive there. Do you want this?' The man responded, 'yes, you can yell, I do not know where the village is; I really did get lost.' It was there, far away. Macaw yelled, 'Ah! Ah! Ah!' and came down from the tree, with the man following. They came close, and arrived at the grove of *urucum* [annatto; *Bixa orellana*] trees. There were many trees, large *urucum* trees. They were very large in the forest. Macaw said to the man, 'this *urucum* that you all do not yet know about, this is mine. We paint it on our bodies; it is very red.' Then he showed the man how to use it. 'Break some off, for when you arrive in the village, and show [the fruit] to the women. Bring the women here to take some and paint it on their bodies.'

In the beginning, the 'ancestors' did not know about this *urucum*; they only knew how to use that rock as paint – it is also red, and you can paint with it like *urucum*, but it is not very red. Macaw discovered the real *urucum* for the man, and the man took two branches of the tree with him. He came to the road and walked to the village. Everyone came together, asking, 'where have you been? Where did you spend the night?' 'I lost my way back to the village, but I have arrived now. Macaw showed me where the village was and the road to it, and I came back,' the man said. 'Look, this is called *urucum* [Pym]! This is the real macaw's *urucum* that Macaw showed me. There is a grove of trees in the middle of the forest. Tomorrow, I am taking all the women there to break off the branches and use [the fruit] to paint our bodies.' This is how Macaw showed the Indians *urucum* for them to use.

Again, there is an emphasis on the nonhuman being, in this case Macaw, *showing* the Canela in verbal and nonverbal ways how to harvest and utilize a cultivated crop that is significant to the modern-day Canela life-world. As with Star-Woman, Macaw 'discovers' the *urucum* trees, although they appear to be seen more as the bird's 'own' plants than the species and varieties that Star-Woman shows the Canela. Similar to the explanation of why armadillos eat sweet potato, the story provides a mythical explanation for why macaw feathers are bright red – because the birds paint themselves with the brilliant red paint made from *urucum* seeds. Just as the ancestors learn from Macaw how to use the seeds to paint their bodies a beautiful red colour, so too do young people today learn

from their elders how to boil down the *urucum* seeds into a thick paste and paint themselves in different designs based on age, gender, and ritual occasion. In these three myths regarding the origin of horticulture and cultivated crops, it seems that the Canela ancestors were able to learn about and acquire crop materials from certain nonhuman animals and a supernatural entity by engaging in intimate, embodied and multi-sensory communicative relationships.

These human-animal communicative engagements are central to other myths as well, particularly those that describe the origin of fire and specific ritual songs and activities. A common mythic story among Jê-speaking communities is the origin of fire, which is said to have been stolen from the jaguars (cf. Wilbert ed. 1978; Crocker 1990: 304; Nimuendajú 1946: 243). In Leandro's version of the myth, people were eating raw meat until a Canela boy encounters Jaguar and visits his house, partaking in a feast of all sorts of game animals that were cooked in the fire. When the boy returns to his village, the community decides to steal the fire from the jaguar village, and the following scene ensues:

In the meeting in the patio, they decided to take the fire. 'Well, let us go take the fire from the jaguar,' they said. They advised Toad, Hô-ti, to accompany the community. They arrived at Jaguar's house, and they stole the flame of fire. Toad, meanwhile, was spitting in the fire pit, and while the jaguars' arms were falling [on him], Toad continued spitting and putting out the fire, until the Indians arrived in the village. Afterward, Jaguar began eating raw things, and the Indians had the fire; [they took it] as they ran away. They [the Indians] had stones and they lit that fire. They knew how to make fire. They took rotten, dry, soft wood and they rubbed it until it caught fire. The Indian knew how to make fire.

Unlike the horticultural myths in which nonhuman beings helpfully shared their ecological knowledge with the Canela, in this story the Canela acquire the fire from Jaguar through theft and trickery, recruiting Toad to help them with their planned attack. In addition, while the boy becomes close with the male jaguar, calling him '*compadre*' and 'father,'

the female jaguar dislikes the boy, jealously guarding her cooked meat and scaring him from eating it. The male jaguar even makes a bow and arrow for the boy to use against the jaguar wife when she refuses the boy food a second time. It therefore seems that the relationship between the ancestors and jaguars is more predatory than those engagements formed with Star-Woman, Giant Armadillo, and Macaw. As in the myth of the brave warrior, here the positions of predator and prey shift throughout the myth – first the boy is in the position of prey, but with his weapon and later with the entire community the Canela become the predators and the jaguars the prey.

These shifting predator-prey engagements between humans and animals, especially in human-jaguar encounters, are well documented in lowland South America and often incorporate an affinal and hierarchical component of mastery of one being over another (cf. Viveiros de Castro 2011; Fausto 2007a, 2007b, 2008). While these relationships are important in Canela mythic storytelling, the ancestors typically received mythical knowledge and materials through more friendly and empathetic engagements with nonhuman beings. It is interesting to note that the relationship between the warrior Pàrpajõi-te and Giant Armadillo, for example, is immediately established as a friendly and consanguinal one through the kinship terms of *kêt-ti*, meaning ‘grandfather’ or ‘uncle,’ and *tàm̃tswè*, the named grandchild, nephew, or niece (cf. Crocker 1990: 236; see Chapter 4 [p. 120]).

Similarly, other myths recount how Canela humans learned about ritual songs and activities through helpful encounters with animals who are their ‘formal friends’ (*hapĩn*; *compadre* in Portuguese), an important and respectful social relationship. In one story, the great shaman Kruwapure learns about the Wuh-tỳ girls’ ceremonial role and the

complex of ritual activities and songs associated with it through an extended stay in Alligator's underwater village (see Appendix D [pp. 427-433]). The Alligator Chief, who refers to Kruwapure as his 'formal friend,' calls on the Karà fish to cure Kruwapure and the alligators teach him about the Wuh-tỳ festival and about many ritual songs. According to Leandro, the alligators also give sweet manioc, sweet potato, squash, peanut, and maize to the Canela shaman, thereby shedding light on another alternative understanding of the origin of some crops. The myth of Puret-re has a similar story arc (see Appendix D [pp. 433-437]). Puret-re visits the underwater fish village after being swallowed by an anaconda, the fish save their 'friend' and the same Karà fish who is a 'healer and a master' heals the boy, and the Fish Chief (Tep Tyc-ti; 'Large Black Fish') teaches him about the fish festival and its ritual songs. In both stories, the Canela men return to their village and teach the community about these new festival activities. As these stories display, many important sociocultural items and activities of today originate from animals who live in their own communities.

While modern-day Canela without shamanic abilities cannot converse with these nonhuman beings, through these stories they learn about their mythical-historical ties to animals and supernatural beings. Whether predatory or empathetic, affinal or consanguinal, antagonistic or friendly, the shared past engagements among humans, animals, supernatural entities, and plants – which are included in the stories, albeit in a passive way – emerge through mythic storytelling. Moreover, I posit that these past mythical encounters continue to shape and inform present-day relationships that the Canela form with animals, supernatural beings, objects and artefacts, and plants. In the remaining chapters, I explore these shifting human-nonhuman relationships and where they fall on the continuum of empathy – predation.

Conclusion: the interplay of myth and history as seen in the story of

Awkhêê

While the above mythic stories focus on human engagements with nonhuman beings, the story of the 'culture hero' Awkhêê focuses on the Canela relationship with another type of 'Other,' the non-indigenous whites or *cupên* (see Appendix D [pp. 404-411] for two full versions of the myth). From the time he is a foetus, Awkhêê has unusual abilities – he speaks to his mother, leaves and re-enters her belly, and essentially 'births' himself, causing his mother no pain. He grows unusually quickly, and as a child begins transforming into animals, twice as an anaconda, and a third time as a jaguar. The rest of the community becomes frightened of him, and after persuading his uncle to assist them, attempts to kill Awkhêê, first by pushing him off a cliff and later by burning him alive. These attempts fail, however, and Awkhêê stays alive but 'transforms' into 'another type' similar to that of the whites. In Leandro's version of the myth, Awkhêê tells his mother and the rest of the community to call him 'Emperor' (*Imperador* in Portuguese) and gather in front of his house so that he can distribute his newfound wealth, including cattle, tools, baked goods, and money. The following scene takes place:

In the morning, everyone went to Awkhêê's house and sat down. Awkhêê had called the whites, the 'Christians,' as well. Awkhêê placed a shotgun and a bow [and arrows] in front of them, and said, 'look, if you receive this shotgun, you will receive money, axes, machetes, baked goods, and more money.' There was a huge amount of money on top of the table in a package. 'It is wealth if you receive the shotgun. But if you receive the bow, well then, you will receive poverty – the bow is not rich, the shotgun is rich.' 'How do people shoot the shotgun?' [Someone asked]. Awkhêê armed the shotgun and shot a bullet – *pow, pow!* Everyone fell to the ground, rolling around and grabbing the children, afraid of the shotgun! Afterward, they stopped crying. 'If you take this other weapon, the bow, you shoot it like this.' Awkhêê placed an arrow in the middle of the bow, shot it, and it flew silently. Therefore, everyone wanted it. 'That is what we want for a weapon; it is much quieter.' Awkhêê became angry. 'Why? Why do you not want the riches? Well, you will receive poverty then! I am throwing you out of here; go walk the earth! Suffering from thirst, from hunger, from necessity! You will never become rich; all the time you will suffer from poverty and steal cattle from the whites. The cattle are no longer yours, the money

is no longer yours, the baked goods are no longer yours; they belong to the whites now.' The whites liked this. Awkhêê was very angry. A [Canela] woman had already stolen a piece of meat and hid it under her dress. Then, they all left, fearing Awkhêê.

From this point onward, the Canela 'receive' the poverty and marginalization that Awkhêê gives them. The whites take over all the material items with which they have become associated today – guns, money, gardening tools, and baked goods (*mercadoria de pão*), all of which the modern-day Canela must purchase in the nearby white towns instead of 'making' themselves. In addition, the whites take over Canela lands, which were originally near Rio de Janeiro according to the story.¹⁷ Leandro describes how the Canela lived near Sugarloaf Mountain (Pão de Açúcar) in Rio de Janeiro, and in Liliana's version of the myth, Awkhêê banishes the community on a long journey to their 'new home' in Maranhão, during which many children are eaten by jaguars.

As a mythic-historical figure, Awkhêê appears to be both Canela and white (*mêhĩn* and *cupẽn*) – first exhibiting the abilities of a powerful Canela shaman (as Chapter 7 [pp. 287-289] describes), and then transforming into a rich, powerful white landowner and cattle rancher. Leandro describes Awkhêê as Emperor Dom Pedro II, the last monarch of Brazil who ruled from 1831-1889, and he also tells a story in which Awkhêê (as Dom Pedro II) is the 'godfather' of Deodoro da Fonseca, the first president of the republic of Brazil (1889-1891). Meanwhile, Liliana states that Awkhêê's Portuguese name is Pedro Álvares Cabral, the Portuguese explorer who 'discovered' Brazil in 1500. Awkhêê's story resembles that of Jesus Christ as well. According to Leandro, Awkhêê's mother Ror-kwỳj was a virgin when

¹⁷ Crocker (1990: 305) hypothesizes that 'Rio de Janeiro' originally referred to 'rio' or river, namely the Itapecuru or Parnaíba Rivers to the east of the Canela territory. Leandro's specific mention of Rio de Janeiro's famous Sugarloaf Mountain may complicate this hypothesis, although the historical record indicates that a Timbira group did reside east of the Parnaíba River in the eighteenth century (Crocker 1990: 305; citing Nimuendajú 1946).

he 'entered' her belly, similar to Mary's Immaculate Conception, and in both versions of the myth Awkhêê re-appears as living after around three days, perhaps referencing Jesus' resurrection in the same amount of time. These historical and Biblical references, I would argue, appear to emphasize Awkhêê's power over the ancestors as well as his continuing influence over the Canela community of today. It therefore follows that the messianic movements calling for a 'new world order' would reference Awkhêê, for he seems to be the only mythical figure powerful enough to reverse his original mandate of impoverishing the Canela and enriching their white neighbours.

In Nimuendajú's (1946: 246) version of this myth, Awkhêê is similarly described as 'turning into' a white man with a large house, horses, and cattle, and he is called Emperor Dom Pedro II. This version does not include the Canela choice between the shotgun and bow and arrow, however. Crocker (1990: 304-305), on the other hand, provides a similar account of the Awkhêê story that I recorded, and argues that it establishes an 'acculturative "social contract" – the Indians' excuse for begging and being dependent without experiencing any shame or loss of face.' This mythic establishment of inequality between the Canela and the neighbouring whites does appear to inform modern-day *mẽhĩn—cupẽn* engagements, seen particularly in the messianic movements that attempted to change this 'social contract.' I would posit, however, that the story provides more of an explanation of rather than an 'excuse' or justification for the inequality and marginalization that the Canela continue to experience in their modern-day life-world. As a mythical-historical guide, the story of Awkhêê provides a way for the Canela of today to understand the emergent life-world and their place within it, and some community members conceptualize the transformed reversal of this myth as a way forward for their community, explored in the historical section above.

In addition to the story of Awkhêê, the historical and mythical accounts of the Canela life-world explored in this chapter shed light on another significant transformation, the development of subsistence gardening as a valued and meaningful activity. The historical changes over the past two centuries highlight how the Canela have become a community of gardeners, including how they have modified their gardening practices by cultivating multiple garden plots that are most likely larger and more biodiverse than in the past. Meanwhile, it appears that the mythic origins of horticulture and of multiple crop species and varieties as they are recounted today emphasize the conceptual significance of gardening and crop diversity for modern-day Canela gardeners.

It is important to note that particularly destructive historical forces such as colonial warfare, slave raids, and introduction of deadly diseases led to the Canela development of horticulture, as they led to a reverse process of increased nomadism for neighbouring groups such as the Guajá (Balée 2013: 77). Nevertheless, instead of viewing gardening as a shift away from more 'traditional' hunter-gatherer subsistence methods, it appears to me that the modern-day Canela conceptualize horticulture and varietal diversity maintenance as fundamentally '*mêhĩn*' activities that have emerged from the combined mythic-historical context. The active, embodied processes of ecological learning and knowing have emerged through myth and history, as have the human engagements with nonhuman beings, including the mythic figures of Star-Woman, Giant Armadillo, and Macaw, among others, and with cultivated plants.

While re-interpretations of the Awkhêê myth provide one way of engaging with outside mythical-historical forces, perhaps subsistence gardening provides another way to interact with and make sense of mythical, historical, and current Canela engagements

with ‘Others,’ including supernatural entities, cultivated plants, and the neighbouring whites. As my research assistants describe, cultivating many crops and working in the garden are valued for their mythical and historical origins as well as for the intimate relationships that gardeners form with their growing plants (explored in Chapters 5 and 6 [pp. 162-184, 228-235]). Finally, by valuing gardening activities, Canela gardeners appear to interpret their relationship with whites in a new light – less in terms of helpless dependence and more in terms of Canela survival in the face of ongoing inequality and prejudice by their non-indigenous neighbours. In Renato’s words:

All the time the *cupẽn* do not understand our culture and they say, “the *mẽhĩn* are lazy,” but it is not the truth! *Mẽhĩn* are hard workers! They can work in the middle [forest garden plots] and suffer from hunger... [Unlike the whites], the *mẽhĩn* grow their gardens for food! That is why the story of Giant Armadillo is very important.

Chapter 4

The village and the gardens: space, place, and landscapes in the

Canela life-world

Introduction

Life in the Canela territory is lived in the main village of Escalvado, in riverbank gardens that are usually located near the village, and in more distant forest garden plots. As these three spaces are geographically and conceptually distinct for the Canela community, this chapter examines each of these spaces in detail, including the activities undertaken in each area and how the spaces themselves are valued within the entire territorial landscape. The chapter begins with an exploration of life in Escalvado village, with an emphasis on the kinship and ritual ties that are created and maintained in this space. In particular, I explore how kin relationships form and are solidified through ritual activities and socio-political organization. Previous ethnographic studies of Canela socio-political organization have overwhelmingly focused on the male leadership council located in the ceremonial centre of the village space (cf. Nimuendajú 1946; Crocker 1990), a notable exception being Panet (2010). In contrast, I shift the analytical focus to the ‘peripheral’ and conceptually female houses in order to shed light on the importance of matrilocality to Canela village life. I examine how the everyday activities of the matrilocal household form a central component of living in the village and can expand our understanding of the Canela ‘bio-sociocultural life-world’ as a whole.

Moving outward from the village, which appears to be the conceptual centre of the Canela territorial landscape, the chapter goes on to compare the nearby riverbank and more distant forest garden spaces. I explore how the matrilineal household continues to be a conceptually important socio-political unit in both of these spaces, now that Canela garden ownership is becoming more formalized along with more sedentary patterns of living. Additionally, I examine the overlapping yet distinct riverbank and forest gardening seasons, as well as the gardening techniques and practices of Canela gardeners in the two spaces. By exploring how Canela life unfolds in distinct ways in each of these garden spaces, the section highlights the conceptual distinctions between the riverbank garden, which is conceived as more fertile and 'easier' to cultivate, and the forest garden, which is seen as larger and abundant yet can be more difficult to maintain. Canela gardeners are not the only beings living and working in garden spaces, however, and in this section, I incorporate a discussion of cultivated crop lives in riverbank and forest garden plots as well. I examine how the Canela conceptualization of yam, manioc and sweet potato 'communities' that mirror Canela socio-political organization sheds light on the integral involvement of cultivated crops in the Canela life-world.

Finally, the chapter concludes with a closer examination of how the village, riverbank gardens, and forest gardens appear to form a triadic conceptual division of the Canela landscape that exhibits similarities with other Jê-speaking societies and yet is distinctly Canela. I posit that this triadic division is central to understanding the modern Canela community and its gardening practices, and I explore how these three spaces form part of the overarching Canela life-world that emerges over time. Additionally, I incorporate the 'bio-sociocultural aesthetics' theoretical approach outlined in Chapter 2 to examine the ways in which different types of multi-sensory, embodied relationships among

humans and a variety of nonhumans, especially cultivated crops, emerge and are made meaningful in village, riverbank garden, and forest garden spaces.

While Chapters 5, 6, and 7 (pp. 195-200, 228-246, 283-287) explore particular human-plant relationships in more detail, here I focus on the spatial aspects of these relationships as they are tied to distinct locations within the life-world. In the village, human relationships emerge through the active process of 'making' kin, and in the riverbank and forest gardens, various human-plant and plant-plant engagements unfold over time. There are also myriad engagements between and among humans and other beings such as animals, objects, and supernatural beings that emerge in all three of these spaces. Thus, I suggest that exploring these spaces through the 'bio-sociocultural aesthetics' approach allows us to expand our understanding of the beings involved in the Canela life-world and of how life is lived and valued in the village, riverbank, and forest gardens.

The village

Most of the over 2,000 people in the Canela community live in the main village of Escalvado, which has remained in the same geographical location for the past 45 years (see Map 5 [p. 8]). While a few families reside in smaller settlements throughout the Canela territory, including three 'old villages' (Pac-re in Canela) in the southeast quadrant, Escalvado is the seat of the male political leadership council and the main location where communal ritual activities take place.¹⁸ The longevity of Escalvado as a single village is

¹⁸ In late 2012, I began to hear rumors of political tension between the male leadership in Escalvado and the families living in the main 'old village' (Pac-re), who were threatening to form their own distinct village that would be politically separate from Escalvado. I am unsure of the current situation, but at the time, I was told that the 'old village' inhabitants had threatened this action before yet never followed through with it.

most likely historically unprecedented for the Canela, and as the previous Chapter 3 explores (especially pp. 81-84), various historical-mythical factors have led to its modern existence. In terms of population density, it has also become one of the largest single modern-day indigenous villages in lowland South America. Although it is a product of modern socio-political and historical circumstances, Escalvado is also a distinctly Eastern Timbira and especially Canela village in the ‘traditional’ sense. As Diagram 1 displays below (p. 117), the village is organized in a series of concentric circles, with the innermost circle being the ceremonial and socio-political centre where the male leadership council meets and where most communal rituals occur. There are currently two full outer circles of houses and a partial third circle, fanning out from the ceremonial centre. The first circle of houses is connected to the centre with radial pathways, a characteristic design of Eastern Timbira villages (cf. Azanha 1984: 3).

The village is conceptually divided between the eastern side, Pýt já pøj xà (‘where the sun rises’) and the western side, Pýt cjêj xà (‘where the sun sets’). As the Sun and Moon origin myth in Chapter 3 explains (pp. 90-92), Sun created ‘beautiful’ and ‘good’ (*impej*) people to live on the western side of the village, while Moon created ‘ugly’ and ‘bad’ (*ihkên*) people to live on the eastern side (see Appendix D [pp. 379-384]). The two male age-based moieties symbolically follow this division as well, with the ‘western’ or ‘Lower’ moiety (Harã?katêyê) associated with the western side of the village and the ‘eastern’ or ‘Upper’ moiety (Khèy?katêyê) with the opposite side (Nimuendajú 1946: 91; Crocker 1990: 194). As Crocker notes (1990: 194; 369-373; 377), all men belong to one of these two groups for their entire lives, and membership is based on belonging to specific ‘age-sets’ that are divided into ten-year age brackets. Marriage patterns are based on the eastern/western divide as well, such that men from the western side can only marry women who belong

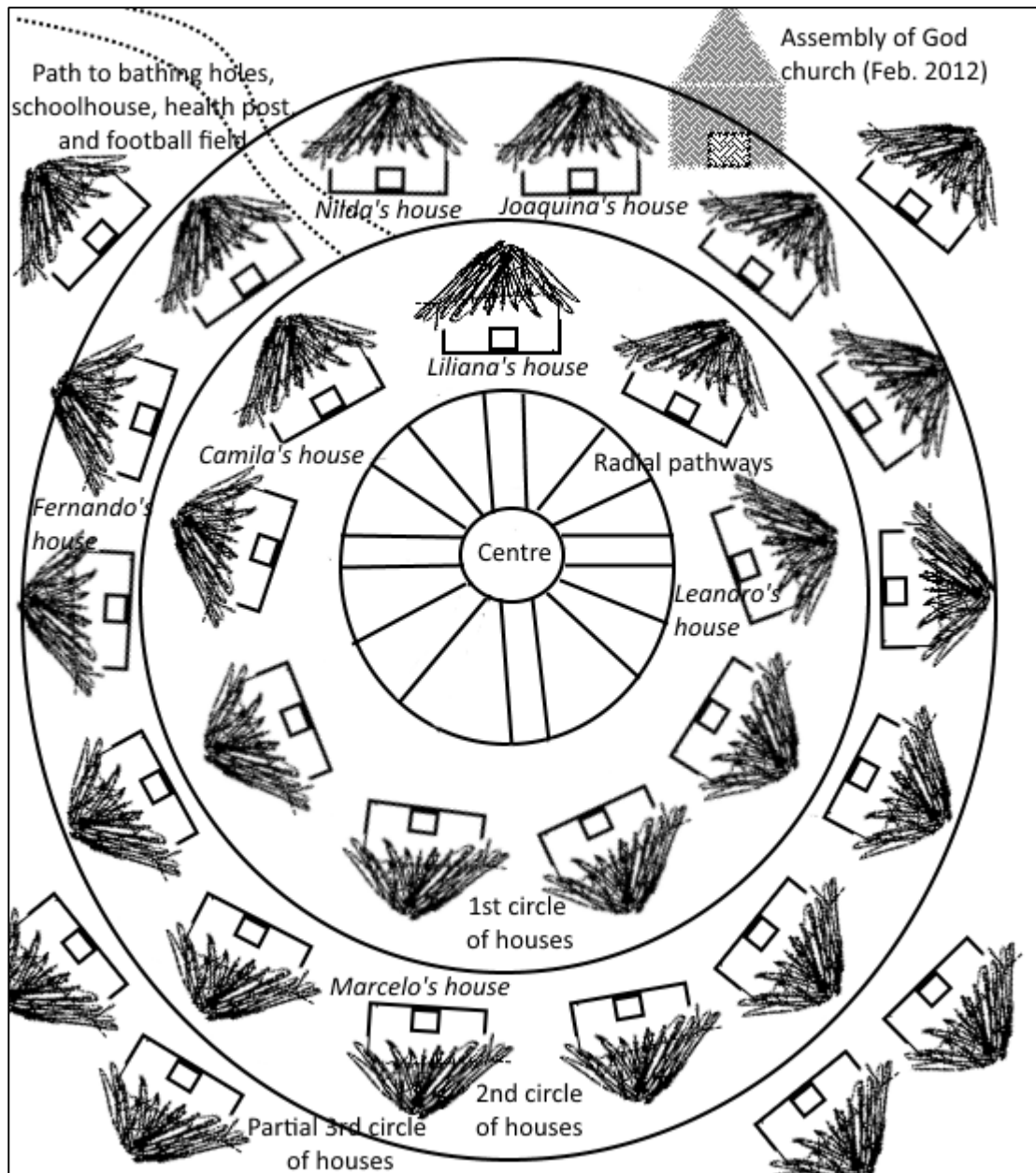
to houses on the eastern side, and vice versa. Following the matrilineal kinship system, a man moves into his wife's mother's house in the opposite side of the village upon marriage (and if the couple separates, he moves back to his natal home, his mother's house). This east-west division and its associated marriage patterns are so fundamental to Canela social organization that even outsiders must adhere to it. During my first visit to Escalvado, I was 'adopted' by a Canela family living on the western side of the village.¹⁹ My partner came along on this visit, and a different family on the eastern side of the village quickly adopted him as well so that, as they explained, we would not be committing 'incest.' After the 'adoption,' he stayed with my Canela family and myself, following the matrilineal residence pattern.

Similar to other Jê-speaking societies (cf. Maybury-Lewis ed. 1979), the Canela conceptualize the centre of the village as the male ceremonial-political sphere, and the houses as the feminine domestic sphere. Unlike some Jê groups such as the Panará in which women can become involved in political discussions in a limited way (Ewart 2008), however, Canela women are in a similar position as Krahô women who are 'totally excluded from political life' (Melatti 1979: 48). Thus, Canela women are prohibited from participating in political meetings that take place in the ceremonial centre. During my fieldwork, I noticed that women typically voiced their opinions on political matters to their husbands in the home, and the husbands sometimes took these messages to the centre on their wives' behalf. Nonetheless, some women lamented the fact that they could not involve themselves directly in these meetings. Often I would see women watching the

¹⁹ See pp. 14-15 in Chapter 1 for a brief exploration of the role of the anthropologist, including the first meeting with and 'adoption' by my Canela family, with a particular focus on gift-giving and exchange.

men's afternoon meetings at the farthest edge of the ceremonial centre, the closest they could be without violating the prohibition.

Diagram 1: concentric circle layout of the village



The leadership council who meets in the centre once or twice daily is comprised of all older men in the village, with 'older' meaning those who are aged around 40 and above (cf. Crocker 1990: 369). Within this group, the *pró-khãmmã*, which consists of younger elders belonging to the Lower moiety age-set, leads the council for around 20 years before handing off this role to the next round of Lower moiety men (Crocker 1990: 375; personal communication). The relationship between the Upper and Lower age-sets is therefore somewhat unequal, since Lower moiety members 'enjoy a permanent ascendancy' over Upper members through their exclusive membership in the *pró-khãmmã* (Crocker 1990: 195). Within this group, a chief (*pa?hi*; *chefe* in Portuguese) and between one and three 'vice-chiefs' ('deputy chiefs' in Crocker [1990: 215]) lead the *pró-khãmmã* and the entire leadership council and interact with FUNAI officials and other outsiders on the community's behalf. Crocker (1990: 211; 375) points out that powerful warriors were traditionally chosen as leaders until the 1830s, when local Brazilian authorities began to designate a 'chief' of the entire community based on his ability to interact with outsiders, a common activity of colonial governments interacting with local or indigenous communities throughout the world (cf. Ranger 1983). Nowadays, however, the posts of chief and vice-chief have become an important part of Canela socio-political organization, and this type of leadership is even reflected in conceptualizations of cultivated crop organization, as the next section displays (pp. 150-152).

During the daily meetings in the ceremonial centre, the leadership council and particularly the *pró-khãmmã* plan events such as moiety-based hunting trips (which used to take place more frequently) and other communal work activities, and occasionally they will organize individual men to take their matrilineal families to the more distant forest garden plots (cf. Crocker 1990: 212). The *pró-khãmmã* also deals with issues of inter-familial 'justice' during

formal ‘hearings.’ While Crocker (1990: 214) notes the chief typically organizes these hearings (*mě aypěn pa*) in his house, during my fieldwork in October 2012 the *pró-khāmmã* as a whole arranged a meeting in the ceremonial centre to settle disputes between all husbands who had recently left their wives and the wives’ families. They spoke with the husband and wife and encouraged them to stay together, but if this was not possible, the group decided whether to issue a ‘ticket’ (*multa* in Portuguese) to the offending ex-husband ordering him to ‘pay’ his wife’s family in the form of cattle, money, or other items. (If the woman had left her husband, no ‘tickets’ were issued). The male leaders discussed what type of payment was appropriate with the ex-wife’s father or uncle, and after an agreement was reached both husband and wife could remarry someone else. My matrilineal family was especially interested in these proceedings, since the husband of my classificatory ‘sister’ Fabiane had recently left her, and my classificatory ‘grandmother’ Belém wanted him to reimburse the family with heads of cattle. Fabiane did not want to demand payment from her separated husband, however, and therefore the leaders did not order him to pay the family.

In addition to leading socio-political decision-making, the chief, vice-chief (or vice-chiefs), and the *pró-khāmmã* organize and manage the Canela ceremonial calendar, and inform the community when certain rituals will take place. The complex Canela annual ritual cycle has been described in detail in Crocker (1990, n.d.a) and Crocker and Crocker (2004), and here I provide only a brief sketch of this ritual calendar in order to shed light on the socio-cultural importance of the central village space. The Canela divide the year into separate ceremonial periods, what Crocker (1990: 98-100) terms the Regeneration Season (*Mě-ipimràk*) that roughly corresponds with the rainy season from September or October into January, the Wuh-tỳ (*Wè?tè*) Season that corresponds to much of the dry season from

around April or May to September or October, and an ‘Unnamed’ Season between the two. Most, though not all, of the ritual activities during these seasons take place in the ceremonial centre or in the circular pathway in front of the first circle of houses.

For the Regeneration Season, the village divides into Black (Aʔtùk-mã-ʔkhra) and Red (Kàà-mã-ʔkhra) moieties with membership based on one’s name-set (Crocker 1990: 197). Boys receive their names, along with membership into specific men’s ceremonial groups, from their mother’s brother or classificatory ‘brother’ (*kêt*), and girls receive their names from their father’s sister (*tùy*).²⁰ It is interesting to note that this is the only moiety system that includes all women based on name-set transmission (cf. Crocker 1990: 208). Although the modern-day community rarely performs the Regeneration Season festivals, Crocker (1990: 98; 197-198; n.d.a) describes the continued importance of ceremonial men’s log races between the competing Black and Red moieties. Running around the circular pathway closest to the village centre, men from the two groups pass a heavy log from shoulder to shoulder in a manner resembling a relay race. The logs, according to Crocker (1990: 98-99), become heavier and larger as the races continue throughout the season. Nearing the end of the season in November, the maize planting ritual traditionally occurs, with the maize harvest and Hôxwa sweet potato harvest festivals taking place during the ‘Unnamed’ Season in February or March (see Chapter 6 [pp. 249-256] for a description of these rituals).

²⁰ The category of *kêt* includes one’s mother’s brother or classificatory ‘brother’ as well as one’s father’s father and one’s mother’s father (paternal and maternal grandfathers). Meanwhile, *tùy* refers to one’s father’s sister or classificatory ‘sister,’ one’s father’s mother and one’s mother’s mother (paternal and maternal grandmothers). One’s mother’s sister is known as ‘mother’ (*inxê* for 1st person and to address someone; *nàà* for 2nd person) and one’s father’s brother is known as ‘father’ (*inxú* for 1st person and to address someone; *pom* for 2nd person). In addition, the children of one’s mother’s sister and one’s father’s brother are termed ‘siblings’ (*khyê*) to oneself. See Crocker (1990: 234-249) for a full description of the complex Canela naming system.

During the Wuh-tỳ Season, the ceremonial centre becomes especially active as the site of five main festivals. Three of the festivals together form the period of male initiation: the Kêtuwajê (Khêêtúwayê) internment of young boys; the Pep-yê male initiation and training for slightly older boys; and the final Pep-cahàc festival that serves to ‘retrain’ adult men (Crocker 1990: 99-100) and celebrates the end of the period of internment for the newly initiated boys. The other two rituals, the Fish and Mask festivals, take place after the Pep-cahàc festival.²¹ For the Kêtuwajê, Pep-yê, and Fish festivals, another moiety system that Crocker (1990: 199) terms the ‘Plaza Group Moieties’ emerges, and male membership is once again based on name-set affiliation from the naming uncle. The two Upper (eastern) and Lower (western) Plaza moieties are each split into three groups that have the same names for the two male initiation festivals and different names for the Fish festival.²² Each of these six groups also has two ‘girl associates’ whom the *pró-khãmmã* and/or the group leadership chooses. For the closing Pep-cahàc male initiation and Mask festivals, other groups of ‘men’s societies’ participate (Crocker 1990: 200).

While a complete description of these festivals is available in Crocker (1990: 269-321), here I focus on how the community conceptualizes and utilizes the village and its surrounding space during the male initiation ritual period in particular. The Kêtuwajê

²¹ There is also an Orange Festival that usually occurs in June or July, but does not seem to take place every year. It did not occur in 2012 while I was there, although people told me that it had taken place the previous year. Since the leadership council organizes the ritual calendar each year, it is possible that they simply decided not to celebrate the Orange Festival that year (and around the same time in mid-June, the Pep cahàc rituals occurred instead).

²² For the Kêtuwajê and Pep-yê festivals, the Upper/Eastern groups are: Hàka (Boa), Xêp-re (Bat), Xôn (Vulture), and the Lower/Western groups are: Awxêt (Armadillo), Kêt-re (Dwarf Parrot), Cupên (‘Enemy/Other’). For the Fish festival, the group names change while membership does not. The Fish Festival Upper/eastern groups (in corresponding membership order as those above) are: Tep (Fish), Têt-re (Otter), Xêwxêt-re (Stingray), and Lower/western groups are: Tep (Fish), Apràn (Piranha), Teprã-ti (another type of fish). My research assistants also included the Mêhkĩn (Clown) group in the Fish festival groups, although Crocker (1990: 201) does not include it in the plaza groups or men’s societies since group membership is not based on name-set transmission. See Crocker (1990: 193-209) for further information on Canela socio-ceremonial groups.

period is for ‘catching’ or ‘imprisoning’ very young boys in the ceremonial centre (cf. Crocker 1990: 102), and the Pep-yê ritual period emphasizes training and food and sex restrictions for older boys around 14-15 years of age. As my research assistants explained, the first period begins when the Mě Hapỳn Catê, the official adult male ‘imprisoner’ (or ‘catcher;’ cf. Crocker [1990: 272]) and ritual singer appointed by the male leadership ‘imprisons’ two sets of two young boys in the ceremonial centre that have ‘higher’ ritual status than the others, known as the Mamkjêhti and the Ihkôt Ipa Catê. The mothers of these boys prepare mats for them to lay on, and afterwards the rest of the boys in the same age-set are also ‘imprisoned.’

During the Kêtuwajê period, the adult ‘imprisoner’ sings in the centre every morning, and the young boys face each other in two rows according to plaza moiety to sing and learn the ritual songs. Each row includes one Mamkjêhti ‘file leader,’ one Ihkôt Ipa Catê ‘messenger’ boy, one ‘girl associate’ appointed by the male elders, a ‘chief’ (Ihcapõn Catê Impej), and a ‘vice-chief’ (Ihcapõn Catê Cahàc).²³ As Crocker (1990: 273) points out, while this first ritual period is intended to teach the young boys and protect them from deceased Canela ‘souls’ (*měkarõn*; see Chapter 7 [pp. 268-271]), the second Pep-yê period is meant for training older boys through food and sex restrictions. During this phase, my research assistants informed me, boys are interned in their mother’s houses for around six months, and during the last month they have more freedom of movement. They must bathe in outhouses nearby, refrain from sexual intercourse, and avoid ‘heavy’ foods such as game meat. Fernando explained that the only ‘true’ foods that ‘imprisoned’ boys should

²³ According to Crocker (1990: 272), the Mamkjêhti (*mam-khyê-?ti*) boys are the ‘file leaders’ and the Ihkôt Ipa Catê (*mě ?krat to-ipa katê-re*) are the ‘messenger’ boys. Along with two ‘girl associates,’ one for each file, this group of six holds special ritual status known as *hàmren*. He terms the Ihcapõn Catê Impej and the Ihcapõn Catê Cahàc the ‘commandant’ and ‘deputy commandant,’ which are prestigious positions but do not hold the same ceremonial status as the other six people (Crocker 1990: 273).

consume are sweet potato, peanut, the 'True/Original Maize' variety (Põhy Pej-re), one type of red rice, and *farinha seca* ('dry' toasted manioc flour). According to my research assistants, these restrictions and training by the older male groups help the interned boys develop the necessary perceptual abilities and skills to become great log racers, hunters, and perhaps shamans (*kay*) as well (as Chapter 7 explores [pp. 276-280]).

The period of internment ends when the male elders call one of the mothers of the Mamkjêhti boys to the centre where, my research assistants explained, she must 'speak well' of all the imprisoned boys. The following day, the entire village prepares the ritual *beribu* manioc and meat pies, the men helping to build the earthen oven with firewood and stones from the forest, and the women preparing the pies by wrapping them up in wild banana leaves (Acahôm Pej). In addition, each matrilineal family in the main circle of houses prepares offerings for the classificatory 'uncle' who built the outhouse for the one of six plaza groups to which the interned boy in their family belongs. The families stuff gifts of rice and other foodstuffs for the designated uncle into a large basket (*kaj*) woven from *buriti* palm fronds. They place the *beribu* pie on top of the basket, and after a series of singing and dancing activities that last all night, the following day the uncle takes these gifts back to his family and leaves the pie in the ceremonial centre. In the centre, the adult men distribute the pies according to their six plaza groups.

The newly initiated boys, meanwhile, have been singing throughout the night as they slowly circle the ceremonial centre, and they are allowed to 'grab' female lovers if they so choose. After the men consume the *beribu* pies, the boys divide into the six plaza groups to which their maternal uncles belong, and the uncles paint them in black (Aràmhôm Pàr; *pau de leite*) and red (Pym; *urucum*) with the ritual designs associated with their particular

group. Next, the boys and men perform many rounds of singing and log racing, and they are accompanied by the 'girl associates' as well. Finally, they celebrate what Crocker (1990: 274) terms the 'Wild Boar Day' that involves feasting and extramarital sex, and afterward the boys are given a new age-set name in the ceremonial centre and are no longer considered 'novices.' The Pep-cahàc ritual period is a 'continuation' of the other two periods, but is intended for adult men who similarly undergo food and sex restrictions (cf. Crocker 1990: 274). The final festivities also include day- and night-long singing, dancing, and log racing, as well as the 'Wild Boar Day' (Crocker 1990: 275).

Although this is a brief description of the male initiation period, it does shed light on the importance of the centre as a ceremonial and fundamentally male space. In and around the central space, Canela boys learn what it means to become a Canela man, with all the associated conceptually 'male' roles – as members of multiple male groups (including age-set moieties, the six plaza groups within the plaza moieties, and Regeneration Season moieties); as lovers to women both inside and outside of marriage; and as log racers, hunters, and perhaps shamans. The relationship between a boy and his maternal naming uncle (*kêt-ti* or *kêt-re*), central to ceremonial and political life, is also emphasized and solidified. In these ways, conceptualizations of 'manhood' appear to take shape and to become embedded in the physical space of the village centre.

While women are involved in these rituals, they take on roles that supplement the primary roles of men – as mothers vouching for their sons, as preparers of the ritual pies and baskets that men receive, and as 'girl associates' who are traditionally expected to be lovers to many boys and men. A woman's ceremonial activities are therefore much more limited than a man's, and even the revered 'girl associate' positions are reserved

exclusively for unmarried girls without children (cf. Crocker 1990: 206). Thus, if we look at the village only from the vantage point of the centre, it is possible to interpret women's roles as 'peripheral' and secondary to that of men, and to see their lives as indistinguishable and unchanging after marriage and childbirth (cf. Crocker 1990: 102).

While the central space is literally and conceptually 'central' to the Canela life-world, a more holistic picture of men's and women's lives emerges if we move beyond the centre to consider the rings of matrilineal houses and the activities that take place in and around them. As noted above (p. 116), the matrilineal kinship system means that women effectively 'own' their houses and the spaces on the eastern or western side of the village where they are located. A typical Canela household consists of the elder woman who 'owns' the house, her husband, and the couple's adult daughters, sons-in-law, and grandchildren. Usually elder sisters will build their houses next to or behind each other, and nowadays some younger couples and their children live in their own houses behind or near the wife's mother's house. These more 'modern' nuclear households typically remain in close contact with the family members of the main matrilineal household and could be considered extensions of the main house.

The men of the family usually build the houses using *buriti* palm leaves for the thatched roof and sides of the house, although nowadays many families are choosing to build handmade adobe walls (as Figure 1 displays below [p. 126]), and a few families have built terracotta roofs and brick walls using materials purchased in town. There is typically an outdoor cookhouse behind the residence that is sheltered with a thatched roof, and behind this space, women maintain backyard gardens if they desire. The main residence usually consists of one large room in which the household activities of eating, making

baskets or *miçanga* beaded jewellery, telling stories, sorting and storing seeds, having sex, and sleeping take place. The 'traditional' Canela way of sleeping is on a *buriti* woven mat placed on the red earth floor, but nowadays many people sleep in hammocks as well, a custom most likely learned from neighbouring Tupi-Guaraní-speaking groups (cf. Crocker, personal communication). Couples and young children often sleep together on the same mat or in the same hammock, with the older children sleeping nearby. Houses usually have open entryways instead of doors that are covered with cloth during inclement weather such as rainy season thunderstorms and the dusty winds of the dry season. These entryways also facilitate the coming and going of people within the domestic space of the house. Relatives living next door or near the house often come to visit and perhaps to negotiate an exchange for seeds, meat, or prepared food, and children from nearby houses sometimes spend the night in their mother's sister's home if they so choose.

Figure 1: my mother Liliana's house with newly made adobe walls, July 2012



Many important events in one's life take place in and around the matrilocal house, including birth, individual rituals for maturing boys and girls, establishing a couple's marriage, raising children, and often, death. Most women give birth at home, surrounded by their mothers, sisters, and sometimes their mothers-in-law. As Crocker (1990: 290) notes, 'the infant is born into a world of women,' since men are not allowed to attend the birth. If there are any problems with the birth, the family will ask a midwife for assistance. Known as *mēhkuti tó pōi catê*, or 'those who remove the pain of the placenta,' midwives help deliver the baby and the placenta, and receive gifts in return for their services (similar to shamans who performs healing rituals).

When my sister Joaquina gave birth to her daughter in July 2012, for example, the midwife Graziela helped deliver the placenta by placing her hands on Joaquina's stomach and rubbing it. Immediately afterward, Joaquina and her mother buried the placenta under the earthen floor inside the house. They informed me that this was necessary because the placenta (*ihkuti tó pōi catê*) is 'connected' to the infant; it is her 'companion' and must remain inside the house to 'protect' her from harm. A placenta that is left to decompose or is buried outside, Joaquina told me, causes grave harm to the baby and can even result in its illness or death. As a bodily 'link' to the infant, the placenta buried underneath one's mother's house highlights the symbolic and material connection an individual has to his or her natal home throughout one's lifetime. Even when a man marries into his wife's mother's home, he is still connected to his natal home where his placenta 'companion' remains. A woman, on the other hand, is doubly bound to her natal home through her buried placenta and through an entire lifetime of living in or nearby her mother's house.

After a young woman gives birth to her first child in her mother's house and the child reaches around six months of age, the Měhàkrě Jõ Pànrýt 'marriage' ritual usually takes place.²⁴ As my research assistants described it, this ritual celebrates the end of the food and sex prohibitions that the couple undergo while the woman is pregnant and until the child is around six months old (Chapter 6 [pp. 236-239] describes these restrictions in detail). While couples typically undergo some sort of restrictive period for every pregnancy and childbirth, the restrictions for the first child are traditionally stricter and include the man moving back into his mother's home during the restrictive period. To commemorate its end, the woman's family performs the 'marriage' ritual that, according to my research assistants, serves to 'thank' the husband's family for the new baby that will be raised in their matrilineal home.

One of the instances when I observed this ritual was in June 2012, when my Canela family performed it for one of my sister's daughters, Patrícia. Beginning around two in the morning, the women of the family start preparing the *beribu* manioc and meat pies that they will give to Patrícia's husband's family. First, they grate bitter and sweet manioc tubers into a dough-like consistency (having already processed the bitter ones in the *tipiti* to remove the toxins) with the electric grater that Lilia received as a gift for previous research with Dr Crocker. The bitter manioc dough is finer and drier, resembling uncooked toasted manioc flour, while the sweet manioc dough is wetter and stickier.²⁵ To form the

²⁴ Crocker (1990: 261) describes a similar ritual that is known as Mě Hà-?krhě and that includes all the 'contributing fathers' of the child. While the Canela do practice partible paternity, in which a woman sometimes has intercourse with multiple men throughout her pregnancy who are considered partial 'fathers,' here I focus on the relationship between the husband and wife that is central to everyday activities in the matrilineal household.

²⁵ Despite Star-Woman's mythical prohibition of making the 'masculine' bitter manioc varieties into *beribu* pies (see Chapter 3 [p. 95]), none of the families I know followed this restriction and made pies from bitter or sweet manioc varieties, although they kept the dough from each type separate.

large pies, the women lay twisted pieces of *buriti* fibres known as *imbira* (Hõr-ti) in a radial circle and place large wild banana leaves (Acahõc Pej) in a circle on top of the fibres. Spreading the bitter or sweet manioc dough (the two types are kept separate) on top of the banana leaves, the women then include cuts of raw meat, in this case coming from a cow they had purchased from a local cattle rancher. Making a parcel, the women fold up the wild banana leaves and tie the parcel together with the *imbira* strings. For Patrícia's marriage ritual, the women in her family made around five large pies, with younger girls making smaller ones to practice their skills.

Figure 2: women waiting to cook their beribu pies in the earthen oven, June 2012



Next, the earthen oven is created using firewood and stones that the men of the family bring from the forest and the rocky hill behind the second circle of houses on the western side. It is usually quite large, around 10-12' long by 6' wide. Once the stones are white-hot from the burning firewood underneath (which has now turned to ash), both women and men place the pies on top of the hot stones and pile more stones, brush, and palm fronds on top of the pies. Covering everything with cloth and piles of dirt to keep the smoke inside, the family leaves the pies to cook in the oven for one or two hours.

Once the pies are finished cooking in the oven, women and men remove the covering and extract the pies, placing them on wooden platters for transport. While the pies are cooking, Patrícia's maternal grandmother paints her entire body except her face with red *urucum* paint. As the women are bringing the pies back to the main house, Patrícia fetches her husband from his mother's house and brings him to her natal home. With one of the pies placed on the floor inside (it can also be placed in front of the house), Patrícia and her husband stand on opposite sides and each take a small piece to eat. Chewing it quickly, the husband immediately returns to his mother's house, and the wife walks away from him to the far corner of the house.

To complete the ritual, the women of the family, with scores of children tagging along, bring one of the pies to the centre for the male elders to enjoy, and march rapidly to the husband's mother's house to present her with a pie as well. In this case, Patrícia's classificatory great-grandmother quickly presents the pie to the husband's mother and father in front of their house, and then the entire group of women and children march back to their houses. Finally, the matrilineal family can enjoy their pie at home, and later

that night, the husband traditionally returns to his wife's mother's home to live there permanently.

Similar to the placenta burying tradition, the marriage ritual highlights the importance of the wife's and the husband's natal homes. While the wife's home will be the space where their new family will grow, the ritual celebrates and 'thanks' the husband's family in his natal home. The movements of the couple in the ritual trace the pathways that the husband and wife will follow throughout their lives – she going to retrieve him from his home and bringing him into her matrilineal family, and he returning once to his mother's house, only to return permanently to his wife's mother's home at the end of the day. Thereafter, the infant grows up in her mother's house and when she is old enough (around six or seven), begins assisting her mother with everyday tasks in the house such as cooking, cleaning, and taking care of younger children. She also attends primary school at the local schoolhouse, although many girls quit formal schooling when they become pregnant at the average age of 13-14 (cf. Panet 2010: 251-252; Almeida 2009: 101).

My research assistants described how a girl traditionally undergoes a restrictive period in her mother's house during her first menstrual period, wherein she follows the same diet as that of the interned boys during the Pep-yê festival. While the restrictions enable boys to become strong and powerful socio-political leaders and hunters, for girls the period serves to 'strengthen' them to visit and work in garden plots, predominately-female activities that the next section and Chapters 5 and 6 explore (pp. 192-195, 231-232). A boy child also attends school but has less household responsibilities, his energies often focused on the ceremonial activities in the centre described above. When he is an adolescent, he undergoes an individual ear piercing ritual behind his mother's house. As

my research assistants explained, the naming uncle pierces the ears of his nephew (*tàmtswè*) and both undergo a restrictive period where they avoid eating 'heavy' foods and touching blood and the nephew continues his food restrictions for around 4-5 months.²⁶

In these ways, the everyday experiences of girls and boys, women and men, as well as the specific birth, adolescent, and marriage rituals shed light on the centrality of the matrilineal household to Canela lived experience. Thus, I would contend that instead of viewing the rings of matrilineal houses, fundamentally feminine spaces, as 'peripheral' or secondary to the ceremonial centre, perhaps the two spheres exist in a complementary relationship wherein both spaces are necessary for the continued emergence of the Canela life-world. These are not the only spaces in which Canela lives are lived, however, and the next section explores the importance of the forest and riverbank garden spaces to Canela life in all its myriad human (and nonhuman) forms.

The riverbank and forest gardens

The hard worker creates two gardens – one in the “fresh area” [riverbank] and another in the centre [forest area]. Those who enjoy working [do it this way]. They will not need anything, for they will have everything. [...] It is as people say – those who like gardens, who love gardens, who adore gardens, will do it this way, with two gardens.

-Fernando, July 2012

As subsistence horticulturalists, the Canela spend a large portion of their lives in their garden plots. In order to provide food for the matrilineal family, each adult male and female couple typically maintains two garden plots simultaneously, one near the

²⁶ In Crocker (1990: 291), the naming uncle has an ear-piercing specialist perform the ritual.

riverbank in closer proximity to Escalvado village, and another in the more distant forest sectors (called the '*mato*' or the '*seitores da roça*' in Portuguese). Couples usually begin maintaining their own plots after the woman gives birth to her first child and the Mēhàkrēr Jō Pànrýt marriage ritual described above (pp. 128-131) takes place. Within the matrilocal family, each couple typically grows their gardens nearby one another, with the eldest male and his sons-in-law demarcating new plots together. This system of matrilocal garden cooperation appears to date back at least to the 1930s, as Nimuendajú (1946: 59) describes how women from the same matrilocal family typically planted gardens that adjoined one another. Owing to the more sedentary lifestyle that the Canela have adopted since they established Escalvado village in 1969 (see Chapter 3 [pp. 81-82]), the locations of forest gardens are nowadays essentially 'passed down' through the matrilocal family.

For example, the daughters and sons-in-law of expert gardener Liliana cultivate gardens in specific areas of four forest 'garden sectors' that the matrilocal family has been utilizing for at least three generations. Thus, while the couple owns the forest plot together, the location of the plot is largely determined by the woman's familial connections to specific forest spaces. If a couple separates, the plot and its produce usually remain in the hands of the woman and her family. A clear example of the connection between the matrilocal family and forest gardens is the unusual case of Renato, a man who has married and separated from at least seven women in Escalvado. After every separation, he moved out of the woman's matrilocal home and ceded his 'ownership' of the gardens he had cultivated with his ex-spouse. Without a spouse, Renato returns to his mother's household and cultivates gardens in the areas where she has her familial connections. My research assistants informed me that garden spaces were less directly associated with the

matrilocal family when the ‘ancestors’ were alive, referencing the more distant and recent past when the Canela were more mobile and relocated their villages every 7-9 years (cf. Crocker, personal communication). The current organization of forest gardens therefore appears to be a product of the modern Canela lifestyle and the increased reliance on garden produce for subsistence.

Riverbank gardens, on the other hand, do not appear to be ‘passed down’ through matrilineal family lines in the same sense. While couples in the matrilineal family tend to cultivate riverbank gardens near each other when possible, the location of these plots seems to be more fluid and flexible, dependent upon availability, soil quality, and proximity to the village. In addition to the forest and riverbank plots, many families also maintain a small backyard garden behind the house with their favourite varieties of species such as maize, common bean, fava bean,²⁷ and squash, as well as banana, mango, papaya, and lime fruit trees and coconut palms. Some families cultivate other trees that are native to the Cerrado (Irom) and *chapada* (Põ) eco-regions in their backyards or near their houses as well (see Appendix B [pp. 373-376]). A few families with well-known expert gardeners sometimes cultivate other garden spaces such as separate fruit tree groves, although this is not a common occurrence. From my conversations and interactions with Canela gardeners, however, it appears to me that the forest and riverbank plots are more conceptually important than these supplemental garden spaces.

Whether in the forest or near the riverbank, Canela gardeners classify their plots based on age, similar to what Posey and Plenderleith (2002: 187-188) describe for the Kayapó.

²⁷ The classification of beans as ‘fava’ does not directly correspond to the species *Vicia faba*, but is rather used by the Canela as a Portuguese gloss for their indigenous category of Pànkryt beans. See Chapter 6 (pp. 211-212) and Appendix A (pp. 349-372) for more information on the complex and dynamic Canela ethnobotanical classification schema.

During the first annual cycle of demarcation, planting, tending, and harvesting, a plot is considered a 'new garden' (*pul*), in which families can plant most crop species and varieties. During the second annual cycle, the same plot is known as an 'old garden' (*hipêj*; which is also a categorized land type – see Table 1a [p. 39]). As my research assistants explained, gardeners tend to the bitter manioc that was planted during the previous gardening cycle in the 'old garden,' and they often plant more varieties of bitter and sweet manioc, fava bean, and common bean. The slash-and-burn technique of preparing a garden plot described below becomes more difficult for an 'old garden,' and gardeners may need to perform it as many as five times to clear the plot completely. By the third annual cycle, the plot is considered an 'older' garden. According to my research assistants, gardeners refrain from planting anything new in this type of garden and they allow the regrowth of weeds and trees. Most gardeners will still visit this older garden, however, to collect the bitter manioc from the second year that will now be maturing.

In the third year, the new garden planted the previous year has become an 'old garden' itself, and thus the cycle continues with families often tending to new, old, and older gardens simultaneously. After the third year, gardeners leave 'older' plots in the forest and near the riverbank to lie fallow for seven or eight years before cultivating the land again. The plot is not completely out of use during the fallow period, however, since many gardeners continue to collect fruit from trees planted during the first gardening cycle. My research assistants, for example, maintained varieties of cashew (*Ahkrýt*), banana (*Pypyp-re*), orange (*Ràràj*), and mango (*Mac*) in their fallow garden spaces, all of which begin bearing fruit after five to seven years.

Overall, Canela gardeners appear to give special conceptual significance to new forest and riverbank plots and to the relation between the two. My research assistants frequently told me that both types of gardens are necessary for subsistence, as their overlapping growing cycles help families avoid experiencing *meia-fome*, or 'half-hunger,' during part of the rainy season in December and January when the forest garden produce has been mostly depleted. They also explained that the forest and riverbank gardens were a 'couple' that helped each other, similar to a man and woman and to the five soil 'couples' that work together to increase soil fertility (see Chapter 1 [pp. 37-39]). Fernando described the connection between forest and riverbank gardens in this way:

The gardens that we talk about are a couple, a garden couple [...] This is why I say that the gardens are like spouses – because you create one near the riverbank, in the “fresh area,” and afterward you create another one in the centre [forest area]. You plant this first one near the riverbank during the month of August, and the other in the centre you plant in November, December, or January, and you will not have any problems. [...] To have only one garden is nothing!

Perhaps this explanation indicates that just as husband and wife couples work together for the wellbeing of the matrilineal family unit, so too do forest and riverbank garden spaces promote well-fed and 'happy' matrilineal families. Whatever the case, the conceptualization of forest and riverbank gardens as 'couples' highlights the dualistic, complementary relationship between the two spaces that requires further analysis.

The locations of forest and riverbank gardens within the Canela territory gives us an indication of the complementary relationship between the two spaces. As Map 5 (p. 8) displays, the main forest 'garden sectors' are mostly located in the 'live forest' (Ivëntũm) eco-region areas spread throughout the northwest and northeast quadrants of the territory. Forest gardens are also sometimes located in Iromtũm 'old forest' or Pjêhtũm 'old land' eco-regions, both of which are a considerable distance away from Escalvado

village. Meanwhile, riverbank gardens are usually grown in the riverbank land type, known as Coh-cahêhnã, next to streams flowing near the village space. These streams, such as the Santos Estevam and the Pau Grosso, meet up within a kilometre or so of Escalvado, and they continue past the Canela territory to form the Corda River.

As they are located in certain 'sectors' reserved specifically for gardening, the forest gardens can be much larger than riverbank plots, which are smaller and constrained on one side by the river itself. Most forest gardens are cultivated in the fertile Pjê pej soil of the Ivëntüm eco-region, a soil type that my research assistants told me responds well to fire and can produce an abundant harvest. The Awpêê and Amcó pair of soil types in the Coh-cahêhnã riverbank space are even more fertile, however, and cultivated crops grow faster here than in the forest spaces. These distinct soil types therefore allow for two overlapping yet separate gardening cycles in forest and riverbank plots (Chapter 1 [pp. 37-39] describes the five pairs of soil types in more detail).

As Fernando's above quote highlights and as Table 3 displays below (p. 153), the distinct forest and riverbank planting, growing, and harvesting cycles complement one another and allow for an almost continual supply of garden produce. Both gardening cycles begin in May, when the eldest male of the matrilineal family and his sons-in-law visit the forest and riverbank spaces to demarcate new garden plots. In the forest, the men initially delineate the rectangular plots by cutting away some brush with their machetes, and then return over the next few days to clear more brush and mark out the plot's boundaries. Some Canela gardeners attribute the rectangular shape of modern garden plots to their *cupên* or 'white' neighbours, and the Canela learned the system of measurement they

now use from the whites as well.²⁸ According to my research assistants, the 'ideal' size for a forest garden plot is three *linhas* long and five or six *linhas* wide (approximately .85 x 1.4-1.7 hectares). Some families demarcate plots that are as much as seven *linhas* long (approximately 2 hectares) if they have many male family members or can pay other people outside of the matrilineal unit for their labour with gifts or money.²⁹

Cutting down the large trees and extensive brush in a forest plot takes a few months, from May into June and July. Some species of especially hardy forest trees, my male research assistants informed me, can take several days to fell using a steel axe. During this time, the entire matrilineal family often relocates to a temporary shelter near the forest plot so that the women and children can assist with the cutting of smaller brush. Meanwhile, demarcating and felling trees in a new riverbank plot is much less time-intensive, since the tree species in these areas tend to be smaller with softer wood. Gardeners typically leave the trees, grasses, and other vegetation growing near the riverbank to help prevent erosion and to maintain a barrier between the river and the garden plot. Because the riverbank plots are often within easy walking distance to the village, families do not need to relocate to temporary shelters during the demarcation and felling phase.

Gardeners typically leave the felled trees and brush in the new forest and riverbank plots to dry out under the hot sun characteristic of the dry season. Once the plant debris are sufficiently dried out and the dry season is underway, men and boys begin the burning (*queimada* in Portuguese) typical of slash-and-burn or swidden horticulture. Near the

²⁸ Canela gardeners measure their plots by *linhas* ('lines') and *braços* ('arms'). There are 25 *braços* per *linha*, and 3.5 *linhas* equals approximately 1 hectare, according to my research assistants.

²⁹ Matrilineal families with few male family members will often ask men from other families to assist them with the demarcation and felling of large trees in new garden plots. In exchange for their labour, the men typically receive gifts such as *farinha* (toasted manioc flour) or money.

riverbank, the burning usually takes place at the end of July and takes around two days to complete. It is followed by the clearing or slashing (known as *coivara* in Portuguese) of the burned debris, which is a group effort undertaken by men, women, and children. In riverbank plots, families normally only need to perform the burn-and-slash cycle once, although occasionally a second cycle is needed to sufficiently clear the plot. Conversely, forest plots cultivated in the Ivěntũm 'live forest' eco-region require at least two rounds of burning and slashing, and plots in eco-regions that are more densely forested such as the Caxàt-re kô 'real forest' usually require four or five burn-and-slash cycles.

As my male research assistants explained, one of the most important tasks of a male gardener is performing a successful burning of a new garden plot (see Chapter 5 [pp. 190-192] for a description of how boys learn to use fire in this way). In forest plots, men wait to begin the initial burning until the height of the dry season in early-to-mid August, and it usually lasts around two days. Women rarely accompany men to this first burn, but they do pay close attention to the skies for signs of smoke from distant forest plots. Upon seeing the smoke, Canela women are meant to signal that the burn is happening by sweeping the ground and pounding an empty wooden mortar with a pestle in front of their houses. My research assistants assured me that these activities help ensure a successful burn and forest growing season. After the first burn in forest plots, women and children typically slash the burned debris while men clear it from the plot. The second burn-and-slash cycle takes place shortly thereafter, and all burning should be completed by the end of September since the first rains of the rainy season can begin in early October.

The burning and slashing cycles prepare forest and riverbank plots for planting and gardeners typically cultivate similar crop species and varieties in both areas. Despite growing many of the same species and varieties, however, the two plots each have a distinctive planting schedule and garden layout. Becoming well-versed in each garden's layout and planting schedule requires years of multi-sensory, embodied learning from one's elders and extended engagements with forest and riverbank spaces and the crop species and varieties growing within them. Through these engagements with human and nonhuman 'teachers,' gardeners learn how to adapt the layout and scheduling to better fit the needs of their families and the spaces they cultivate. Thus, the diagrams and schedules that I explore here should be considered templates that individual families and gardeners shape and modify depending on specific circumstances. In the following Chapter 5 (pp. 162-184), I examine how individual expert gardeners and their families creatively expand upon these templates.

The planting schedule for riverbank gardens usually begins in August, well ahead of forest plots that are still undergoing burning at this time. A typical riverbank garden is rectangular with one side bordered by a river or stream, as shown below in Diagram 2 (p. 142). Male and female gardeners usually plant fruit trees, especially banana varieties, near the vegetation next to the riverbank because they serve as a buffer between the river and the garden. Next to the trees at the riverbank's edge, gardeners plant sweet manioc by placing cuttings of mature roots (*maniva* or *manaíba*) in the ground at regular intervals that are more haphazard than rows. They also plant varieties of species that grow particularly well in the fertile Awpêê and Amcô riverbank soils, including maize, fava bean, common bean, rice, squash, watermelon, yam, sweet potato, and sugarcane. Often, fava bean varieties are planted near the sweet manioc at the river's edge of the plot, so that

female gardeners can hang the fava vines from the sweet manioc sticks while they are growing (see Chapter 5 [p. 193] for more information on this activity).

In the centre of the garden, fava bean and maize varieties are typically planted in horizontal rows next to each other so that women can hang the vines from the maize stalks as well. If the riverbank plot is large enough to accommodate the long sweet potato vines, the gardener couple intercrops sweet potato varieties with common bean 'on the vine' varieties near the riverbank side of the plot. They intersperse fast-growing rice varieties throughout the entire plot as well. At the end of the plot furthest from the riverbank, gardeners plant yam varieties in one row and varieties of squash and watermelon in separate holes next to each other in another row or two. Many families line the outer edge of the plot with two or three rows of the Tepja-re vine, which takes two to three years to mature and is used to stun fish, especially the *poraquê* fish (*Electrophorus electricus*), in the water so that they can easily be collected and killed. It is also common to plant a type of inedible 'fava bean' known as Pànrýt Cahàc-ti, or 'Cobra Fava' (literally 'Large Common Fava'), in the four corners of the rectangular plot. According to my research assistants, the strong smell of the plant deters snakes from entering the garden and biting humans.

Diagram 2: Riverbank garden layout

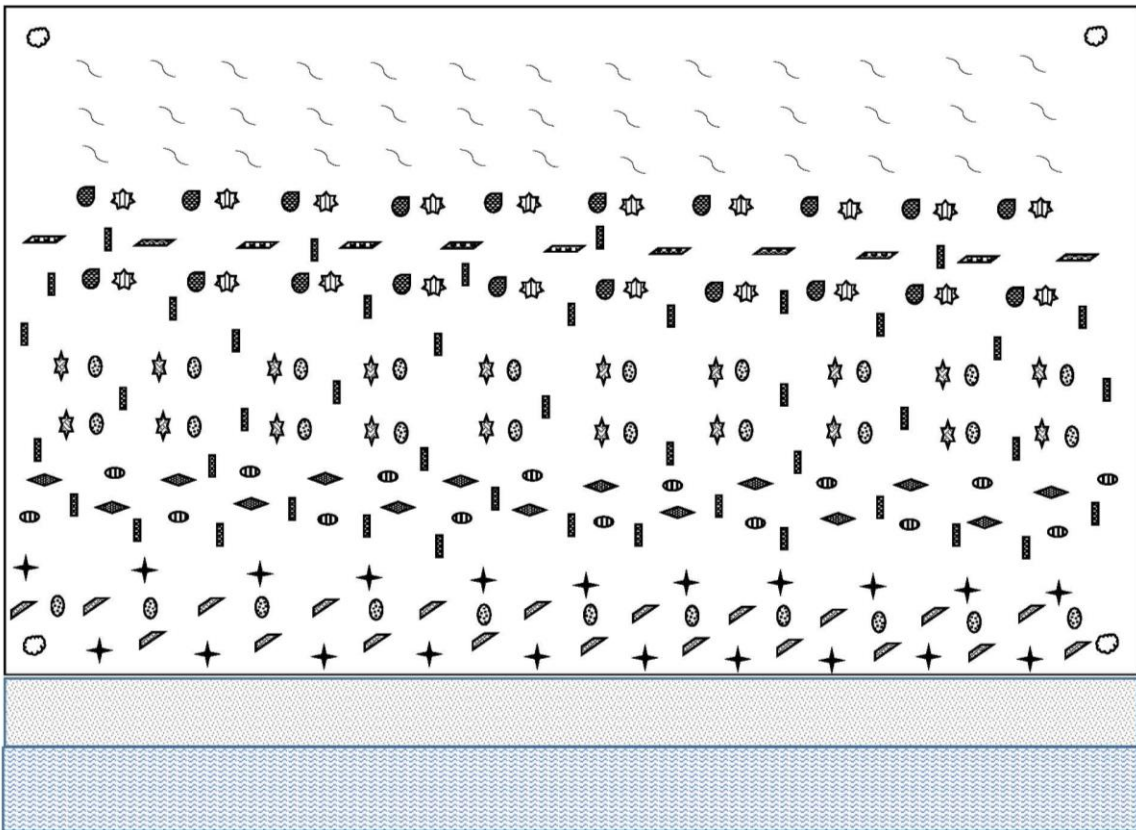
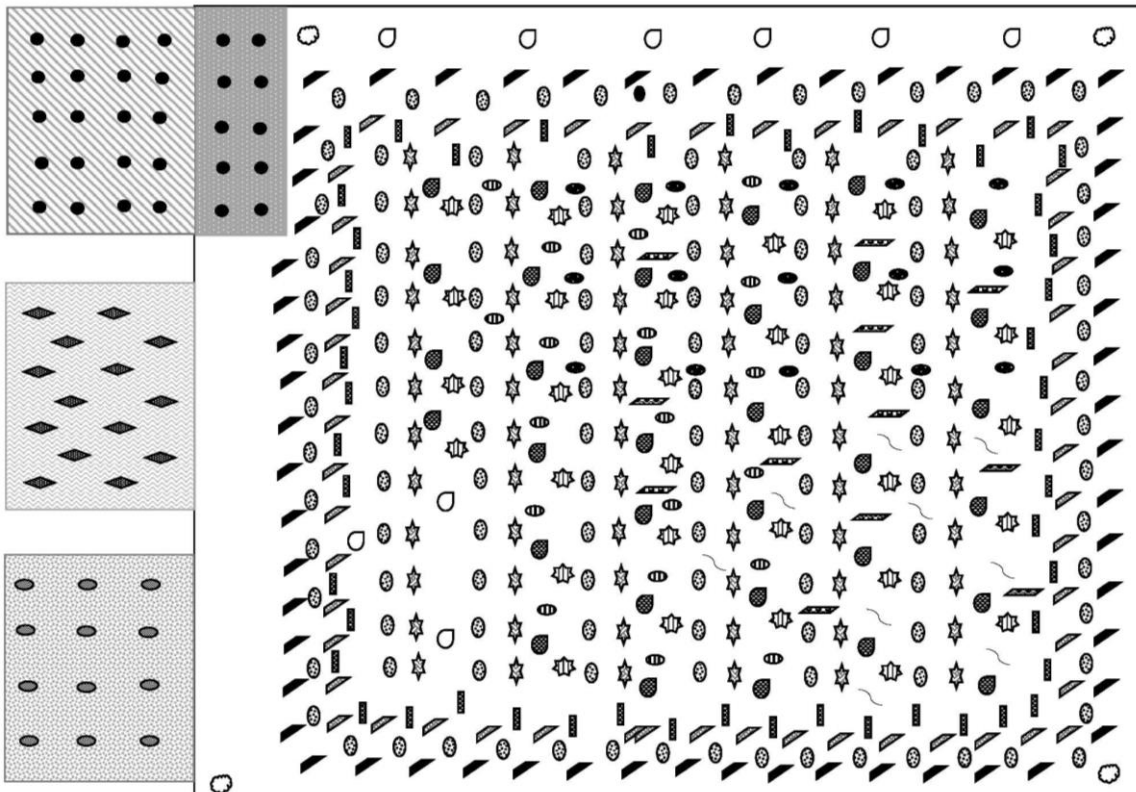

























Diagram 3: forest garden layout



Key for Diagrams 2 and 3:

Caahy / peanut		Cuhkõn / gourd	
Jåt / sweet potato		Praxī / watermelon	
Krērõ / yam		Pypyp-re / banana	
Påt Juhtõi-re / common bean not 'on the vine'		Tepja-re / <i>tingi</i> fish poison vine	
Påt Juhtõi-re / common bean 'on the vine'		Cobra fava – to repel cobras	
Påt Juhtõi-re Pàràre/Pryjī / 'Guajajara Tree Bean'		Vegetation left growing next to riverbank	
Pànkryt / fava bean		River/stream	
Põhy / maize		Separate garden for varieties of peanut	
Arÿihy / rice		Separate garden for Caahy Capa-re peanut variety	
Bitter manioc		Separate garden for varieties of Jåt / sweet potato	
Sweet manioc		Separate garden for varieties of Påt Juhtõi-re / common bean that are not 'on the vine'	
Cuhkõn Cahàc / squash			

For forest plots, the garden layout is more complex since a wider variety of species and varieties can be planted in the soils of the forested land types (see Diagram 3 above [p. 142]). While much of the planting in forest gardens takes place during the rainy season in November and December, gardeners can plant certain crops earlier in the year. Some families plant yam varieties interspersed in the centre of the garden as early as June or July, after the plot demarcation or cutting of small brush but before the felling of large trees. Other families choose to plant an early crop of maize in between the two burn-and-slash cycles in September, and many gardener couples plant yam and sweet manioc, the former spread throughout the plot and the latter in straight rows. September is also a good time to plant watermelon and squash in adjacent parallel rows in the middle of the garden, being mindful to leave space for both species' long vines. Varietals of the Cuhkõn and Cuhtõj types of gourd can be planted in one corner of the plot during this time as well,

again leaving space for the vines that can interfere with the growth of rice and bitter manioc. Meanwhile, gardeners plant the Tepja-re fish poison vine in the middle of the plot, intercropping it with other species.

By October, when the rainy season begins, gardeners typically plant separate rows of bitter and sweet manioc around the edges of the rectangular plot, as Diagram 3 shows (p. 142). If the gardener couple wants to plant fruit trees in the forest plot, they can do so in October as well. In November, gardeners plant maize, fava bean, slow-growing rice varieties, and a portion of the common bean crop because, as my research assistants explained, the vines grow too quickly to plant all at once. A helpful hint that my research assistants gave me in terms of timing is to plant rice interspersed around the edges of the plot first, and then begin planting maize once the rice buds have sprouted. As in the riverbank plot, maize and fava bean are planted together in rows, leaving enough space between each hole for the maize to develop large stalks and ears. Older gardeners teach the younger generation about the close connection between maize and fava bean, which Fernando described as a 'protective' and helpful relationship of mutual growth and abundance.

Unlike maize and fava bean, many vine crops such as peanut interfere with other species' growth if intercropped in central garden spaces. Younger gardeners learn to plant peanut varieties in two separate mini-gardens next to the main plot, one for the Caahy Capa-re variety and the other for the three remaining peanut varieties. In December, sweet potato varieties are typically planted in a separate mini-garden, as are nine varieties of common bean that have lengthy vines and do not grow well in the central plot space (see Appendix A [pp. 355-356] for the full list of common bean varieties). The four 'on the vine' common

bean varieties can be intercropped throughout the forest plot, and 'Guajajara Tree Bean' (Pàt Juhtõi-re Pàràre/Pryĩ) should be planted in a horizontal row or rows in one section of the garden.³⁰ While most of the planting is completed by the end of December, varieties of fast- and slow-growing rice can be planted well into January if desired, and sometimes gardeners plant bitter manioc and common bean varieties as late as February if they are trying to space out crop harvest times.

While crops are growing, female gardeners manage and tend to the multiple crop species and varieties through regular visits to riverbank and forest plots. These are predominately-female activities, although male gardeners sometimes accompany their spouses on the visits, especially to the more distant forest gardens. My research assistants explained that in general, women visit their riverbank gardens on a daily basis, as the crops growing here require more care and attention than those in the forest plots. In the early morning, shortly after sunrise, it is common to see groups of women from the same matrilineal family walking in the direction of the riverbanks to visit their plots. Once there, they will survey the garden space, pulling out weeds and hanging the vines of vined crops such as fava and common bean.

Although forest gardens do not require daily care, my research assistants informed me that they should be visited at least every few days or once a week at a minimum. Women, either in groups or accompanied by their husbands, tend to these plots in a similar fashion as the riverbank gardens, yet they must also be careful to remove any forest overgrowth

³⁰ 'Guajajara Tree Bean' has been identified as *Cajanus cajan*, also known as pigeon pea, which was domesticated in Africa and is a different species from the other common bean varieties that are mostly *Phaseolus vulgaris* (Harris, personal communication; see Appendix A [p. 356]). Unlike the other types of beans, it grows into a small 'tree,' perhaps partially explaining why it needs such specific planting requirements. See Chapter 5 for an exploration of 'Guajajara Tree Bean's' importance in terms of seed exchange between Jê and Tupi-Guaraní groups.

that can quickly overtake a forest plot if left alone for more than a week. Additionally, the peanut crop that is only grown in forest plots is known as being particularly difficult and requires special care. As Liliana explained, a gardener should carefully weed and tend to the peanuts without disturbing them, as this can lead to an ant infestation that will destroy the crop. Because forest plots can be as much as a day's walk away from the village, couples, groups of women, or entire matrilineal families will often spend weeks at a time in temporary shelters near forest plots during the growing season. When the rice varieties start to ripen, for example, men and women visit the plots together to scare away the Krẽ-re and other types of birds that will destroy the rice crop by eating it (see Appendix C [pp. 377-378]). Men typically bring their shotguns and shoot at the birds to scare them off or kill them. Through frequent visits to the forest plots, gardener women can predict when the birds will arrive and inform their husbands when this type of visit is necessary.

Through these frequent visits and daily or weekly engagements with growing crops, Canela women gardeners become acutely aware of when different species and varieties are ready to harvest in both plots. Since most crops are planted earlier in riverbank plots and grow faster in the fertile riverbank soils, they are typically harvested earlier in the year. Maize planted in riverbank plots in August, for example, can be harvested as early as November or December, when the planting season is underway in forest plots. Many families choose to plant two crops of fast-growing rice near the riverbank, once in August and again in October, and the two rice harvests will therefore be in December and February or March. Most of the other crops planted in riverbank plots are also ready for harvest in February or March, including sweet potato, fava bean, common bean, squash, and watermelon. Sweet manioc typically matures a bit earlier in January. In April and May,

gardeners usually harvest some of the bitter manioc they planted eight months to a year ago near the riverbank.

For forest plots, February and March typically mark the earliest months that crops are harvested, other than an early crop of maize that can be harvested in December if planted in September. Families usually harvest sweet potato, watermelon, and maize crops in February or March, and the community as a whole celebrates the first harvests of these crops through two separate rituals for sweet potato and other vine crops (known as the Hôxwa) and for maize (both are described in Chapter 6 [pp. 249-256]). Fast-growing rice varieties can also be harvested during these early months. Virtually any combination of the matrilineal family will harvest together, including couples on their own, groups of women or men, and often the entire matrilineal family. If a couple or family has a larger crop that they cannot harvest on their own, they will solicit assistance from other matrilineal families, again exchanging the labour for gifts of food or money. During my fieldwork, a few families were paying for additional manual labour and the usage of village trucks to plant and harvest large crops of manioc and rice, which they intended to sell to other Canela families and to their white neighbours in nearby towns. This is still relatively uncommon, however, and most families plant forest and riverbank gardens solely for their own subsistence.

By April, May, and June, most of the other crops in forest plots are ready for harvest, including slow-growing rice, fava bean, common bean, and squash. Yams and peanuts tend to have a later harvest in June or July, as both crops have a longer maturation period of approximately seven to eight months. If the gardener couple has planted sweet potato later in the year, it will also be ready for harvest around this time. Gourds are typically

harvested in June or July as well, although my elder research assistants lamented that cultivating gourds is becoming less common now that plastic buckets and bottles have largely replaced gourds as containers for storing water and seeds. Nonetheless, some families continue to cultivate gourd varieties, especially the smaller varieties of 'Flute Gourd' (Cuhkõn Pàt-wỳ) and 'Smallest Gourd' (Cuhkõn-re) that are respectively made into flutes and ritual ornaments for ceremonial activities (cf. Crocker 1990: 143-154 for discussion of ritual objects and their uses).

Unlike other crops, varieties of sweet and bitter manioc have widely different maturation periods, and there are therefore numerous manioc harvests throughout the year in both riverbank and forest plots. Most sweet manioc varieties mature in only five months, while most bitter manioc varieties take a year to mature and produce the best-tasting *farinha* (toasted manioc flour), according to my research assistants. One bitter manioc variety, 'Tortoise Arm Bitter Manioc' (Kwỳr Pakran-re or Kwỳr Caprãn Jũkee), takes a year and a half to fully mature, and 'Strong Vine Bitter Manioc' (Kwỳr Hêhtyi) matures in three years. 'Hugging Vine Manioc' (Waíputre), one of the two varieties that Canela gardeners classify as half-sweet/half-bitter, can remain in the ground for an impressive five years before harvesting. Thus, gardeners must keep track of their different manioc crop growth rates, and women are often harvesting bitter manioc planted in the 'new' garden as well as crops from previous years in the second-year and third-year 'old' and 'older' gardens. Toasted manioc flour and other foodstuffs made from bitter and sweet manioc are staples of the Canela diet, and gardeners therefore space out the planting of different manioc varieties to ensure a frequent supply of manioc throughout the year.

According to my research assistants, the multiple manioc harvests combined with the overlapping harvests of other garden crops in riverbank and forest gardens can sustain Canela families for most of the year. Families who maintain the two-garden system, they say, will never ‘feel hunger’ because they will have food ‘all the time.’ Liliana reiterated this sentiment many times, saying that with both riverbank and forest plots, she ‘does not let the family suffer from hunger.’ As Liliana’s quote indicates, ‘letting’ one’s family experience hunger is perhaps viewed as something shameful, and no one ever directly admitted to me that they or their families had experienced hunger. From the beginning of the fieldwork, however, it became clear to me that the concept of hunger or ‘half-hunger’ was frequently on people’s minds, and that the two-garden system was seen as the best way to avoid hunger throughout the year.³¹

As buffers against the ever-present fear of experiencing hunger, riverbank and forest garden spaces are central to Canela subsistence. They are also conceptually important as two sides of the same gardening coin per se, and their intricate garden layouts and planting schedules attest to their complementarity and dualism. Fernando’s quote at the beginning of this section highlights the importance of the dual garden system, when he states that those who ‘love’ and ‘adore’ gardens cultivate both forest and riverbank plots. It is easier to cultivate crops in the smaller riverbank plots with their fertile Awpêê and Amcó soils (which are themselves a dualistic pair – see Chapter 1 [pp. 37-39]) that ‘help with subsistence’ and enable families to ‘have food all the time.’ On the other hand, even

³¹ I have also conducted research on the role of governmental social assistance payments, especially the conditional cash transfer programme Bolsa Família, in combating ‘half-hunger.’ My research indicates that women who receive the payments conceive of maintaining forest and riverbank gardens as the best defence against hunger rather than the monetary assistance, although the payments allow women to purchase basic items such as cloth, clothing, soap, and foodstuffs such as coffee that the Canela do not grow themselves (cf. Miller 2013).

with the slightly more difficult soil, families can grow a wider variety of crops in the larger forest gardens and can visit them less frequently than the daily visits to riverbank spaces. When discussing gardening activities, Canela gardeners frequently compare their work in the two plots, and it appears that they conceptualize these activities as interdependent and interrelated. Working in the riverbank plot is only conceived as 'easy' in comparison to the forest plot, and vice versa. Similarly, families can make riverbank plots smaller because the larger forest plots exist in the first place.

Overall, then, it appears that the two garden spaces are mutually dependent, and conceptually they seem to exhibit the dualism common in pan-Jê categorization (cf. Maybury-Lewis ed. 1979; see Chapter 8 [pp. 303-311]). In addition to occupying categories of Canela thought, the forest and riverbank gardens are material-ecological spaces where the lives of Canela gardeners unfold in dualistic ways. The planting, tending, and harvesting activities that gardeners undertake in forest and riverbank gardens are similar yet distinct, overlapping yet separate. Within these two spaces, then, life appears to unfold in complement to itself and in contrast to everyday life in the village space, and it seems that Canela gardeners enjoy and seek out this way of dualistic (or triadic) living.

Thus far, I have provided a sketch of how Canela humans engage with village, riverbank, and forest spaces. Humans are not the only beings whose lives unfold in the Canela territorial landscape, however, and exploring how the lives of other nonhuman beings become enmeshed in these spaces will greatly enrich our understanding of the overarching Canela life-world. Here I would like to focus on cultivated crop lives, as they are crucial to riverbank and forest garden spaces. According to the shaman Reinaldo, cultivated crop species can converse with each other (and with the shaman) in garden

plots. They frequently comment on how they are being treated by their male and female gardener ‘parents’ and they will physically ‘walk away’ to a different plot if they feel mistreated or ignored (see Chapter 7 [p. 286]).

In addition to these inter-species communications and movements, certain species such as yam are known for maintaining their own ‘communities’ that mirror Canela socio-political organization. Similar to the male elder leadership council explored above, my research assistants described the yam ‘community’ as being led by the two ‘chiefs,’ ‘Pỳp Fish Yam’ (Krērô Pỳp-re) and ‘Anaconda Yam’ (Krērô Tekãjkãj/Rorti). The ‘vice-chiefs,’ meanwhile, consist of the four varieties of yam that are classified as ‘true’ or ‘original’ (*pej* in Canela; see Appendix A [pp. 352-353]). As the chiefs, Pỳp Fish Yam and Anaconda Yam are classified as *peaj*, an augmentative of *pej* meaning even more ‘true,’ ‘original,’ ‘beautiful,’ and ‘good.’³² They are the only two varieties that are said to ‘come from the water,’ perhaps a reference to their names and association with riverine animals. As my research assistants explained, these two yam chiefs ‘protect’ the other yam varieties and should be planted in the middle of the entire yam crop to ‘strengthen’ all the yam varieties.

There are indications that manioc and sweet potato organize themselves into their own intra-species ‘communities’ as well. Liliana explained that Hugging Vine Manioc (Waíputre), the half-sweet/half-bitter varietal, is the chief of manioc because it is ‘stronger’ than the other varieties. She also recounted how her father taught her that

³² For a more detailed discussion of crops classified as *pej* and *peaj*, see Chapter 6 (pp. 225-227). In Chapter 8 (pp. 312-322), I explore the concept of *impej* and its conceptual opposite, *ihkên*.

‘Large Mixed-Colour Sweet Potato’ (Jàt Krorti)³³ is the chief of sweet potato due to its large ‘head’ and overall ‘thickness’ compared to other varieties. Explaining what she meant by these descriptions of crop socio-political organization, Liliana stated that ‘yam, sweet potato...have chiefs as well, just like us [*měhĩn*].’ In this vein, conceptualizing cultivated crops as having ‘communities’ similar to humans may be a way that Canela gardeners identify plants with people.

While Chapter 6 (pp. 228-246) explores the interrelated life cycles of gardeners and cultivated crops on a more individual level, here Canela gardeners appear to be identifying their entire human community with those of plants. I would go one step further to posit that in riverbank and forest garden spaces, humans and plants are sharing in the *same* communal space, what I am calling the ‘bio-sociocultural life-world’ that unfolds over time. Human gardeners do not simply observe these crop communities, but rather intimately participate in them by, for example, placing the yam chiefs in their designated spaces and tending to the growing sweet potato and manioc varieties. Without human engagements, these plant communities in riverbank and forest spaces would not exist, and the reverse could also be said of the human community in the village space, which relies on cultivated crops for subsistence. It therefore appears to me that intimate, interdependent engagements between and among humans and cultivated crops emerge in village, riverbank, and forest spaces, all of which form part of the overarching Canela life-world.

³³ My research assistants did not incorporate this variety into the ethnobotanical list for sweet potato varieties. Further research is needed to determine whether this is a ‘new’ variety or is another name for one that has already been classified.

Table 3: forest and riverbank gardening seasons

Month	Forest garden	Riverbank garden
	<u>Dry season: May-June to September-October</u>	
May	Plot demarcation	Plot demarcation
June-July	May, June, & July: cut down and fell brush and trees – takes more time to cut down harder wood Can plant yam this early	Cut down and fell brush and trees – takes less time because wood is softer here End of July: two days of <i>queimada</i> burning followed by <i>coivara</i> – cutting away burned debris/trees
August	Mid-August or beginning of September: <i>queimada</i> once or more as necessary, at the height of summer/dry season	Beginning of August: begin planting all crops – sugarcane, sweet manioc, sweet potato, common bean ‘on the vine,’ fava bean, squash, watermelon, maize, fast-growing rice
September	Can begin to plant sweet manioc, squash, yams, watermelon – vine crops Do <i>coivara</i> – cut away burned trees and plant debris until plot is clean; additional burning may be necessary	Planting is essentially finished Tend to growing crops
October	Plant yams and rows of bitter manioc along sides of plot	Plant fast-growing rice a second time
	<u>Rainy season: October-November to April-May</u>	
November-December	Plant slow-growing and fast-growing rice, sweet potato, peanut, maize, fava bean, common bean – can plant into month of January	Harvest fast-growing rice and maize that was planted in August
January	Tend to growing crops	Harvest sweet manioc
February-March	Harvest fast-growing rice, sweet potato, watermelon and maize Can still be planting bitter manioc and common bean	Harvest second crop of rice and all other crops
April-May	Harvest many crops – fava bean, common bean, squash, slow-growing rice May-June/July: harvest sweet potato (if planted later in year), yam, and peanut	Harvest bitter manioc – will have large crop by now

Conclusion: dualistic and triadic spaces in the 'bio-sociocultural life-world'

Throughout this chapter, I have explored the various ways that Canela humans live their lives in the village, riverbank garden, and forest garden spaces. In the village, men and women engage in ritual and everyday activities in the ceremonial-political centre, which is conceptually 'male,' and in the concentric rings of matrilineal houses, conceptually 'female' spaces. Drawing from the examples of communal and familial rituals and everyday experiences in both spaces, I posit that the masculine central space and the feminine circles of houses exist in complement to one another and together form the overarching village space within which the Canela human community reproduces and maintains itself.

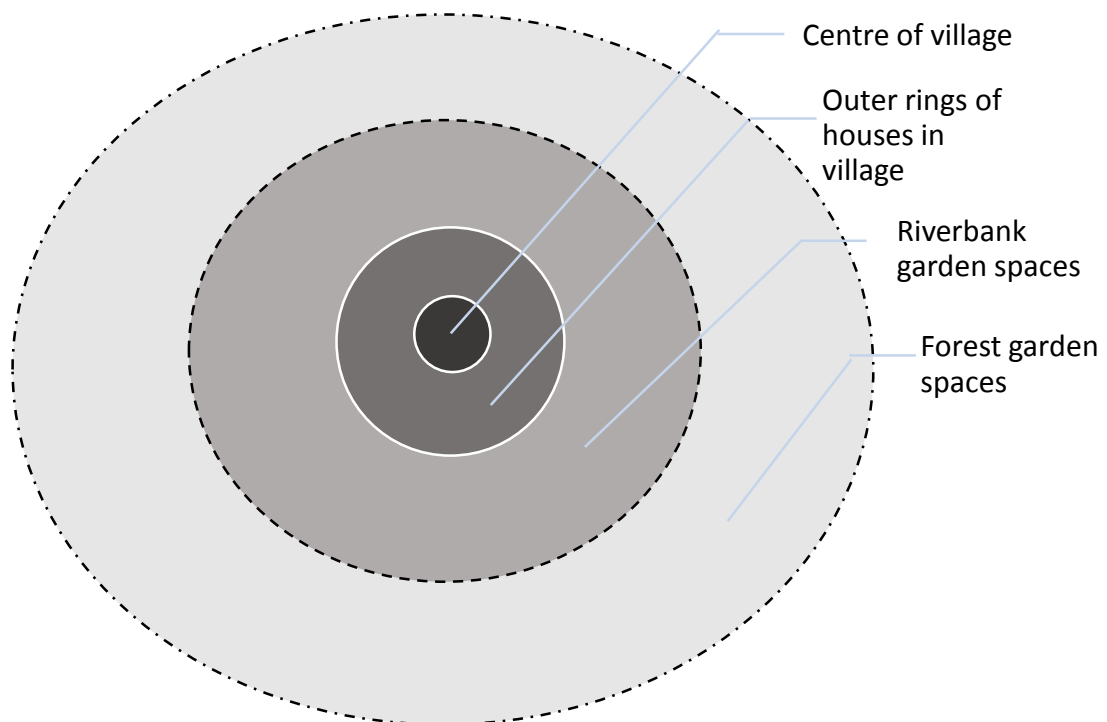
The male/female, central/periphery dichotomy of Jê villages is not a new concept, and has been explored in detail by anthropologists whose research formed the Harvard Central Brazil Project (Maybury-Lewis 1967, 1974, 1979a, 1979b; Turner 1979; Lave 1979; Da Matta 1973, 1982; Melatti 1978, 1979) and others (Seeger 1981; Crocker 1990). While the organization of Escalvado is similar to other Jê villages as described by these authors, following Lea's (2001) research with the Kayapó and Ewart's (2003, 2013) with the Panará, I would argue that classifying the circles of houses as 'peripheral' belies the importance of women and of matrilineality to the village space. Thus, for the Canela (and perhaps for other Jê communities as well), the importance of the centre or the circles of houses is relative and dependent on one's perspective. From inside the central circle, the male elders and their political and ceremonial decision-making take centre stage, but looking outward to the houses, a different picture focused on the role of women as owners of household spaces and as mothers and nurturers of future generations emerges.

What happens if the perspective shifts even further, and we look at the other spaces apart from the village that comprise the Canela territory? As this chapter explores, moving away from the dichotomous village, we see that the Canela appear to conceptualize another complementary dichotomy in the riverbank and forest garden spaces. Riverbank and forest gardens are conceived as distinct spaces based on geographical location, types of soil and soil fertility, garden layout, and planting, tending, and harvesting schedules. Similar to the centre and circles of houses that together form the entire village, Canela gardeners appear to conceptualize riverbank and forest gardens as equally necessary for gardening and subsistence as a whole. It therefore seems that there are two main dichotomies, or 'couples' or 'pairs' as my research assistants described them, in the Canela territorial landscape: namely, the centre/circles of houses that comprise the village space, and the riverbank/forest plots that together comprise gardening spaces. To understand how these two sets of two are related, I draw from Lévi-Strauss's (1963: 131) theory of concentric dualisms forming implicit triads to posit that the pairs overlap in a triadic system of village – riverbank garden – forest garden space (see Chapter 8 [pp. 303-311] for a further exploration of Jê and Canela dualistic and triadic structures).

In this view, the village space consists of a concentric dualism, with the ceremonial centre conceptually and geographically nested inside the concentric outer circles of houses. Meanwhile, the riverbank and forest gardens appear to exist as a parallel dualistic pair, since they are conceptually linked yet geographically separate from each other. The village is arguably the conceptual centre of the entire Canela territory. When my research assistants drew maps of the territory, for example, they consistently began with a sketch of Escalvado in the centre of the paper and used this sketch as the reference point for the rest of the map's markings (see Map 5 [p. 8] for a reproduction of their map).

Moving outward from the village, the riverbank garden spaces emerge as geographically and conceptually circling the village itself: they are nearby spaces that women can visit on a daily basis and easily bring crop harvests back to their families in the village. The forest plots then appear to encircle the riverbank plots – they are linked to yet distinct from riverbank gardens, and they are geographically and conceptually further away from the village. Unlike the riverbank plots that have a direct connection to the village, the forest plots exist in more distant spaces, and gardeners often construct temporary shelters nearby instead of moving directly between the forest and village space. Thus, the triadic structure of village – riverbank garden – forest garden emerges as another series of roughly concentric circles, displayed in Diagram 4 here:

Diagram 4: triadic structure of village – riverbank garden – forest garden



Moving the perspective outward one last time, we can glean some insight into how the Canela conceptualize their unfolding life-world as a whole, with all of its apparent dualisms and triads. Viewing the life-world through the ‘bio-sociocultural aesthetics’ theoretical approach, it is possible to see how human and nonhuman engagements (some of which are subsequently valued and made meaningful) emerge through and alongside the diverse spaces that make up the Canela territory, including village, riverbank, and forest garden places. These spaces are not unchanging, discrete entities, but rather form an emergent ‘meshwork,’ to use Ingold’s (2008, 2013) term, of life forms that are simultaneously biological and sociocultural, and whose biological and sociocultural forms intertwine with each other throughout time and space.

In the village, for example, the lives of girls and boys, men and women become biologically and socio-culturally intertwined through living together in matrilineal houses, sharing meals, having sex, becoming pregnant, giving birth, raising children, and through all the associated ritual and everyday activities that make up Canela human experience. The lives of nonhuman objects or artefacts also unfold alongside those of humans in village spaces, and shamans sometimes interact with these beings in the matrilineal house (see Chapter 7 [pp. 282-283]). In riverbank and forest garden plots, Canela gardener and plant lives become biologically and socio-culturally entangled through processes of plant growth and social organization as well as through human tending to, interacting with, and eventually consuming cultivated crops. Wild animals also live in distant forest spaces, engaging in relationships with male hunters, and Chapter 7 (pp. 264-265) explores how deceased Canela ‘souls’ (*mēkarōn*) live in forested places and engage with humans in forest gardens and occasionally in the village.

As this chapter has highlighted, particular human multi-sensory and embodied engagements with each other, such as those among elder men, between uncles and nephews, and among the matrilineal family are especially valued and made meaningful in the centre and outer circles of houses in the village space. In forest and riverbank garden spaces, relationships among matrilineal family members remain important, and entanglements within plant communities and between humans and plants become valued as well. While this chapter focused on the spatial component of these emergent relationships through and within the overarching life-world, in the following Chapter 5 I explore how human-plant engagements unfold and subsequently become valued and meaningful through the embodied practices of learning how to garden and excelling at gardening.

Chapter 5

Becoming an *impej* Canela gardener: knowing and valuing gardening experiences

Introduction

I think that gardens are important. In the first place, I want to say that the garden is the mother of the people [*měhĩn*]. The garden is our defence; it is my defence. To me, the garden is about surviving well. Secondly, having a garden...and having much produce helps us escape from misery. [...] This is how we are surviving. If people do not have gardens, it is a sad thing, without any happiness. Today, I am thankful that we are learning how to have...this courage, this idea to work more in the gardens, so that this Canela family can maintain [itself] and survive well.

-Wander, May 2012

Gardening expertise is especially valued in the modern Canela life-world, and skilled gardeners are conceived as model community members who embody strength, beauty, and survival. This chapter explores how gardening and maintaining biodiverse garden plots are simultaneously meaningful as socio-economic or 'functional' activities to provide food *and* as practices that promote Canela notions of overall 'happiness,' 'strength,' and wellbeing. As the above quote indicates, for the Canela surviving and living 'well' appear to be integrated into a holistic conceptualization of wellbeing known as being or becoming *impej* (or in Wander's words, 'surviving well'). Through a comparison of the experiences of three expert gardeners and their matrilineal families, the first section explores what it means to be an expert Canela gardener, and how gardening knowledge and expertise is valued and appreciated within the community. In particular, I examine the role of expert

gardeners in promoting overall wellbeing through their cultivation of abundant and biodiverse garden plots.

In order to gain a more complete picture of how Canela women and men become skilled gardeners, in the second section I explore how girls and boys learn from their elders how to engage with their environment, especially through gardening. Environmental knowledge in this sense is not conceived as a static body of verbalized facts and figures, but rather as a process of active 'knowing' (Kohn 2002) that constitutes an embodied way of living (Ingold 2007a: 89). This 'environmental knowing' revolves around verbal and nonverbal communicative engagements between and among humans and nonhumans. Canela gardeners, I suggest, engage with multiple plant species and varieties through processes of 'contextually situating information and understanding its meaning through direct perceptual engagement with the environment' (Ingold 2000: 20-21). Thus, the section explores how expert gardeners share their experiential knowing of cultivated crops with younger generations within the matrilineal family through a series of verbal and nonverbal embodied perceptual experiences, with a particular emphasis on the role of play, creativity, and experimentation in learning how to garden.

To address the active, processual nature of coming to know and knowing how to garden, I draw from the theories of knowledge transmission and learning in Lave (2011), Marchand (2014), and Ingold (1996, 2000, 2011). Lave's (2011: 152) focus on processes of learning through active 'doing' in the 'lived-in world,' I suggest, has particular relevance for how Canela girls and boys learn how to garden, as does Marchand's (2014) emphasis on the role of creativity and improvisation in one's development from a novice into a skilled craftsperson, or in this case, an expert gardener. Ingold's (1996: 40; 2000: 21-22,

167) theory of 'enskilment' in which novices learn through an 'education of attention' also sheds light on Canela learning experiences, especially with its focus on engaging with and perceptually experiencing the unfolding environment or landscape.

Through an exploration of how Canela girls and boys learn from older women and men throughout the forest and riverbank gardening cycles, however, I reformulate Ingold's (2000: 22) 'education of attention' into an 'education of *affection*.' I suggest that the 'education of affection,' with its focus on how girls and boys learn to intimately engage with multiple crop species and varieties, more fully accounts for the gendered aspect of Canela environmental knowing and for the attentive, empathetic relationships that human gardeners (and especially women) develop with their growing crops in diverse spaces within the life-world.

In the third section of the chapter, I continue to examine gender-specific gardening 'enskilment' through the predominately-female activities of seed saving and exchange. I explore how Canela women appear to link conceptually saving seeds and cuttings with their roles as caretakers and nurturers of human children. This attentive care of saved seeds and of growing plants sheds light on the affectionate, empathetic nature of gardeners' interactions with their cultivated crops, thereby furthering my hypothesis that Canela gardeners learn through a creative, processual 'education of affection.' Additionally, I explore how combined sociocultural and ecological knowledge become embedded in crop exchanges within and outside of the community and in the material seeds and cuttings themselves. Exchange also highlights the importance that Canela gardeners place on the overall spectrum of crop varietal diversity, as they actively seek

out new varieties from other families and neighbouring indigenous and white communities.

To conclude the chapter, I suggest that learning how to value and appreciate varietal diversity appears to be integral to Canela gardening 'knowing' as a whole. As teachers to the younger generation, 'parents' and caregivers of plant 'children,' and keepers of biodiversity, then, expert gardeners appear to pursue overall 'wellness' for themselves and their families, and they are subsequently valued by the community for their ability to be or become *impej* gardeners. I posit that intimate gardener-crop engagements promote overall 'wellbeing' for the Canela life-world, and that these encounters become especially valued through the Canela 'aesthetics of landscape' that the 'bio-sociocultural aesthetics' theoretical framework seeks to explore.

Three case studies of expert gardeners: Liliana, Camila, and Fernando

Why am I interested in gardens? Because gardens give sustenance. The garden makes me happy all the time, every day. If I lacked a garden, before long I would become weak. Do you know why? Because for me, the garden is the most important [thing], and it gives a lot of strength. Seeing as I have gardens, I am happy! I sleep well, and every day at daybreak, I am awake [and] already remembering the work in the garden that I want to do to protect my life.

-Liliana, May 2012

Liliana and her husband, João Miguel, maintain a matrilineal household on the western side of the village with their daughter, Aline, her husband, Davi, and their eight children. Their other adult daughters, Nilda and Joaquina, live with their husbands and children in separate houses directly behind Liliana's in the second circle of village houses (see Diagram 1 [p. 117]). While each adult couple typically 'owns' one forest and one riverbank

garden plot as Chapter 4 describes (pp. 132-133), the matrilineal family with Liliana at its head chooses to cultivate plots next to each other in the same geographic areas or ‘garden sectors.’ Keeping the family’s garden plots close to one another is important to Liliana so that everyone can ‘help’ each other and no one ‘forgets’ about their familial ties. Liliana’s maternal classificatory grandparents maintained plots in four main forested locations, and she now refers to having garden ‘properties’ (*propriedades*) in these areas, which are Põhipôc (Campestre), Cumxê-ti Kat (Baixão Preto), Potyc (Brejo dos Boi), and Capà-ti (Ponto Velho) (see Map 5 [p. 8] and Table 2 [p. 42]). The Cabiceiro do Ponto sector is another preferred forest garden location, and the family manages riverbank plots and backyard gardens as well.

Liliana chooses the exact location of her family’s garden plots based on the eco-region and soil type that Chapter 1 describes (see Tables 1a and 1b [pp. 39-40]). She likes to cultivate gardens in the fertile soils of the Iventũm ‘live forest,’ the Pjêhtũm ‘old land,’ and the Pàrkô or ‘closed’ and less forested *chapada*. During my fieldwork, she decided that the family would cultivate a second-year Hipêj or ‘old’ garden in Cabiceiro do Ponto due to the area’s Pjê xôm soil. Feeling the soft, sandy soil in her hands, Liliana determined it was Pjê xôm and would be relatively fertile for growing varieties of squash and common bean, especially ‘Guajajara Tree Bean’ (Pàt Juhtõi-re Pàrè/Pryjĩ), a favourite of the family. Liliana also takes advantage of the fertile Amcô and Awpêê soils in the Coh-cahêhnã riverbank eco-region that ‘work together’ to produce abundant harvests. After walking past the women’s and couple’s bathing holes closest to Escalvado, wading through the stream, and traversing up a slight hill, Liliana arrived at a spot with fertile soil which she knew would be ideal for a riverbank plot. Since Liliana typically decides where the family’s plots will be located in any given year (a decision that is made by the elder

male in some other Canela households), she told her husband and sons-in-law to demarcate this riverbank plot and other plots in the forest sectors. Thus, with her expert knowledge of eco-regions and soil types, Liliana ensures that her family demarcates garden plots in fertile locations.

Other Canela gardeners single out and admire Liliana for her gardening expertise and enthusiasm, especially her cultivation of many different crop species and varieties. Neighbour women often stop by Liliana's house to discuss gardening techniques and to acquire some of her diverse varieties through exchange. Those who visit her garden plots are struck by their biodiversity. When the Canela tractor driver Dorival visited Liliana's forest plot in early 2013, for example, he expressed his appreciation for the tall fava bean vines, telling her his heart 'beat very fast' upon seeing the beautiful vines. My three male research assistants frequently commented on Liliana's expert gardening techniques and maintenance of varietal diversity. Renato often told Liliana she was the 'only woman [gardener] who cultivates so many things.' Fernando and Wander, meanwhile, once explained that Liliana was the 'Dilma Rousseff of gardens,' likening her gardening prowess to the strong leadership capabilities of Brazil's current (and first) female president. Liliana herself attributes her expertise to the teachings of her maternal and paternal classificatory grandparents, who showed her various gardening techniques and gave her seeds and cuttings of varieties that she continues to cultivate today. In turn, Liliana passes along this knowledge and appreciation of biodiverse gardens to her daughters and grandchildren.

One of the most important aspects of Liliana's gardening prowess is her knowledge of which crop species and varieties grow best in different garden plots. Through experiential

'showing' by her grandparents and decades of personal experience planting gardens, Liliana has developed her own techniques and practices that correspond with and deviate from the more general practices outlined in the previous Chapter 4 (pp. 137-150). In the riverbank plot, Liliana maintains that squash, watermelon, banana, maize, and bitter and sweet manioc produce abundant harvests in the fertile Amcó soil. She also likes to plant Cãn Peaj-re, or 'True/Original Sugarcane,' and Tepja-re, the fish poison vine, in the riverbank garden. For banana varieties, Liliana initially plants the saplings in riverbank plots and then relocates the trees to her and her daughters' backyard gardens after a few years to allow more space for their growth.

She also maintains a large grove of cashew trees in her riverbank plot, the different varieties of which she proudly shows to neighbours, family members, and myself, as Figure 3 displays below. Some species, such as *urucum* (annatto), are grown mainly for ceremonial purposes. In October 2012, Liliana planted 'True/Original *Urucum*' (Pym Peaj), the fruit of which is boiled down to make a brilliant red body paint that she needed for her grandsons who were participating in the following year's Pep-yê male initiation festival period (see Chapter 4 [pp. 122-124]). With proper care and tending, Liliana assured me these trees would continue to bear fruit for nine years, thereby providing many seasons of rich red body paint.

Figure 3: Liliana showing me 'Large Red Cashew' in her riverbank plot, August 2012



Liliana's preferences of where and when to plant different species and varieties shed light on her creativity and experimentation in garden spaces. In the forest plot, Liliana advises her family to plant yam and common bean varieties twice per year. While the adult couples of the family plant most crops together, Liliana likes to plant the second crop of yam varieties by herself, an unusual practice for a Canela gardener. Being well-attuned to the dry and rainy seasons in the Cerrado, Liliana is flexible with her planting schedule and waits to plant varieties of squash, sweet potato, and peanut until the heavy rains arrive in November or December. The beginning of the heavy rains also determines when she plants maize varieties, which can be as early as November or as late as February. Liliana maintains that December is the best month for planting rows of sweet and bitter manioc cuttings, and she and her family plant fast-growing rice at the end of the month, which Liliana prefers over the slow-growing varieties. For fava bean, Liliana experiments with

different schedules, planting varieties in December, January, and February to gauge which crop gives the most abundant harvest in May or June.

Her flexibility and creativity are especially apparent in the backyard garden space, where she can easily experiment with planting schedules and with small crops of new species and varieties. In the backyard plot, Liliana typically plants her favourite varieties of different species, including of fava bean, common bean, maize, squash, sweet potato, and papaya and banana fruit trees. While many Canela families maintain some sort of backyard garden, Liliana's is larger and more biodiverse than the average backyard plot. If Liliana is curious about the taste or successful harvest of a recently acquired species or variety, she will test it in the backyard plot. In May and June 2012, for example, Liliana was growing a small amount of coriander that she had acquired from whites in the nearby town of Barra do Corda. She also planted the seeds from tomatoes that I brought from Barra do Corda for her to cook (she enjoys trying out new cooking techniques as well). Her flexibility and desire to incorporate 'new things' as she calls them highlight Liliana's mastery of gardening techniques as well as her openness to incorporate new crops and gardening knowledge from both *mẽhĩn* gardeners inside the village and from 'Others' (*cupẽn*) outside of the Canela territory.

Throughout the fieldwork, Liliana repeatedly told me that experimenting with and incorporating new species and varieties into her garden plots was 'the most important thing' for her. She values 'new' crops for their own attributes, such as a distinctive colour or taste, and most importantly because they contribute to the overall spectrum of biodiversity in her gardens. When surveying the growing crops in her gardens, Liliana finds it 'beautiful' to see many species and varieties together. She actively pursues the

cultivation of as many species and varieties as possible. Thus, she and her family maintain six of the nine known maize varieties, and in December 2012, Liliana planted seeds of the four ‘new’ maize varieties that her son-in-law Vítor had acquired at a government-sponsored seed exchange with other Jê-speaking communities (see Appendix A [p. 349]). Explaining why she planted the new varieties immediately after acquiring them, Liliana told me that she ‘enjoys the new maize—it is pretty.’ In her riverbank garden, Liliana cultivates five of the seven cashew tree varieties, and she grows multiple varieties of more recently introduced fruit trees such as papaya, mango, banana, and orange. Her impressive fava bean collection includes dozens of the 52 named varieties, including some varieties such as ‘Jaguar Fava Bean’ (Pànkryt Kroro-re) that no other gardener appears to possess. Other gardeners visit Liliana’s house solely to admire the diverse spectrum of her fava beans, commenting on how beautiful they look when spread out together on a blanket in the middle of the dirt floor.

While overarching diversity is her main pursuit, Liliana also cultivates certain varieties for specific reasons. She grows ‘True/Original Sugarcane’ (Cãn Peaj-re), ‘True/Original Maize’ (Põhy Pej-re), ‘Largest Peanut’ (Caahy Catia Ita), ‘Pỳp Fish Yam’ (Krêrô Pỳp-re), and ‘Anaconda Yam’ (Krêrô Tekãjkãj/Rorti) because these varieties are directly associated with the mythical figure of Star-Woman and are conceived as particularly beautiful and ‘true’ or ‘original’ (*impeaj*; see Chapter 6 [pp. 225-227]). ‘Tortoise Arm Bitter Manioc’ (Kwỳr Caprãn Jũkee) is cultivated because it can remain growing in the ground for one and a half years and therefore serves as a kind of food ‘storage’ to be used in times of shortage. Liliana and her family cultivate ‘Cobra Bitter Manioc’ (Kwỳr Awari) because it produces delicious and beautifully coloured yellow *farinha* (toasted manioc flour). Meanwhile, she finds the common bean varieties ‘Guajajara Tree Bean’ (Pàt Juhtõi-re Pàrè/Pryjĩ) and

‘Large Bright Red Bean’ (Pàt Juhtõi-re Intep-ti), ‘Large Dry Squash’ (Cuhkõn Cahàc Crààti), ‘Large White Sweet Potato’ (Jàt Jakati), and ‘Small Red Parrot-Tail Sweet Manioc’ (Kwỳr Caprêc-re/Krỳi-re Japỳ) especially delicious.

Nonetheless, Liliana also continues to cultivate varieties that she does not prefer, such as ‘Large White Membrane True/Original Yam’ (Krêrô Pej Caxwỳn Jaka-ti) and ‘Large Brown-Violet Membrane True/Original Yam’ (Krêrô Pej Caxwỳn Kukum-ti) that have a bland taste and are said to produce lesions or ‘tears’ in a person’s heel when consumed. Explaining why she continues to grow varieties that are less delicious and are thought to cause physical injury, Liliana alternately told me that her grandfather had taught her about ‘all the seeds,’ that cultivating as many species and varieties as possible helped ‘defend’ herself from hunger, and that she ‘enjoyed’ the ‘beautiful’ diversity growing in her garden plots. Thus, it appears to me that Liliana’s overall ‘enjoyment’ and appreciation of biodiversity forms an integral component of her gardening ‘knowing’ that is interwoven with her grandfather’s teachings and her nutritional concerns.

Although Liliana typically increases the biodiversity of her gardens through exchange (as the last section of this chapter explores [pp. 200-202]), sometimes she ‘discovers’ new varieties in her family’s own saved seed collections or garden plots. During one of our sessions sorting through her saved fava bean seeds in July 2012, Liliana ‘found’ one seed of ‘Jaguar Fava Bean’ (Pànkryt Kroro-re). Unaware that she currently had this variety, Liliana explained that a seed which ‘appeared’ like this had ‘turned into itself’ (*virou por si mesmo*), likening it to some Canela infants who are born with slightly different skin colours than their parents. Similarly, in February 2013 a ‘new’ variety of common bean ‘appeared’ in Liliana and her daughter Nilda’s gardens. Both women expressed surprise and wonder

at how this had occurred, and again Liliana compared the new variety to an infant with ‘changed’ skin colour from that of its parents. In this way, she stated, ‘plants are the same as people.’ Excited over the discovery, Liliana immediately named the new variety ‘Hipêj Egg Bean’ (Pàt Juhtõi-re Hipêj Cre) because it has markings similar to ‘Hipêj Egg Fava Bean’ (Pànkryt Hipêj Cre) and stored it in a safe place for the next planting season. When I asked her if this was a common occurrence, Liliana stated that she has ‘discovered’ other new varieties in the past as well. In 2006, she ‘found’ ‘Small Bright Red Bean’ (Pàt Juhtõi-re Intep-re) in her garden, which is a brilliant red colour similar to that of ‘*Urucum* Fava Bean’ (Pànkryt Měcupry-re; see Appendix A [p. 356]). Both times, Liliana expressed ‘shock’ over the new beans, and as an Evangelical Christian, she attributed the change to ‘God.’³⁴

It is interesting to note that the extent of Liliana and her family’s purposeful intention to create a ‘new’ variety is unclear. While she emphasized her amazement at how the new beans ‘appeared’ in her gardens, Liliana also told me how much she enjoys the ‘changing’ (*mudança*) of new varieties. Moreover, although she and her family generally plant varieties in separate holes, Liliana sometimes chooses to mix different varieties together in small backyard plots where there is not enough space for long rows, or if she is in a hurry to finish planting. Mixing varieties can lead to a ‘new’ phenotypically distinct variety (it may not be genetically distinct), and it is possible that Liliana has a general understanding of this process. Her comments linking new seeds to new born children indicate that Liliana may see herself as responsible for the appearance of new varieties, but only insofar as a mother is accountable for the skin colour of her child (that is, not

³⁴ Liliana is a follower of the Assembly of God church established in February 2012 and led by her son-in-law Vítor as ‘pastor.’ See Chapter 3 (pp. 84-85, 87) for a brief overview of Christian influences in Escalvado village.

particularly active in the decision-making process). Regardless of the purposefulness of their creation, Liliana and her family highly value and appreciate the 'new' varieties and quickly incorporate them into their dynamic corpus of gardening knowledge or 'knowing.'

For Liliana, spending time with and caring for growing crops of all species and varieties is a crucial part of maintaining biodiversity. In order to care for her growing plants, Liliana pays close attention to their needs through frequent visits during which she weeds, tends, and sometimes ritually sings to them (as Chapter 6 describes [pp. 231-232]). Throughout the forest garden season, Liliana and her family stay in nearby temporary shelters for weeks at a time to clear the area, perform the *queimada* burning and *coivara* clearing, and plant the crops. While the plants are growing, Liliana and her daughters frequently visit the forest plots together so that they can tend to and interact with the crops. She occasionally visits the garden by herself, which is unusual for a female gardener. Liliana spends her time surveying all the crops and attending to individual species and varieties that may need her care.

Fava bean, for example, requires frequent attention while growing, and Liliana describes how she 'helps' the fava vines grow by hanging them on maize stalks or manioc sticks. Knowing that fava bean and maize 'work together,' Liliana often plants their seeds in the same hole so it is easier for her to hang and monitor the growing fava vines. She also assists the four varieties of common bean 'on the vine' (*de corda* in Portuguese) by hanging them, and determines whether her yam varieties would benefit from hanging on a case-by-case basis. Aware that the long vines of some species and varieties interfere with other crops, Liliana plants and tends to sweet potato, peanut, and the nine common bean varieties that are not 'on the vine' in separate mini-gardens at the edge of the forest

plot (see Diagram 3 [p. 142]). She takes extra care when planting peanut and avoids weeding it while growing, since she says this can lead to ant attacks that destroy the crop. Additionally, during her visits Liliana determines whether animals have entered the garden space. She can tell when an armadillo has eaten some of her sweet potato varieties, for example, and knows when the Krẽ-re birds will swarm her garden, usually in May, to feast on most of her rice varieties. To repel snakes from entering, Liliana plants *fava da cobra*, a native plant resembling fava bean with a pungent smell that the snakes are said to 'dislike.'

Liliana enjoys visiting the garden to attentively care for and help her growing crops, and she considers both forest and riverbank gardens to be spaces where happiness and strength abound. She says the garden 'gives her strength' and 'defends' her and her family from hunger as well as from sadness, weakness, and 'unhealthy' malaise. Liliana links garden work or the lack thereof to the Canela concepts of *ih̀t̀ỳi*, which translates as 'strength,' 'happiness,' and 'health,' and its opposite *ih̀p̀êc*, or 'weakness,' 'sadness,' and 'illness.' As she explained during one of our conversations in October 2012:

Liliana: *Ih̀t̀ỳi* is strength, hardness...and weakness is *ih̀p̀êc*. The correct word – *ih̀p̀êc-re* – very weak, weakness.

Me: Does *ih̀t̀ỳi* mean being healthy too?

L: Yes, it is health.

Me: And when a person is *ih̀p̀êc*, is he or she ill?

L: [He or she] has a problem, an illness. There are some people who do not undergo *resguardo* [food and sex prohibitions], and they too are *ih̀p̀êc xà* – sad, because they did not undergo the strict diet. [...] This person...only creates weakness – he/she does not like to walk, does not like to become strong.

Me: Do people undergo *resguardo* to become strong?

L: Yes, to become strong and happy.

Me: Is the person who is strong also *impej*? Is there a connection between *ih̀t̀ỳi* and *impej*?

L: Yes, *ih̀t̀ỳi* is linked to the most beautiful word, *impej*.

Me: And *ihpêc* is linked to *ihkên*?

L: Yes, they are not well – weak and sad. *Ihtyi* is strong, happy – not feeling sadness. [...] Working in the garden and preparing food before the weakness arrives; preparing everything beforehand – in this way the weakness does not come. However, *mě ihpêc xà* creates weakness all the time...people become weak, unmoving, and quiet inside the house. These people do not enjoy speaking, nor playing; they only foster anger and speak badly about others. [...] Those who feel strong have the courage to do everything to survive, and suffering does not stay near them. They do the same as a chicken who takes care of her family – clearing away rubbish, getting food for the children – the father and mother of the family do the same things as the chicken who cares for her chicks, and these bad things do not enter! In my understanding, this is very important.

As the above conversation highlights, for Liliana working in the garden makes her feel happy, healthy and strong (*ihyti*), and she considers spending long hours or days in the garden to be a ‘courageous’ way of preventing suffering from affecting herself and her family. Becoming strong and happy through garden work is likened to undergoing strict food and sex restrictions that also help Canela men and women become ‘strong,’ ‘happy,’ ‘healthy,’ and overall ‘beautiful’ or ‘well’ (*impej*; see Chapters 6 and 7 [pp. 236-237, 279]). Conversely, she explains that someone who remains ‘unmoving’ inside his or her ‘mother’s house’ every day and never visits the gardens will feel sad and weak (*ihpêc*), and could possibly develop an illness or some other ‘problem’ over time. Thus, for Liliana the garden is a place of respite ‘where there is no sadness; everyone is happy [and] strong all the time, doing all the work.’ Over time, these feelings of happiness in the garden space can become a more sustained experience of overall wellbeing, which appears to be connected to the concept of *impej*, meaning that which is ‘beautiful,’ ‘true’ or ‘original,’ ‘good’ and perhaps also ‘well’ in a holistic sense (Chapter 8 [pp. 319-320] explores this concept in more detail).

Liliana considers herself skilled at and enthusiastic about gardening, and similar to a ‘chicken who cares for her chicks,’ she works hard in garden and village spaces to feed and

care for her human family. This caring, attentive garden work is also meant to benefit her plant ‘children,’ as Chapter 6 (pp. 228-236) explores in more detail. Liliana describes how she is the ‘mother’ of her growing crops, and emphasizes the importance of caring for them through frequent visits to the garden:

Seeing as I have gardens, I awake at four o’clock in the morning to prepare things, to prepare breakfast to give me strength. We prepare the food, and by four or five in the morning, we are going to the garden. Since I am far away from the [forest] garden this year, I cannot become “softened” with weakness! I have to have the courage to wake up [early]. [...] Seeing as I have gardens, I remember them [and] enjoy them, same as having a baby in my arms. I take good care of my gardens; I protect them, same as my human family.

Thus, it appears that for Liliana, working in the garden promotes strength, health, happiness, and overall wellbeing for herself and her human and plant ‘family,’ including diverse species and varieties, and in this way, she becomes an *impej* gardener.

In Canela matrilineal families, one’s mother and mother’s sister (who are both called ‘mother’), along with one’s maternal grandmother, typically pass on gardening techniques and practices to the younger generation of women, and the family in which Liliana grew up is no exception.³⁵ Together, Liliana and her two sisters Camila and Marlena learned much of their gardening knowledge from their maternal family, including their grandparents, their ‘mother’ (mother’s sister) Belém, and her husband Jacinto. It is not surprising, then, that Camila is also known as an expert gardener within the community. Camila lives next door to Liliana in her own matrilineal family house with her husband, Wilmar, Belém, and her three adult daughters, sons-in-law, and grandchildren. Her

³⁵ As Chapter 4 (p. 120 footnote 20) mentions, one’s mother and mother’s sister are both called ‘mother,’ *inxê* in the 1st person or as a form of address, and *nàà* in the 2nd person. One’s mother’s mother (maternal grandmother) is called *tùy*, the same term as one’s father’s sister (‘aunt’) and one’s father’s mother (paternal grandmother). Additionally, one’s mother’s sister’s children are known as ‘siblings’ (*khyê*) (cf. Crocker 1990: 234). This closeness of sisters’ families sheds light on the centrality of this relationship to the development and growth of matrilineal family units.

situation is unique in that both her husband and one of her sons-in-law are often traveling outside of the Canela territory – Wilmar works for the FUNAI office in Barra do Corda, and her son-in-law Adriano is a college-educated political leader who ran for vice-mayor in the municipal elections in October 2012 (see Chapter 3 [p. 86]).

Thus, while the men of the household demarcate plots and assist with gardening when possible, the overall organization and management of the garden rests on Camila's shoulders. As with Liliana, other women in the village admire Camila's diverse collection of crop species and varieties, particularly of fava beans and rice varieties. Neighbouring women often gather in the communal space between Liliana and Camila's houses to chat and sort through their saved fava beans and grains of rice. They comment on the beauty or uniqueness of a particular variety, thereby appreciating the expertise of both women. Camila is especially known for her rice collection. Whenever I asked to photograph different rice varieties, my research assistants usually led me straight to Camila's house where she had many bushels of rice drying from the house rafters.

Figure 4: Camila weaving a basket in the communal space between her own house and Liliana's house, May 2012



Camila's garden plots are also incredibly biodiverse, with a wide array of species and varieties. Her preferred location for her family's forest plots is the Cabiceiro do Ponto sector, close to those of Liliana and her family. Camila enjoys growing varieties of yam, squash, watermelon, bitter and sweet manioc, fava bean, common bean, rice, maize, and peanut. She likes to plant common bean varieties in her Hipêj second-year 'old' gardens to give them extra space to grow, and she is particularly fond of growing peanuts, which she plants in a separate mini-garden near the forest plot. Showing her enthusiasm for gardening, Camila says she plants crops 'anywhere' that she desires.

Her backyard certainly attests to this statement, as it includes a large garden of common species and varieties as well as mature fruit trees and saplings of native and recently introduced species. In addition to the more common mango, papaya, and banana trees, Camila has a large native Cerrado Capôcre tree (*tuturubá*; *Pouteria macrophylla*) and Pyyrija (*cajá*; *Spondias mombin* L.) saplings (see Appendix B [pp. 373-376]). The backyard also includes a *jenipapo* tree (Pôl-ti; *Genipa americana*), whose fruits are used to make a semi-permanent ritual black body paint. Camila seeks out species that come from outside the Canela territory, and in 2012 her backyard was full of jackfruit (Potukà; *Artocarpus heterophyllus*), guava (Cwaj-jap; *Psidium guajava* L.), and tamarind (Pôj Kõc-jõjre Cahàc; *Tamarindus indica* L.) saplings, as well as tomato plants (see Appendix A [p. 372]). When one of her fruit trees is mature, neighbouring children flock to her backyard to collect the fruits. In August 2012, for example, children from nearby houses climbed up her *pitomba* (Hyjorore; *Talisia esculenta*) tree and joyfully gorged themselves on its newly ripe fruits, in what appeared to be a spectacular show of appreciation for Camila's gardening efforts.

Similar to Liliana, Camila conceives of her growing crops as her 'children,' and makes sure to take care of them as she does her human children and grandchildren. She describes her caretaking efforts in this way:

I take care of [my crops] this way, same as my daughters! Same as at home, I take care of my crops this way. I have to clean and clear [the garden]. If I do not take care of them, they are no good. [...] I do not leave them. I have to pay attention, so that the crops stay [in the garden] for us. I have to keep the garden clean.

To show that she is attentive to the plants' needs, Camila remains 'quiet' while planting and tending to them. She does not ritually sing to her crops, but rather spends time quietly cleaning and weeding the garden space to ensure that the crops are 'happy' and will not relocate to a better-managed garden (Chapter 7 [p. 286] describes this phenomenon in detail). While acknowledging that it is hard work, Camila takes pleasure in gardening activities and typically stays at her forest plot every other week. Sometimes her daughters accompany her, but often Camila visits the plot by herself and expresses her happiness at spending time in the garden space. She is proud of her gardening prowess and hard work, and especially of the fact that her typically abundant harvests 'do not let hunger arrive' at her doorstep.

While the garden space generally brings happiness to expert gardeners such as Camila, there are times when sadness prevents one from visiting and working in the gardens. After Jacinto passed away during the main planting season in November-December 2011, Camila was 'too sad' over her classificatory father's death to plant many crops in her forest plot. When I arrived to Escalvado in April 2012, Camila was still spending many days at home and infrequently visited her gardens. Liliana explained that the sadness caused by their father's death prevented Camila from working and led her to 'mope about' the

house, a sign of her feeling weak and sad (*ihpêc*).³⁶ Liliana was also saddened by his loss and planted slightly less varieties than usual, although she avoided the malaise that affected Camila by continuing to visit and work in the ‘happy’ garden space. In this way, the garden appears to create and reinforce feelings of strength and happiness for Canela gardeners. Conversely, avoiding the garden space when feeling sad or weak only reinforces those feelings, making it harder for someone like Camila to visit the garden and recover feelings of happiness (*ihțyi*). Fortunately, when the 2012 planting season began, Camila had recovered from her *ihpêc* state and happily cared for her crops once again.

Fernando, another expert gardener, also expresses his happiness and satisfaction while working in his biodiverse garden plots. He views the gardens as places that give sustenance and provide for a ‘happy life.’ While Canela women tend to be the primary caretakers of growing crops, men in some families play a more engaged role throughout the annual forest and riverbank gardening cycles. Fernando is actively involved in all aspects of gardening, including demarcation, planting, tending, and harvesting. He lives in his wife Geralda’s matrilineal family home with their adult daughters, sons-in-law, and grandchildren. The house is located in the second circle of houses on the western side of the village (see Diagram 1 [p. 117]). Geralda’s family maintains forest plots in the Cõhnã-kên (Passagem de Pedra) sector in the northwest quadrant of the Canela territory (see Map 5 [p. 8]), and Fernando therefore typically demarcates new plots in this area. Walking or bicycling with his sons-in-law, Fernando surveys the soil quality to decide the exact location of a new forest garden.

³⁶ Becoming *ihpêc* is often linked to times of mourning, and can be compared to the Panará state of being *suangka* as compared with its opposite, *suakiin* (similar to the Canela term *ihțyi*) (cf. Ewart 2013: 179). I explore how the Canela concepts compare with the Panará ones in Chapter 8 (pp. 316-319).

As a skilled gardener and former hunter, Fernando has expert knowledge of the eco-regions, soil types, and native flora and fauna in the Canela territory. He is especially aware of how wild animals interact with growing crops in garden spaces. In the second-year 'old' garden areas, for example, Fernando tells me that wild peccaries and *paca* and agouti rodents feed off the bitter manioc left growing there. He also informs me (and his grandchildren) that after a *queimada* burning in a new garden plot, animals come to eat the buds of newly sprouted Ahtu and Woporore native *chapada* grasses. For Fernando, having old and new gardens feed wild animals in this way is essential to the 'preservation' of the animals and of 'nature' in general. He takes particular pleasure in knowing that the gardens are providing the animals with 'new' food, since he says the animals 'enjoy and need to eat new things' as much as humans do. Thus, for Fernando the garden plots and their produce sustain and give enjoyment to animals as well as to humans.

As with Liliana and Camila, Fernando's emphasis on the enjoyment and necessity of 'new things' translates into an appreciation for and maintenance of crop species and varietal diversity. He and his wife cultivate a wide array of species and varieties in their forest plot and in their large riverbank plot that is located near the main women's bathing spot. In both plots, the couple grows bitter and sweet manioc, squash, sweet potato, watermelon, yam, fava bean, common bean, rice, maize, and peanut. Fernando experiments with species that are not commonly grown in garden plots, including native Cerrado Crowa (*buriti*; *Mauritia flexuosa* Mart.), Capêr (*bacaba*; *Oenocarpus bacaba* Mart.), and Têrêre (*juçara/açaí*; *Euterpe*) trees and Ronre, or *tucum da chapada* (*Bactris*) that is made into twine for *miçanga* beaded necklaces and *krãn-re* ceremonial belts, among other ritual items (see Appendix B [pp. 373-376]). In his backyard garden, Fernando also grows varieties of mango, papaya, lime, and orange. His enthusiasm for gardening and

biodiversity maintenance even extends beyond the confines of traditional garden spaces to include a grove of cashew tree varieties that he manages near his house, and to a communal grove of Crowa and Capêr trees behind the eastern side of the village, a project that he initiated.

Figure 5: Fernando in the Crowa and Capêr tree grove, April 2012



Fernando and Geralda also maintain crop varieties that few other families cultivate, including 'Yam That Multiplies' (Krêrô Teamjijapê/Tum Pram) and 'Small Basket Yam' (Krêrô Kaj-re), 'Large Mixed-Colour Maize' (Pôhy Kror-ti) and 'Hairy Tail Maize' (Pôhy Jîre), and 'Small Jaguar Bean' (Pât Juhtôï-re Kroro-re). Fernando prefers particular varieties for their taste, physical appearance, and/or for their usefulness in the garden space. He appreciates 'Large Mixed-Colour Maize,' for example, for its beautiful kernels that are mixed white, brown, and black, while 'Small Basket Yam' has an interesting shape similar to a woven basket (*kaj*). As with Liliana and her family, Fernando also enjoys growing

‘Cobra Bitter Manioc’ because of the beautiful and delicious yellow *farinha* it produces, and because he likes to hang growing fava bean vines from the sturdy sticks of this manioc varietal. Fernando seeks out and maintains new or rare varietals because they are different and will add to his overall crop collection, regardless of their taste or beauty. For example, he sought out and acquired ‘Hairy Tail Maize’ from the government agency EMBRAPA³⁷ and he continues to cultivate it despite the fact that it is not especially tasty. Similar to Liliana, Fernando appears to value a wide spectrum of biodiversity in his garden plots more than a particular variety’s individual traits.

Additionally, over the years, Fernando has become actively involved with outsiders, including governmental functionaries, non-governmental development workers, missionaries, and anthropologists, and in one of his many leadership roles, he advocates for biodiversity maintenance in Canela gardens. Fernando expressed to me many times his concern over youths who were ‘no longer remembering’ how to garden and the subsequent biodiversity loss related to this ‘forgotten’ knowledge. To address his concerns for the community, Fernando worked with the non-governmental organization CTI (*Centro de Trabalhadores Indigenistas*, Centre for Indigenist Researchers) on a project in the 1990s to grow jackfruit and *cupuaçu* (*Theobroma grandiflorum*) trees, the fruits of which were intended to be processed into juice and commercialized. While the commercial aspect of the project fell through, Fernando continues to maintain the fruit trees that CTI gave the Canela community.³⁸

³⁷ EMBRAPA’s extensive seed bank has provided seeds to and sponsored seed exchanges for a number of indigenous communities, including the Krahô (see Chapter 1 [pp. 30-31]; and see Ávila [2004] for a description of the Krahô community’s recent experiences acquiring seeds from the government agency).

³⁸ Siqueira Jr. (2007: 104-109) provides an account of the difficulties implementing the ‘Cerrado Fruits Project’ for the Wyty-Catë pan-Timbira association in the 1990s. The Canela appear to have been marginally included in this project, less so than their Krĩkatí and Gavião-Pykobjê Timbira neighbours.

More recently, in 2012 Fernando met with representatives of FUNAI and EMBRAPA at their offices in Brasília concerning the recovery of ‘lost’ crop varieties, and received seeds of ‘Large Grey Maize’ (Põhy Jiproh-ti) and *kupá* (*Cissus* L.) vine cuttings that he brought back to the community. Canela gardeners have all but abandoned growing *kupá*, even though Nimuendajú (1946: 58) recorded it as an ‘aboriginally known’ species. Fernando also supported and sent Canela representatives to a government-sponsored seed exchange among Jê-speaking indigenous communities that took place in Pará state in September 2012, wherein the representatives brought back four ‘new’ maize varieties (including ‘Large Grey Maize’ as well; see Appendix A [p. 349]). Thus, through these various engagements with outsiders, Fernando has been able to better maintain and even increase the biodiversity of his own and others’ garden plots. Other gardeners therefore know and respect Fernando as an expert gardener who can successfully interact with whites (*cupên*) to acquire ‘new’ crops that are subsequently incorporated into Canela (*mẽhĩn*) gardens.

According to Fernando, a biodiverse and abundant garden is essential for a Canela person, as it ‘quenches’ the desires in one’s life. In his view, garden work ‘fortifies’ people by providing food and by promoting overall happiness and wellbeing. Thus, for Fernando, maintaining and acquiring diverse crop species and varieties is ‘necessary for life.’ As he explains:

The gardens are important for survival! Because the gardens sustain us...[they] satisfy life [and] give happiness and contentment to life. Without gardens, it is like a person without eyes, without hands, and without feet. A person without eyes does not see anything, without hands does not do anything, and without feet does not walk, and [therefore] does nothing. That is why we should be hard workers...for us to produce, feed ourselves, and live! Without crops, one becomes weak and near death. [...] However, rice, *farinha*, squash, bean, sweet potato fortify. The garden is important for these things.

By comparing a Canela person without a garden to someone without eyes, hands, or feet, Fernando appears to be underscoring the embodied aspects of physical garden work, as well as of consuming crops that ‘fortify’ human bodies. In this way, the metaphor sheds light on the importance of gardens and the expert knowledge that maintains them to embodied survival and wellbeing for individuals, families, and the community as a whole. Other gardeners also associate garden work and the garden space itself with happiness and wellbeing. In Wander’s quote in the beginning of this chapter, he discusses how the garden, the ‘mother’ of all Canela people, helps him to ‘survive well’ and is his ‘defence’ against hunger and misery. For Renato, gardens are spaces where people become ‘strong’ and ‘happy’ through working, conversing, making love, and staying healthy and avoiding illness. In his understanding:

Nowadays everyone is preoccupied with creating a garden. Why? To not suffer from hunger. Because having rice, bean, fava bean, maize, peanut – then one can survive. Through eating [crops], this abundance is blood. Because [when one] eats well, one becomes strong and very big and beautiful, very beautiful [*impej*] indeed! That is why the garden is important. For survival. When people eat well, they become very strong!

Renato’s statement that abundant garden harvests are ‘blood’ that make Canela people ‘strong’ and ‘beautiful’ similarly emphasizes the embodied significance of maintaining garden plots, as they satisfy people’s appetites and help men and women become *impej*, what appears to refer to here as ‘well’ in a holistic sense. Through these discussions, then, it seems that expert and non-expert gardeners link the concept of being or becoming *impej* with garden spaces and the human work involved in such spaces.

If gardening activities within the garden space promote a process of becoming ‘well’ or *impej* as the comments above suggest, then I would argue that experts such as Liliana, Camila, and Fernando are truly *impej* gardeners. The case studies of these gardeners

highlight how and why the broader Canela community identifies certain women and men as especially skilled gardeners. It appears that the large, abundant, and biodiverse garden plots of Liliana, Camila, and Fernando set them apart as experts. Their knowledge and maintenance of many different species and varieties is particularly important in establishing their gardening expertise, as is their desire to seek out 'new' varieties through exchange with indigenous and white outsiders and, in Liliana's case, through 'discovery' in her garden plots.

This gardening expertise appears to be grounded in long-term, affectionate engagements with growing crops in garden spaces. All three of these experts frequently visit their various garden plots and develop intimate, caring relationships with their crops through these visits. Liliana and Camila more obviously identify themselves as the caretaking 'mothers' of their plant 'children,' and interpret weeding, tending, and hanging growing vines as ways that they are taking care of and 'helping' these children. Fernando also identifies crops as being 'similar to children' in that they require constant attention and care so they do not feel 'sad.' He describes tending activities such as hanging fava vines as something the fava 'enjoys.' Similar to Liliana's description of hanging fava, Fernando says that he likes to 'help' the fava 'live well' and be happy. This care and affection for growing crops is not limited to expert gardeners, and the next section explores the ways in which learning how to garden can be thought of as an 'education of affection' towards multiple crop species and varieties. Expert gardeners such as Liliana, Camila, and Fernando, however, appear to have particularly honed their skills of intimate engagement with growing plants.

Ecological learning and knowing

Learning how to become a Canela gardener is an embodied, multi-sensory process that includes verbal and non-verbal training as well as an element of creativity and improvisation. One of the primary ways that young Canela children first learn about their environment and gardening is through mythic storytelling. From a very early age, young children listen to their elders' stories about the origin of horticulture and the ancestors' gardening techniques. In the origin of horticulture mythic story, as described in Chapter 3 (pp. 92-95), children learn how Star-Woman showed the ancestors many different species and varieties that were already growing on the earth and introduced horticultural and processing techniques. In this sense, Star-Woman appears to be the 'original' gardening expert from whom the ancestors learned many of their gardening practices and their appreciation for maintaining multiple species and varieties.

The myth also highlights the importance of sensory perception in learning how to garden, through Star-Woman's 'showing' the ancestors to see, taste, and touch the crops while planting, tending, harvesting, and processing them (pp. 92-99 in Chapter 3 explore Star-Woman's embodied teachings in detail). Elders frequently describe the ancestors' expert gardening knowledge and practices in interwoven historical-mythical stories, including their preferred crop species and varieties and planting techniques. Fernando and the gifted storyteller Leandro say that the ancestors preferred cultivating sweet potato, sweet manioc, peanut, and maize, especially the 'Large White Maize' (Põhy Jaka-ti) varietal and the 'Hugging Vine Manioc' (Waíputre) half-sweet half-bitter varietal. They maintain that the custom of planting Pym (*urucum*) and Põl-ti (*jenipapo*) trees separately from other native tree species originated from the ancestors, as did the preference of planting

gardens in the Ivëntüm ‘live forest’ and Iromtüm ‘old forest’ eco-regions. Leandro vividly describes these mythic-historical accounts to his young grandchildren and great-grandchildren, who listen to him rapt with attention. Recounting the story of Puret-re, who discovered the Fish Festival, for example, Leandro describes how people cultivated crops long ago (see Appendix D [pp. 433-437] for the full myth):

The Indians [*měhĩn*] had finished planting seeds in their gardens. Everyone had planted the seeds of peanut, sweet manioc, sweet potato, and fava bean [Pànkryt]. In that time, they did not yet know about or have rice or common bean [*fejão*]; they only knew about fava bean, sweet manioc, peanut – only these types of vegetables. Maize as well; in this time, they always cultivated white maize [Põhy Jaka-ti].³⁹ The chief of the Indians’ community asked every father of each family if they had planted all their seeds in their gardens, [and] if everyone was ready. Everyone said that they were ready; there was nothing left that had not yet been planted.

In this story, Leandro emphasizes the importance of particular crops to the ancestors and the social organization of gardening, wherein the chief and male heads of the matrilineal households coordinate planting schedules together (a coordination that occasionally occurs today – see Chapter 4 [p. 118]). Through storytelling, then, it appears that valuable gardening knowledge originating from the ancestors (and the supernatural entities who taught them, such as Star-Woman) is passed down to the youngest Canela generation.

In addition to learning about mythic-historical gardening through storytelling, modern-day Canela children learn how to engage with forest and riverbank garden plots through frequent visits to these spaces, where they watch their elder matrilineal family members work, assist them when possible, and partake in their own creativity and experimentation.

³⁹ While Canela gardeners categorize certain crop species and varieties as ‘original’ to the Canela or ‘introduced’ by outsiders, usually whites, these categories are shifting and appear to be context-dependent, as Chapter 6 explores (pp. 218-219). Overall, all ‘original’ crop species and varieties are associated with Star-Woman, although other mythical figures are also thought to have ‘discovered’ particular species, such as Giant Armadillo ‘discovering’ peanut (see Chapter 3 [pp. 100-101]).

From the time they are around six months old, children frequently visit forest and riverbank gardens with their parents. As their parents are tending to their crops, children become familiar with the garden through playful games that sometimes mirror the adults' activities. During one of my visits to Fernando's riverbank plot in July 2012, for example, I came across two of his granddaughters who were playing in a tiny 'shelter' they had constructed out of *buriti* palm fronds in the middle of the plot. Upon being discovered, the girls giggled and continued to play in the garden space, occasionally watching their grandmother and mother who were harvesting manioc nearby. Fernando exclaimed to me, 'look, they are learning!' He was referring to the shelter the girls had built, which resembled a miniature version of the temporary houses that families construct near forest garden plots, and to the playtime itself, which he considered educational. Instead of reprimanding the girls for not working in the garden, Fernando and the other adults encouraged the children to continue playing so that they could 'learn' in this way.

Figure 6: girls playing and 'learning' in their miniature garden shelter, July 2012



During my visits to Liliana's gardens, she also let her young grandchildren play, and they would often run around while she surveyed her crops with me. Her grandson Diogo was clearly interested in gardening, and he occasionally interrupted his own playtime to show me something of interest, such as a particularly beautiful cashew varietal. These examples highlight the creative and individual nature of gardening knowledge acquisition, as children decide what games to play and how they want to engage with and understand the garden space.

While playtime certainly appears to be an important aspect of young children's experiences in garden plots, they also directly participate in the group activities of clearing the garden space and planting and harvesting crops. As Chapter 4 (pp. 137-139) describes in detail, matrilocal families typically visit forest plots together to clear the garden of plant debris both before and after the burning (*queimada*) of plant matter. Girls and boys help their older male and female relatives with this process, learning which grasses and bushes they should chop down with their machetes. Children also help their older relatives with the planting of crops, and through this hands-on experience learn their families' preferred planting techniques and garden layouts. Fernando recounts how he learned specific planting techniques in riverbank and forest garden plots from his elders:

I learned from my father and my father-in-law to plant everything in the "fresh area" [riverbank] during the month of August: sweet manioc, rice, sugarcane, watermelon, squash – and then we can eat [everything] early. Then we create a garden in the centre [forest area], and we need for nothing, for we have everything. In my learning, the hard worker always said: "[plant] when you see the seven stars,⁴⁰ when they are rising and rising, until you do not plant anymore. With the new moon, do not plant anymore until it is already rising, and then when it is nearly a full moon, stop planting." The gardener told us this.

⁴⁰ Possibly referring to the Big Dipper in the Ursa Major constellation.

Although my other research assistants did not appear to incorporate the movements of celestial objects into their planting techniques, Fernando's quote emphasizes the importance of learning specific practices from one's elders – his own father from his natal family, and his father-in-law as part of his wife's matrilineal household. The research assistants all agreed, however, that Canela families typically divide planting tasks along gendered lines, with men digging the holes using a branch from the *Critin-re* (*Mouriri*) native *chapada* tree and women planting the seeds or cuttings. It is interesting to note that Nimuendajú (1946: 61-62) describes the use of a digging stick in the 1930s as well (although seemingly made of a different type of wood), indicating the longevity of this planting technique. Thus, male relatives show younger boys how to utilize the digging stick, while women teach girls which seeds and cuttings to plant. In conversations with Liliana and her daughters, they informed me that younger girls in their family learn to separate distinct varieties into different holes, and to plant one cutting per hole and three or four seeds (except for rice, which requires six grains per hole). In this way, girls and women have an impact on and in some sense become responsible for maintaining varietal diversity in the garden. How this responsibility manifests itself through seed saving and exchange is the subject of the next section.

During harvest season, children learn how to collect larger harvests of crops such as rice and maize with their entire matrilineal family. Boys learn from men how to carry large sacks of rice on bicycles from distant forest plots, and girls learn from their elder female relatives how to walk while carrying heavy baskets full of produce from their foreheads (women typically do not ride bicycles). While adult couples or individuals, especially women, usually collect smaller harvests of fava bean, common bean, squash, yam, and bitter and sweet manioc by themselves, children sometimes accompany their parents on

these trips. My sister Aline, for example, often took some of her eight children with her to harvest manioc throughout my fieldwork. Her eldest daughter, Aliciane, developed a particular appreciation for manioc cultivation, accompanying her mother to harvest the crops and helping with the toasting of *farinha* on the oven behind the house. When the women in the family prepared large *beribu* manioc and meat pies for Patrícia's marriage ritual described in Chapter 4 (pp. 128-131), Aliciane made her own small pie to experiment with her cooking techniques. As a pre-pubescent girl, Aliciane was learning important skills – tending, harvesting, and preparing manioc – to become a Canela woman and someday an elder with her own matrilineal household.

Thus, as the above example indicates, while there are similarities in how girls and boys learn to garden, specific techniques and practices fall along gendered lines. Since the elder man of the matrilineal family and his sons-in-law are responsible for the demarcation of new garden plots, a boy initially learns how to measure and delineate a garden plot from his older male relatives in his natal home, and later on develops his techniques through working with his father-in-law and male relatives in his wife's matrilineal family. By watching his maternal grandfather, father, and uncles (the husbands of his mother's sisters) cut away the brush and by participating himself, a Canela boy learns the embodied skills necessary to wield a machete and a steel axe to cut down hardier forest trees. The *queimada* burning is another gardening task that boys must learn from their male elders. Once again, the eldest male in the family typically advises the younger men and boys when and how to perform the burning, as Fernando describes:

When the *queimada* is arriving, you tell your son-in-law and grandson, you all meet up, and you take them there [to the garden plot]. You tell them, "we are going to clean the area around the garden, and afterward we will burn the garden. If we burn it as it is now, the fire will keep burning into the forest and that will be harmful. That is why we are

making a barrier so the fire does not pass through.” We do this work [of cleaning], and another day we set the fire, and the fire will not pass through [the barrier]. If people do not do this and simply set fire to the garden, the fire will pass through the garden and go far, far away, and it will burn of its own accord.

With these verbal instructions, the boys in Fernando’s family learn how to prevent the fire from spreading beyond the boundaries of their garden plot by initially clearing away the large trees and brush from the perimeter. Boys must also learn how to determine the best time for the burn, which Fernando and Wander informed me should take place at the height of the dry season in early-to-mid August for the forest plot, and slightly earlier in late July for the riverbank plot. The timing of the burn is crucial so that, according to Fernando, the land and plant debris burn ‘well’ and do not remain ‘raw’ or untouched by fire.

In order to determine whether the fire is successfully burning, Fernando teaches his younger male relatives to experience it in multi-sensory ways – by seeing the smoke from afar, and by ‘smelling the burn – one stays nearby to see if the smell is “good” [and] will give sustenance to the crops.’ Smelling the scent of burning is a particularly effective way of learning how to gauge the fire and its effects, and Fernando says the scent ‘gives happiness’ to gardeners. Boys learn from their male elders that the fire ‘helps’ the soil and assists the crops to grow abundantly once they are planted. Thus, it appears that through verbal guidance and nonverbal ‘showing’ from their elders, as well as through individual multi-sensory experiences – especially sight and smell – Canela boys learn how to engage with and manage fire in their families’ garden plots.⁴¹ Once married, a young man brings these embodied skills with him to the gardens of his wife and her matrilineal family.

⁴¹ While numerous recent studies examine fire’s benefits to the soil in slash-and-burn cultivation (cf. Hecht 2003; Lehmann et al. eds. 2003; Hoffman 2000), the exact relationship between slash-and-burn gardeners and fire requires more research. Through future research, I would like to explore how Canela gardeners engage with fire in multi-sensory ways.

Women and girls, meanwhile, are typically responsible for visiting the garden plots and tending to the crops while they are growing. Nimuendajú (1946: 60) points out that these activities were ‘almost a wholly feminine job’ during his fieldwork and this remains the case today, with only a few older men such as Fernando tending to crops if they desire. Women are the primary caretakers of most growing crops, and as seen in Aline’s case above, they often bring their children with them to the garden plots. Frequently, entire female work parties consisting of an elder woman, her adult daughters, and her granddaughters visit the plots and occasionally spend nights there together. Learning how to care for growing crops involves verbal instructions, particularly those pertaining to the food and sex prohibitions associated with specific crop growing cycles described in Chapter 6 (pp. 239-243). During one of our sessions, Liliana explained how her sister Camila’s gardening expertise stemmed from paying attention to the advice of their grandparents:

She heard enough – the advice of Dirceu [classificatory grandfather], Jacinto [father], and Manuela Célia [grandmother]. Dirceu was a talker; he spoke so loud! We were all afraid and obeyed his words. [...] These things that he explained to us, she remembered well! I did not remember, but she did!

Although Liliana certainly does remember her grandparents’ verbal instructions (since she recounted their advice to me numerous times), her emphasis on Camila ‘hearing’ the advice is interesting, and perhaps underscores the sensory component of verbal teaching and learning. One of the most important instructions that Liliana and Camila now teach their daughters and granddaughters is how to care for vine crops by hanging the vines while they are growing. Verbal advice forms part of this learning process, especially the instruction to keep fava bean and maize next to each other since Liliana says they ‘work well together’ while growing. She also advises her granddaughters to visit the fava vines

daily to ensure that they remain hanging and do not drop on the ground, because fava does not bear fruit on the ground. In addition, through nonverbal 'showing' girls receive hands-on embodied experience hanging the vines of fava bean varieties, of the four common bean 'on the vine' varieties, and sometimes of the yam varieties (depending on space and personal preference). Girls learn how to drape the yam and common bean vines on nearby fruit trees or manioc sticks, and Liliana and Camila show the girls how to gently hang fava vines from manioc sticks, *buriti* tree saplings, or maize stalks. If the fava vines begin wrapping around the maize stalks or manioc sticks as they grow, the women express their satisfaction that the girls have correctly hung the vines to encourage this interdependent growth.

While squash and watermelon vines are typically not draped over other crops, Camila and Liliana show their younger female relatives how to relocate these vines to another area in the garden if they are interfering with other species' development. Tubers such as sweet potato, yam, and manioc do not need as frequent attention, yet women and girls still visit these crops to survey their growth and remove weeds nearby. Overall, girls learn that tending the garden involves frequent visits to tend to various crop species and varieties, and to remove weeds and other plant debris to keep the space clean and tidy. As Liliana often tells her grandchildren: 'I cannot leave the crops to become overgrown by the forest and become ugly...I have to clean; I have to walk [there] every day. Seeing as I have a garden, I cannot stay put.'

As part of these frequent visits to garden spaces, girls learn from their mothers and grandmothers that growing crops are similar to human children and must therefore be treated with affectionate nurturing and care. Liliana and Camila describe visiting and

tending to growing crops in terms of motherly affection, as highlighted in the previous section. While the following Chapter 6 (especially pp. 244-247) explores the relationship between gardener 'parents' and their crop 'children' throughout human and plant life cycles, here I focus on the care and affection for growing plants that appears to be involved in processes of learning how to garden.

For Liliana and Camila, their crops need their assistance and become 'happy' during their garden visits. Liliana explains her relationship with her crops in this way: 'as the female garden owner [*dona da roça*], I am the same as the mother of people...I have to protect my work; I cannot lose the work that I have. What I do in the gardens is my obligation – I have to care for [the crops] same as I care for my family.' She and her sister tell their daughters and granddaughters that tending a garden is similar to the duties of keeping house and childcare; thus, they liken weeding and cleaning the plot to sweeping and tidying their thatched-roof houses, both of which they consider necessary for the wellbeing of human and plant children. Through verbal instructions and non-verbal showing, Liliana and Camila teach their younger female relatives to engage affectionately with human children in the household and with growing crops in the garden space. According to Liliana, women and girls should show their affection for the growing crops through tending activities and ritual songs intended to please the growing plants (see Chapter 6 [pp. 231-232]). For Camila, silently 'respecting' the crops is the best way to care for them.

Whatever the preferred techniques, girls learn that visiting the garden and interacting with growing plants in affectionate ways promotes happiness and wellbeing for themselves and their crops. Thus, it is not surprising that women visit their garden plots

as frequently as possible, regardless of whether they have a specific task to perform, in order to maintain the affectionate relationships they have with their crops. For example, during the fieldwork my naming aunt (*tùy*) Ivanete frequently visited her family's forest garden plot despite its long distance and the fact that she often burned her feet in the hot sand during her walk there. Being in the garden near her crops, especially her favourite yam varieties including 'Anaconda Yam' (Krêrô Tekãjkãj/Rorti), however, appeared to be of such importance to her that she endured great physical discomfort to be there. The younger women in her family seemed to learn from her example, and neighbouring families would comment on how much time all the women spent in their adjacent forest plots. Through her hard work and attentive care, Ivanete's garden produced a bountiful and diverse yam harvest appreciated by the community, and she set an example for younger girls learning how to affectionately spend time with the crops growing in their families' gardens.

Through these examples of boys and girls learning how to garden, I suggest that three main components of Canela ecological learning and knowing emerge: firstly, a focus on the processual nature of this unfolding knowledge; secondly, the emphasis on developing skills through individual multi-sensory experiences and creativity; and thirdly, the importance of valuing certain affectionate multi-sensory engagements with growing crops. In the first place, gardening knowing emerges over time and in forest and riverbank garden spaces. It takes many seasons of watching their elders from an early age and later participating themselves for boys to learn how to set a fire so that it 'burns well' and girls to understand when vines need hanging or which weeds should be cleared. Thus, Lave's (2011: 154) approach to apprenticeship as a series of relational processes seems

particularly relevant here, especially her focus on the ‘historical processual coming to be’ of human beings and the knowledge or knowing they develop over time.

Reworking the traditional concept of ‘apprenticeship’ as someone who does not know learning from someone who does (cf. Goody 1989: 234), Lave (2011: 156) suggests that ‘we are all apprentices, engaged in learning to do what we are already doing.’ This understanding of apprenticeship sheds light on Canela processes of learning how to garden, which may appear obscure at first glance. While my research assistants discussed verbal instructions with me during more formal interviews, it became clear over time that girls and boys learn much of their gardening skills through nonverbal showing and their own experiences of doing ‘what they are already doing;’ that is, assisting their elders in diverse garden-related tasks that form part of everyday experiences.

This brings us to the second component of learning how to garden through individual experiences that are multi-sensory and embodied. Whether boys are looking for signs of smoke and smelling a newly set fire, or girls are hearing their grandmothers’ advice and handling the vines they hang, Canela children learn how to garden by engaging multiple sensory modalities. In this sense, becoming a skilled Canela gardener and learning how to engage with multiple crop species and varieties can perhaps be likened to Marchand’s (2014: 185) study of English woodworkers who engage with wood in sensory ways based on the material’s diverse grains, colours, odours, figures, and densities. Marchand (2014: 183) points out that the embodied skills of woodworking ‘grow in response to, and in relation with, the total working environment of tools, machinery, materials, fellow carpenters, and clients,’ and thus he argues that training ‘*grows* the body and mind of the learner’ (Marchand 2014: 185; author’s own emphasis). Similarly, it appears to me that

through embodied experiences that involve multiple senses, Canela boys and girls develop skills that 'grow' alongside their own 'working environments' in forest and riverbank spaces involving elder women and men, cultivated crops, and gardening tools such as digging sticks and woven baskets. 'Growing' these embodied skills for woodworkers is an ongoing process 'measured by one's ability to respond creatively, solve problems and incorporate new information' (Marchand 2014: 183). Canela gardeners also seem to emphasize creativity and improvisation as they 'grow' their gardening abilities, with young children encouraged to play and use their imagination in garden spaces, and expert gardeners valued for their experimentation and incorporation of 'new' crop species and varieties.

Through these embodied processes of 'growing' gardening skills, or what Ingold and Hallam (2014: 5) term 'growing-in-making' or 'making-in-growing,' Canela gardeners come to value and appreciate certain affectionate engagements with their crops. This third component of gardening knowing can be seen in the ways in which women gardeners describe their caring and empathetic relationships with growing crops and the frequency with which they visit them. While men such as Fernando typically consider themselves the 'fathers' of the crop 'children' growing in their garden plots (as Chapter 6 [p. 245] describes), apart from Fernando most men do not frequently visit or tend to growing crops as these activities are considered women's work. Women are much more involved in the caretaking of human children as well, with men typically playing peripheral roles unless they are teaching specific lessons to their sons such as building a house, burning a garden plot, hunting, or fishing.

Thus, I suggest that the affectionate engagements gardeners form and value with their growing crops play out in distinctly gendered ways. While women's gardening roles focus more obviously on nurturing and caretaking plant 'children,' it seems that men's roles emphasize creating and maintaining the space for the garden crops to live and flourish, similar to how men build the houses in which their families reside. Therefore, although the degree or exact nature of the affection may vary between genders, perhaps the embodied experiences of girls *and* boys coming to know garden spaces and their crop inhabitants can both be understood through what I term an 'education of affection.' This 'education of affection' expands on the theory of 'enskilment' of novices through verbal and nonverbal 'showing' that Ingold (2000) emphasizes in his writings to incorporate multi-sensory, embodied, and gendered experiences between gardeners and plants that are subsequently valued and made meaningful. In this sense, then, the 'education of affection' can perhaps be considered a primary way in which Canela boys and girls come to know gardens and cultivated crops, as well as the unfolding 'bio-sociocultural life-world' as a whole.

The gendered 'enskilment' of seed saving and exchange

Seed saving and exchange also forms part of the corpus of Canela ecological 'knowing.' Women are primarily responsible for saving their family's seeds and cuttings for the next season's harvest, and they often engage in exchanges within and outside the village. As gardeners appear to generally conceive of their growing crops as 'children,' saved seeds and cuttings are thought of as infants or new-borns (*'filhotes'* or *'recém-nascidos'* in Portuguese). Fernando states that saved seeds are 'the same as infants' or foetuses inside

a mother's belly – in both cases, the foetus and the seed are 'kept' in a safe space until the moment of their 'birth' and subsequent growth and development. Juliana tells me that saved seeds and cuttings are the 'same as people,' and that they need to be 'well-protected' to stay 'alive' during storage.

Similar to human infants, seeds and cuttings appear to require special care and attention. Before storage, Liliana and Camila teach their younger female relatives how to prepare seeds with *malagueta* pepper (*Capsicum frutescens*) and/or with animal or vegetable oil, all of which prevent the accumulation of extra moisture that can ruin the seeds by making them sprout. Once prepared, women store the seeds in hollowed-out Cuhkõn and Cuhtõj gourd varieties or in plastic two-litre soda bottles, typically keeping different species separate but freely mixing varieties in one container. Later on, they typically separate out the varieties for planting (see p. 189 above). According to Liliana, the seeds of fava bean, common bean, rice, squash, gourd, watermelon, and peanut usually remain in storage for four to six months. It is interesting to note that a human infant and his or her parents undergo a six-month period of ritual food and sex restrictions, perhaps signifying a conceptual parallel between human and seed 'infants,' who are in their own kind of 'restriction' during storage.

Unlike other seeds, women typically store maize by hanging the dried-out ears from the house ceiling, making sure to 'protect' the kernels from cooking smoke during this time. This highlights the special care given to maize kernels, in that they are set apart from other seeds and given certain protections. For species propagated by vegetative methods such as manioc, sweet potato, and yam, women store cuttings underground for short periods. Liliana teaches her granddaughters to store bitter, sweet, and half-bitter/half-sweet

manioc varieties underground for around five days before planting, and to store yam and sweet potato varieties for a slightly longer period. She maintains that these are the best ways to help the seed and cutting babies 'live' during storage, and she passes on these caring and affectionate methods to the younger women in her family.

In order to maintain and increase her stores of saved seeds and cuttings, a female gardener usually engages in exchanges with her own family members and with other neighbouring Canela families. When exchanges occur within a matrilineal family, the varieties are often passed down across the generations as gifts that do not require a one-to-one exchange. Many of the varieties that Liliana continues to maintain, for example, come from her grandmother Manuela Célia and her classificatory maternal grandfather Dirceu. Although he was born a man, Dirceu 'became' a woman in his old age by adopting female dress, bodily mannerisms, and activities. In fact, his seed-saving was one of the primary ways that he established himself as a Canela 'female,' along with wearing a cloth skirt (*pano*) and assisting with household chores.⁴²

Manuela Célia gave Liliana the fava varieties 'Large Vulture Fava Bean' (Pànkryt Xôn-ti), 'Small Mask Fava Bean' (Pànkryt Tohcawêu-re), 'Very Small White Fava Bean' (Pànkryt Kryi-re Jaka-re), 'Young/Unripe Children Fava Bean' (Pànkryt Měhkra Tetet), 'Large White Fava Bean' (Pànkryt Jaka-ti), 'Small White Fava Bean' (Pànkryt Jaka-re), and Pànkryt Carêntohkà Pó (translation unclear). She also passed along the yam varieties 'Reddish-Pink Skinned Yam' (Krêrô Kàhcaprôti), 'Large White Membrane True/Original Yam' (Krêrô

⁴² Dirceu's transvestism appears to be rare in the Canela community. During my fieldwork, I heard of a few other instances of men acting and dressing like women in their old age, and the community generally accepted their behaviour. Conversely, in the one case that I heard about of a woman dressing and acting like a man, the male leadership council disapproved of her behaviour and made her stop using male mannerisms and clothing.

Pej Caxwỳn Jaka-ti), and ‘Long Foot Yam’ (Krěrô Parpóhti). Dirceu was an expert gardener himself, and saved many varieties specifically for Liliana in gourds and glass bottles. He gave her four fava varieties – ‘Large Mask Fava Bean’ (Pànrýt Tohcawêu-ti), ‘Large Black Fava Bean’ (Pànrýt Tyc-ti), ‘Urucum Fava Bean’ (Pànrýt Měcuprý-re), and Pànrýt Càà Pê-Xuère (translation unclear). Additionally, Dirceu passed down ‘Anaconda Yam’ (Krěrô Tekãjkãj/Rorti), ‘Breast Yam’ (Krěrô Kàjakěn), and ‘*Dente de Prego* Yam’ (Krěrô Pytĩxwa); five maize varieties – ‘Large Red-Yellow Maize’ (Põhy Caprêc-ti), ‘True/Original Maize’ (Põhy Pej-re), ‘Large Mixed-Colour Maize’ (Põhy Tohrom-ti), ‘Large Bright Red Maize’ (Põhy Caprô-ti), and ‘Large Black Maize’ (Põhy Tyc-ti); and a few types of common bean ‘on the vine’ and peanut.

Liliana actively saves all of these varieties’ seeds except for ‘Large Black Maize,’ and claims she will never ‘leave behind’ what her grandparents gave her. The seeds appear to be reminders of the close relationships Liliana had with her now-deceased grandparents. While sorting the seeds with her daughters and myself, Liliana would often relay a happy memory or piece of advice from her grandparents. On one occasion, she remembered how Dirceu told her to continue saving seeds, saying, ‘I took care of you, I treated you well; [now] be this way with your family.’ Liliana and her family therefore value these gifted seeds not only because they increase the overall diversity in their gardens, but also because of the social relationship embedded in the seeds themselves. The fava, maize, common bean, and peanut seeds, as well as the yam cuttings, are the material embodiments of Liliana’s relationships to Manuela Célia and Dirceu, and she maintains these connections with them by keeping the seeds and cuttings alive and gifting them to her daughters and granddaughters.

Outside of the matrilineal family, women typically trade their seeds and cuttings for varieties that they do not possess. Lilians sometimes trades her fava bean varieties for the well-known yam varieties such as 'Anaconda Yam' grown by her sister-in-law Ivanete, who lives on the eastern side of the village. In July 2012, Lilians obtained 'Large Curved Root Sweet Potato' (Jàt Jikôt-ti) through an exchange with Noemi, a woman on the western side of the village who revealed she cultivated this variety during an interview with me. Women usually exchange varieties in a leisurely manner, visiting each other's houses to chat and share gardening tips. These social exchanges are so important to an expert gardener such as Lilians that she will sometimes cultivate surplus species or varieties in order to exchange them.

Lilians explains that any seed or cutting 'should not be left behind' to disappear, and that she grows varieties she and her family do not eat specifically for the purpose of 'giving, trading, or selling' to others in the village. Indeed, sometimes women gardeners sell their varieties for money, an activity that is becoming more common as women have greater access to funds from the monthly stipend that the Bolsa Família governmental social assistance programme provides. Magdalena, Lilians's naming aunt, is known for her large forest plot of bitter and sweet manioc, and she and her family often sells sacks of processed *farinha* to people within and outside the Canela community. Lilians herself sometimes sells *farinha* and yam varieties, although she also trades these items for other varieties equally as often. The role of money in the Canela socio-economy of gardening requires further research, and in these cases, it is unclear whether selling varieties is conceptualized differently than trading them for other garden produce.⁴³ Overall, though,

⁴³ Gordon's (2006) analysis of the Xikrin do Cateté socio-economy can perhaps be useful here. In the Xikrin case, Gordon (2006: 65, 294) argues that money and the manufactured goods it buys form part of Xikrin

it appears that Canela women seek out trading or selling their varieties to increase the diversity in their gardens and not 'leave behind' any variety, as Liliana explains, as well as to develop and maintain social relationships with other female gardeners and their families.

In addition, women seek out exchanges and the social relationships that emerge from them with people in neighbouring indigenous communities. Usually these exchanges occur when a Canela woman visits family members who have married into other indigenous groups. Noemi, for example, has a relative who married into the neighbouring Jê-speaking Krĩkatĩ community. During a visit there, she obtained 'Mixed-Colour Peanut' (Caahy Kror-ti), and subsequently cultivated it and exchanged her harvested peanuts with other Canela families. The variety now exists in multiple Canela gardens, and gardeners pass along the story of the peanut's origins to their younger kin. In this way, the social relationship between Noemi and her relative, and more widely between the Canela and the Krĩkatĩ, have become embedded in the peanut itself.

Fernando and Renato also told me the story of how the Canela obtained 'Stranger/Outsider Sweet Manioc' (Kwỳr Cahkrit-re) from a 'strange' man from the nearby Apaniekra village of Porquinhos. Meanwhile, 'Guajajara Tree Bean' (Pàt Juhtõi-re Pàràre/Pryĩ; Pryĩ = Guajajara) is commonly known to originate from an exchange with the Tupi-Guaraní-speaking Guajajara community during the Canela community's temporary relocation to their territory in the 1960s (see Chapter 3 [p. 80]). Canela

social relationships. The Xikrin seem to use money differently than the Canela, however, and they have access to much larger amounts of it through their agreement with the multinational mining corporation CVRD (*Companhia Vale do Rio Doce*, commonly known as Vale). Comparing the Xikrin and the Canela in more detail would be a fruitful exercise that I would like to pursue in later publications. Chapter 1 (pp. 19-21) discusses the role of money in gift giving and exchange, especially with the anthropologist.

gardeners sometimes seek out exchanges with whites as well. ‘*Mineira* Sweet Manioc’ (Kwỳr Mĩnêr) is named for a person from the Brazilian state of Minas Gerais, from whom the Canela acquired the varietal (Mĩnêr = *mineiro/a* in Portuguese, or person from Minas Gerais). Similarly, my research assistants told me that ‘Large Black Sugarcane’ (Cãn Tyc-ti) originates from São Paulo state, although it is unclear exactly how the exchange took place. Thus, through naming and remembrance, these different varieties become the material embodiments of Canela relationships with outsiders, whether they are indigenous Krĩkatĩ, Apaniekra, or Guajajara, or non-indigenous Brazilians.

As the primary seed and cutting savers and exchangers, and as the planters of varieties in separate holes (mentioned on p. 189 above), women appear to be the ‘keepers’ of biodiversity in the Canela community. Women keep diverse seed and cutting ‘infants’ alive through caring and affectionate storage methods, and they acquire new species and varieties through social exchanges with other gardeners in Escalvado, in neighbouring indigenous communities, and in white towns. Through saving seeds and through exchange, girls learn how to engage with seeds and cuttings in multi-sensory, embodied ways. When saving seeds, women and girls primarily interact with them through touch while massaging oils onto the seeds’ skins prior to storage. Exchange incorporates a woman or girl’s sight and touch, as she admires the beautiful patterns and feels the distinct shapes of the varieties she desires. Sometimes smell and taste are involved as well, if the woman or girl eats the desired varieties while raw or cooked.

These multi-sensory engagements also take place between humans, as women see each other, embrace, and cuddle each other’s children while they are sorting through seeds or cuttings. Girls learn to value and enjoy saving and exchanging seeds for the relationships

they can develop with the plant ‘infants’ and with other women and girls. Additionally, I suggest that Canela girls learn to appreciate and value the overall spectrum of crop diversity in Canela gardens through seed saving and exchange. One of the most striking examples of this appreciation is when women and girls gather to view and comment on a display of saved seeds and cuttings inside or outside one’s house. Carefully laying her saved fava bean varieties on a bright blue cloth she has spread on the ground in front of her house, Liliانا methodically sorts the seeds as her sisters and neighbours stop by to admire her collection. Girls ask their mothers or aunts about the names and characteristics of different beans, and older women seem amazed at the bright pink seeds of ‘Red Child Fava Bean’ (Pànkryt Ahkrare Caprêc-re) that Liliانا maintains. Meanwhile, younger children sit nearby, affectionately picking lice out of each other’s hair, and occasionally picking up and inspecting some brilliantly coloured beans. Everyone marvels at how the fava bean collection is ‘beautiful’ and ‘good’ (*impej*), thereby appreciating the diversity of all their plant ‘infants.’ Thus, as this example highlights, the female ‘enskilment’ of exchanging and saving seeds is fundamentally based on multi-sensory, affectionate engagements between and among women and diverse seeds and cuttings.

Figure 7: Liliانا, her daughter Aline, and her granddaughter Beta sorting fava bean seeds, June 2012



Conclusion

This chapter highlights the myriad ways that gardening expertise and knowledge are valued and made meaningful in the Canela community. Expert gardeners are valued for their skilled understanding of and engagements with multiple eco-regions, soil types, crop species and varieties, and wild animals. As the case studies of Liliana, Camila, and Fernando explore, expert gardeners appear to be especially admired for their varietal diversity maintenance expertise and their ability to produce abundant, biodiverse harvests. Novice girl and boy gardeners learn to appreciate gardening knowledge from an early age, and they acquire environmental ‘knowing’ through nonverbal showing and verbal teachings from their more experienced elders, as well as through individual multi-sensory engagements in different garden spaces.

Girls and boys appear to develop specifically gendered gardening skills, with girls learning to be caretakers and nurturers of seed ‘infants’ and crop ‘children,’ and boys developing the skills to create and manage the garden spaces where these plant children will grow, perhaps similar to building houses in which their human children will live. Overall, though, I posit that girls and boys learn to garden through a series of processual, creative, and meaningful multi-sensory engagements with garden spaces and growing crops that can perhaps be considered an ‘education of affection.’ With its emphasis on caring relationships between humans and plants, I suggest that this conceptualization gives us broader insight into what constitutes gardening knowledge or ‘knowing’ beyond the solely ecological-functional aspect of providing food.

As the examples in this chapter display, enjoyment and happiness appear to be central components of Canela gardening practices and environmental ‘knowing.’ Gardeners such

as Liliana, Camila, and Fernando find happiness while working in garden spaces. They enjoy being around a diverse array of crop species and varieties, and feel strong and healthy when they visit the gardens and perform gardening activities such as planting, tending, and harvesting crops. The extended engagements that expert gardeners develop with their cultivated crops appears to promote the wellbeing of both humans and plants, as the crops themselves are said to find happiness in these visits as well. Saving and exchanging seeds and cuttings also promotes the happiness of people and plants – the saved ‘infant’ seeds are thought to appreciate the care that is given them, and Canela women and men find the varietal diversity acquired through exchange to be ‘good’ and ‘beautiful’ (*impej*).

Additionally, I posit that gardening and varietal diversity maintenance promotes the overall happiness and wellbeing of the Canela ‘bio-sociocultural life-world’ in which human and nonhuman beings coexist. In this view, overall wellbeing unfolds when various beings – girls and boys, women and men, diverse plant species and varieties, wild animals, and even soils – are happily engaging and coexisting over time in forest and riverbank garden spaces. I suggest that these human-nonhuman entanglements that promote wellbeing are especially valued and made meaningful through the Canela ‘aesthetics of landscape,’ which this chapter has explored through the ‘bio-sociocultural aesthetics’ dynamic theoretical framework. In the following chapter, I further explore the intertwined lives of gardeners and crops in order to expand our understanding of how both humans and plants appear to find happiness and strength through ongoing, multi-sensory engagements with each other over the course of their lifetimes.

Chapter 6

The parallel lives of Canela gardeners and cultivated crops: multi-sensory engagements and ethnobotanical classification

Introduction

For Canela gardeners, engaging with their growing crop species and varieties in multi-sensory, embodied ways is central to gardening practices and varietal diversity maintenance. Through these long-term engagements, the life cycles of human gardeners and cultivated crops become intertwined. This chapter explores how these human and plant lives become interconnected in myriad ways. Firstly, it examines how Canela gardeners link themselves to and engage with cultivated crops through ethnobotanical classification. Using the ethnobotanical lists I have collected as a guide, I explore how the naming of crop varieties can be used to identify plants with people by attributing them with human characteristics. I also examine how human engagements with local flora and fauna, and the environmental knowledge that emerges from these encounters, become embedded in crop naming and classification.

As Canela environmental knowledge or 'knowing' incorporates all the senses, it is important to explore the multi-sensory component of classification as well. Through a brief examination of colour words included in crop varietal names, I examine how the Canela perception and conceptualization of colours highlights the community's multi-sensory engagements with crops and the combined aesthetic and moral preferences regarding varietal diversity. These integrated aesthetic-moral preferences can especially

be seen in the categorization of crop varieties as either 'good' or 'beautiful' (*impej*) and associated with the mythical figure of Star-Woman, or as 'bad' or 'ugly' (*ihkên*) and linked to the figure of Star-Woman's husband, Tyc-ti (see Chapter 3 [pp. 92-99]). I explore how categorically 'good' and 'bad' crops shed light on the Canela aesthetic-moral value placed on particular crop species, and on all named species and varieties as a whole. I suggest that through the sheer quantity of identified species and varieties included and the incorporation of both 'original' and 'outside' or 'introduced' crops, the lists highlight the overall appreciation that modern-day Canela gardeners have for maintaining and increasing biodiversity in their plots.

If classification is a way that Canela gardeners value and make meaningful their relationships with crop species and varieties, as the first section suggests, then the second section explores how these meaningful human-plant relationships emerge over the course of gardener and crop lives. In particular, I examine how gardeners interact with their growing crops through ritual singing in garden spaces and through the food sharing ritual during which the crops are thought to 'eat' meat along with their human family. Both of these ritual activities highlight the parent-child relationship between gardeners and crops. I explore how ritual singing is conceptualized as a caring and affectionate act toward growing crop 'children,' and how the food sharing ritual is similarly conceived as the 'feeding' of these same plant children. How Canela gardeners conceptualize the plant's natural life cycle, especially how they reconcile their understanding of plants as 'children' with the consumption of plants at the end of their lives, is also examined here. The third section expands upon this parent-child relationship through an examination of the parallel food and sex restrictions that Canela adults undergo for their human and plant children. I explore the meaning and value attached to these restrictions, and how the

restrictions themselves are said to improve one's ability to interact with plants utilizing many sensory capacities (although not to the same degree as shamans; see pp. 276-280 in Chapter 7).

In addition to individual relationships between female and male gardeners and their growing crops, communal human-plant engagements also occur during planting and harvest festivals. In the final section of the chapter, I explore the communal rituals for the first harvest of some native Cerrado fruits, fava bean, squash, and yam, as well as examining the Hôxwa sweet potato festival and the planting and harvesting ceremonies for maize. Through an analysis of the performances and songs involved in the different ritual activities, I posit that these communal ceremonies appear to celebrate the end of the plant species' natural life cycle and the relationships that human gardeners formed with the growing plants during their lifetimes. To conclude the chapter, I further the examination of intertwined human and plant lives to suggest that these engagements are integral to the ongoing emergence of the Canela 'bio-sociocultural life-world' and the subsequent valuing of the life-world through a Canela 'landscape aesthetics.' Thus, I posit that the 'bio-sociocultural aesthetics' theoretical approach perhaps provides the most comprehensive way of understanding human and plant engagements in the unfolding Canela life-world.

Ethnobotanical classification

The classification and naming of crop species and varieties is a fluid and dynamic process, with Canela gardeners frequently adding new varieties to their ethnobotanical collections and losing other varieties due to various historical reasons (as Chapter 3 [pp. 81-82]

describes). I therefore consider the ethnobotanical lists I collected during the fieldwork to be 'living lists,' in that they will undoubtedly change over time to reflect the dynamic relationships between Canela gardeners and various crop species and varieties (cf. Miller 2014). It is important to note that while my research assistants have now written down their crop classification schema to fit into Westernized 'lists,' Canela ethnobotanical classification and its concomitant environmental knowledge had traditionally been passed down orally. Nevertheless, my research assistants and others in the community expressed their eagerness to document the names of crop species and varieties in written form, and they seemed pleased with the current lists, as the first of their kind for the Canela community, when I gave them copies at the end of my fieldwork. Liliana's quote highlights the importance of documenting crops for her:

This book [of ethnobotanical lists] that you prepared; I am going to read all of it. I will never leave this work that you did. I will remember all the time; I will pass it on to my grandchildren. It could be that I become a little old lady, but I will pass it on to those who are interested...our research is very important! You are seeing my case; that we always lack something, [even though] I always try. I cannot lose the [crops] that you photographed...I want to increase what I cultivate!

While many community members eagerly showed me their diverse arrays of species and varieties throughout the fieldwork, the fava bean varieties emerged as the most discussed crops, with women (and some men) frequently gathering to admire and discuss the diverse types that different gardeners possessed. It is important to note that the category 'fava' is a Portuguese gloss for the Canela category of Pànkryt, which, with 52 named 'varieties,' appears to include various species including *Vicia faba*, *Phaseolus vulgaris*, *Phaseolus lunatus*, and other species in the *Phaseolus* genus, as well as species in the

Vigna genus (see Appendix A [pp. 357-361]).⁴⁴ Nonetheless, the gardeners with whom I spoke were meticulous about identifying and naming distinct Pànkryt ‘varietals’ and I therefore maintain their indigenous categorization of these beans in the lists.

Gardeners especially enjoyed discussing the names of fava beans that referred to human characteristics or attributes, as Table 4 displays below (pp. 214-215). Four of the varietals are associated with Canela girls and women during various life stages due to their markings and colour combinations. ‘Mature Strong Young Girls Fava Bean’ (Pànkryt Měcupry Catia/Tỳjtu) for example, is white with brownish-yellow colouring on one side that is said to resemble an older girl who is wearing ‘lipstick.’ ‘*Urucum* Fava Bean’ (Pànkryt Měcupry-re), with its bright red colouring, is thought to resemble younger girls whose bodies are painted entirely in red *urucum*, while ‘Large *Urucum* Fava Bean’ (Pànkryt Pyhti), which is white with purplish-red ‘lipstick’ on one edge, is named after a woman who paints her mouth with *urucum* prior to visiting her garden while menstruating. ‘Messily Painted Fava Bean’ (Pànkryt Měhkra Tàmtuw) that is white with brown markings references the messy, disorganized body paint design for a woman who has recently given birth to a child and/or already has two or three children.

One varietal that is white with red ‘lipstick’ is known as ‘White Woman Fava Bean’ (Pànkryt Cupěkwỳj), and my research assistants laughed heartily as they showed it to me, saying it looked similar to the white women in the nearby towns (and perhaps myself as well!) Boys and men are referenced less frequently in fava naming, with only one varietal referring to each. ‘Strong Black Face Child Fava Bean’ (Pànkryt Ahkrare Kuctỳi Tyc) has

⁴⁴ Dr Stephen Harris of the Department of Plant Sciences, University of Oxford, identified most of the ‘varietals’ of Pànkryt in May 2014, based on photographs I took during the fieldwork.

black markings which resemble a boy whose forehead is painted with black *pau de leite* (Aràmhôm) or *jenipapo* (Pôl-ti), and ‘Warriors Fava Bean’ (Pànkryt Měhaprãr) resembles ‘courageous’ warriors who paint their cheeks with red body paint.

Still other types of fava reference Canela people, both male and female, throughout their lives. ‘Child Fava Bean’ (Pànkryt Ahkrare) has white and black markings and is associated with a child and the umbilical cord, while ‘Red Child Fava Bean’ (Pànkryt Ahkrare Caprêcre) is white with brilliant reddish-pink markings and was considered especially ‘beautiful’ by many of the neighbour women near my mother’s house (see Figure 7 [p. 205]). ‘Younger Child Painted with *Urucum* Fava Bean’ (Pànkryt Měhkra Tetet Cucràn) is almost entirely red in colour and directly references what its name suggests, and Pànkryt Mě Hupkre Têp (translation unclear) also resembles people being painted with *urucum* with its white and red colouring. The white-coloured varietal ‘The Strong and Happy Ones Fava Bean’ (Pànkryt Měhtyi) has a particularly interesting name, although it is unclear why this type of fava is thought to resemble ‘strong’ and ‘happy’ (*ihyti*) people. Finally, ‘Old People Fava Bean’ (Pànkryt Měhkàa) is thought to resemble the wrinkled brown skin of elderly Canela, and my research assistants were quick to name specific elderly neighbours who had skin similar to this varietal.

Table 4: list of fava varieties that reference human characteristics or attributes

Canela name	English Translation	Translation Notes	Photograph
Pànkryt Měhtyi	'The strong/happy ones' fava bean	<i>mě</i> = plural; <i>ihyti</i> = strong, happy, healthy	
Pànkryt Měcupry Catia (Tytju)	'Mature strong young girls' fava bean	Měcupry = plural young girls; Tytju = very strong	
Pànkryt Měcupry-re	<i>Urucum</i> fava bean	Měcupry-re = smaller/younger girls	
Pànkryt Měhaprãr	Warriors fava bean	Měhaprãr = warriors	
Pànkryt Mě Hupkre Têp	<i>Translation unclear</i>	Resembles being painted with <i>urucum</i>	
Pànkryt Měhkàa	Old people fava bean	Měhkàa = old men in the centre and/or all old people	
Pànkryt Měhkra Tetet Cucràn	'Young children painted with <i>urucum</i> ' fava bean	Měhkra = children of Canela/Timbira people; Tetet = light-coloured or 'unripe'; Cucràn = act of painting with <i>urucum</i>	

Canela name	English Translation	Translation Notes	Photograph
Pànkryt Měhkra Tetet	'Young/unripe children' fava bean	Eaten during food and sex prohibitions	
Pànkryt Měhkra Tàmtuw	'Messily painted' fava bean	Měhkra = children; Tàm = raw – can also signify menstruating woman; tuw = recently fresh	
Pànkryt Ahkrare	Child fava bean	Ahkrare = child	
Pànkryt Pyhti	Large <i>urucum</i> fava bean	Pyhti = 'large <i>urucum</i> ' (Pym = <i>urucum</i>)	
Pànkryt Ahkrare Caprêc-re	Red child fava bean	Caprêc-re = small and red	
Pànkryt Ahkrare Kuctÿi Tyc	'Strong black face child' fava bean	Kuc = face; Tyc = black	
Pànkryt Cupěkwÿj	White woman fava bean	Cupě = white; kwÿj = woman	

While fava beans have the most varietal names that are directly identified with human characteristics, the classification of manioc, yam, and sweet potato also incorporates the identification of plants with people. ‘Infants Sweet Manioc’ (Kwỳr Měhcapôt) is named as such because, as my research assistants explained, its tuber resembles the arm of a chubby, healthy baby that is around four months old. ‘Black Hair Bitter Manioc’ (Kwỳr Tyc-ti/Krã Jimoctyc) references the black ‘hair’ on the ‘head’ of this variety, similar to the hair of Canela people. Meanwhile, ‘Long Foot Yam’ (Krěrô Parpóhti) has a human foot shape, complete with ‘toes;’ ‘Breast Yam’ (Krěrô Kàjakěň) is said to resemble a woman’s breast and is mythically associated with a man transforming into a woman;⁴⁵ and ‘Pubic Hair Yam’ (Krěrô Crêhô) has short hairs on it that look like pubic hair. ‘Small Human-Faced Sweet Potato’ (Jàt Jĩtehtu-re) references the shape of human cheeks, while ‘Child’s Umbilical Cord Sweet Potato’ (Jàt Ahkrare Jöntot) is small, white, and round and resembles the navel of a newborn baby.

In the case of fava beans, it is clear that their classification directly links them to Canela people in general and to specific categories of children, women, and men. Although the names of manioc, yam, and sweet potato reference body parts instead of entire categories of people, their association with the human body also seems to connect them to Canela people as a whole. With fava varieties especially, gardeners enjoyed describing how the seeds’ markings resembled women, men, and children – laughing about the wrinkly skin of ‘Old People Fava Bean,’ describing the ‘braveness’ of ‘Warriors Fava Bean,’ and commenting on the ‘beauty’ and even ‘cuteness’ of ‘Red Child Fava Bean.’

⁴⁵ In the mythical story that Fernando and Renato only briefly mentioned to me, one or two young men ate ‘Breast Yam’ and transformed into women. As a result, nowadays, young men are prohibited from eating this varietal.

Categorizing other species after human body parts also appeared enjoyable, with gardeners smiling over the ‘chubbiness’ of ‘Infants Sweet Manioc’ and commenting how ‘Black Hair Bitter Manioc’ looked very similar to the Canela themselves. Thus, by naming the seeds and cuttings in this way, Canela gardeners appear to be appreciating and valuing the varieties themselves, and perhaps the relationships they form with these particular varieties over time in garden spaces and while saving them in the village.

In addition, Canela ethnobotanical classification highlights human engagements with animal and plant species that are native to the Cerrado environment. Some varietal names reference game animals that men traditionally hunt in the forest, such as ‘Common Cerrado Deer Fava Bean’ (Pànkryt Po Cahàc) and ‘Deer Toenail *Urucum*’ (Po Jíxwa), both referring to a type of native deer (*veado-campeiro*; *Ozotoceros bezoarticus*), and ‘Ema Shinbone Bitter Manioc’ (Kwỳr Mǎǎ Tehkà), which refers to a species of large native bird (*ema*; *Rhea americana*). ‘Monkey from Pará Sweet Potato’ (Jàt Jõtep-ti), meanwhile, resembles a monkey from the neighbouring Pará state (known as *cupût* in Canela) that has a yellow bottom. While jaguars are only occasionally seen in the Canela territory nowadays, some varieties reference the animal’s markings or body parts, namely ‘Jaguar Head Yam’ (Krěrô Rop-krã), ‘Small Jaguar Bean’ (Pàt Juhtõi-re Kroro-re), and ‘Jaguar Fava Bean’ (Pànkryt Kroro-re).

Other names reference riverine animals such as tortoises, snakes, and fish. ‘Tortoise Arm Bitter Manioc’ (Kwỳr Caprãñ Jũkee) resembles a tortoise arm, while ‘Tortoise Egg True/Original Yam’ (Krěrô Pej Caprãñ Cre-re) and ‘Tortoise Egg Sweet Potato’ (Jàt Caprãñ Cre) have a rounded shape similar to a tortoise egg. ‘Anaconda Yam’ (Krěrô Tekãjkãj/Rorti) circles around itself as an anaconda does and is associated with water, and ‘Cobra Bitter

Manioc' (Kwÿr Awari) has pulp that resembles cobra flesh. 'Pÿp Fish Yam' (Krêrô Pÿp-re) is also associated with water and is shaped like an electric fish native to the Amazon basin region (*poraquê*; *Electrophorus electricus*). Still other varieties refer to native bird species, such as 'Small Red Parrot Tail Sweet Manioc' (Kwÿr Caprêc-re/Krÿi-re Japÿ) whose leaf resembles a parrot's tail and 'Kàkàre Bird Squash' (Cuhkõn Cahàc Kàkàre) that has the same half-yellow, half-green colouring as this native bird. 'Krê-re Bird Fava Bean' (Pànkryt Krêwre) references the type of bird that eats rice growing in garden plots and is said to have been 'Canela people' in the mythical past, while 'Common Têhtê Bird Fava Bean' (Pànkryt Têhtê Cahàc) refers to the bird that 'advises' people when animals are nearby (see Appendices C and D [pp. 377, 415-420]). Finally, a number of fava bean names also reference native bird eggs, including 'Hummingbird Egg Fava Bean' (Pànkryt Jÿnren Cre), 'Jôkrãire Egg Fava Bean' (Pànkryt Jôkrãire Cre), and four varieties named after the Hipêj bird's egg.

In terms of referencing native plant species, a number of crop varieties are named after plants in the surrounding Cerrado landscape. 'Capa-re Plant Peanut' (Caahy Capa-re) resembles a type of plant that grows near riverbeds and is used as a fever remedy, while 'Hônxôti Leaf Slow-Growing Rice' (Arÿihy Hônxôti Kênpôc) resembles the leaf of a native forest plant that appears dried out when it ripens. 'Grey Ahtu Grass Sugarcane' (Cãn Ahtu/Jiprorre) is thought to resemble a type of native *chapada* grass, and 'Small Piqui Mango' (Mac Prÿn-re) is similar to the *piqui* fruit (*Caryocar coriaceum*) in shape and smell (see Appendix B [pp. 373-376]). It is interesting to note that the majority of the varieties named after native plants are considered 'introduced,' including rice,⁴⁶ sugarcane, and

⁴⁶ Rice is generally considered an 'introduced' species by Canela gardeners, although nowadays it has largely become incorporated into indigenous gardening and nutritional intake, and with an impressive 28

mango, which is similar to what Balée (2013: 20) found among many Tupi-Guaraní-speaking communities' naming of non-domesticates as well.

Indeed, the distinction between 'aboriginal' or 'original' and 'introduced' crop species that Nimuendajú (1946: 58) documented appears to remain conceptually salient today, albeit in a slightly shifted form. While my research assistants classified most of the same fruits as 'introduced' by whites, including banana, watermelon, papaya, mango, pineapple, coconut, orange, and lime, they sometimes incorporate bean (*feijão* in Portuguese, Pát Juhtöi-re in Canela) into the 'original' category that is overall associated with the mythical figure of Star-Woman (see below [pp. 225-227] and Chapter 3 [pp. 92-99]). Most of the 'varietals' in the Pát Juhtöi-re category have been identified as *Phaseolus vulgaris* that is native to the Americas, while one varietal, 'Guajajara Tree Bean,' has been identified as *Cajanus cajan*,⁴⁷ a species domesticated in Africa and most likely brought to Brazil by Portuguese colonists and/or African slaves. Balée (2013: 20) notes that the Tupi-Guaraní-speaking Assurini received this species from the Tapirapé, another Tupi group, and named it 'Tree Bean,' which may be a linguistic indicator for a non-domesticated species as his historical linguistic research across Tupi-speaking communities indicates. Thus, perhaps the Canela community's shifting categorization of 'original' and 'introduced' species bears similarity to the Tupi-speaking Ka'apor's 'artificial' dichotomy between domesticates and nondomesticates (cf. Balée 2013: 97).

documented varietals, forms an important part of Canela ethnobotanical classification and varietal diversity maintenance (see pp. 363-365 in Appendix A). Historical and archaeo-botanic research indicates that the two main rice species, domesticated in Asia (*Oryza sativa*) and Africa (*Oryza glaberrima* L.), were introduced to South America by European colonists, and one study indicates that African slaves brought *Oryza glaberrima* to Northeast Brazil (Carney 2001).

⁴⁷ Dr Stephen Harris also identified most of the varietals of Pát Juhtöi-re in May 2014. See Appendix A.

Whether the species and varieties are considered ‘original’ or ‘introduced,’ however, these examples of crop naming shed light on how knowledge of human, animal, and plant characteristics and human-environment engagements becomes embedded in ethnobotanical classification, which appears to be common across indigenous communities in lowland South America and elsewhere (cf. Balée 2000, 2010, 2013). Although Canela ethnobotanical classification is undoubtedly dynamic, the examples here give an indication of the guidelines that Canela gardeners follow when naming cultivated crop varieties. There certainly appears to be an emphasis on naming crops based on traits that are identifiable with humans, animals, and other native plants in the Cerrado environment. While Canela gardeners usually identify these traits based on a visual appreciation of the variety’s shape or markings, they also utilize their tactile sense to feel a variety’s outer skin, shell, or the texture of its pulp (as seen with ‘Cobra Bitter Manioc’) and they engage their sense of smell as well, as the ‘Small *Piqui* Mango’ variety name demonstrates. It is possible that gardeners utilize their sense of taste and hearing to identify crops with other species in the surrounding environment, although this is less clear. Nevertheless, it does appear that crop classification involves the use of multiple sensory modalities by Canela gardeners, and through these senses gardeners come to know and appreciate the diverse crops that they maintain in garden spaces.

Apart from identifying crops with humans, animals, and plants, many crop variety names include Canela colour words that often reference hues existing in the local Cerrado landscape.⁴⁸ For example, my research assistants described the colour words *tatap-ti* and

⁴⁸ While Crocker (1990: 34) mentions that he studied Canela colour categories in the 1970s and includes an analysis of oppositional or complementary colour terms (Crocker 1990: 326), the majority of this research remains unpublished in the Smithsonian Institution’s archives. It would be interesting to compare the data I collected with his own in future research.

tatap-re as being ‘bright yellow as a cotton flower,’ with *-ti* and *-re* indicating large and small size, respectively. Meanwhile, they told me that *tàtà-ti* or *tàtà-re* is a ‘brownish-yellow’ or ‘weak yellow’ colour. My research assistants clearly differentiated between these two yellows, as seen in Figure 8 of ‘Small Bright Yellow Fava Bean’ (Pànkryt *Tatap-re*) and ‘Small Yellowish-Brown Fava Bean’ (Pànkryt *Tàtà-re*) below (p. 224). Although these beans may appear similarly coloured at first glance, Canela gardeners can easily distinguish the two separate varieties due to their recognizably different shades.

Similarly, there are four different words for variations of the colour red: *caprêc-ti/caprêc-re* which is a reddish-yellow hue; *caprôô-ti/caprôô-re* that my research assistants described as being ‘bright red the colour of *urucum* body paint’ or ‘blood’ (*caprôô* = blood); and *intep-ti/intep-re* and *tep-ti/tep-re*, which signify other slight variations of bright red. Figure 9 below (p. 224) displays examples of these different reds as seen in ‘Large Reddish-Yellow Maize’ (Pöhy *Caprêc-ti*) and ‘Large Bright Red Maize’ (Pöhy *Caprôô-ti*). The categories of white (*jaka-ti/jaka-re*) and black (*tyc-ti/tyc-re*) hues are more easily identifiable, as seen in Figure 10 (p. 224) of ‘Small White Fava Bean’ (Pànkryt *Jaka-re*) and ‘Small Black Fava Bean’ (Pànkryt *Tyc-re*). My research assistants also identified the terms *tetet-ti/tetet-re* as being ‘very white, almost clear-coloured’ and/or referring to a crop that is still ‘green’ – that is, unripe and not yet mature. There are also the terms *jiproh-ti/jiproh-re*, which translate as being an ‘ash-grey’ hue, and *krãjipro*, which means a mixture of black and white shades.

Indeed, other colour words incorporate a mixture of multiple colours. *ihkũnkũm-ti/ihkũnkũm-re* and *kukum-ti/kukum-re* both signify a ‘brownish-violet’ colour. Meanwhile, *kror-ti/kroro-re* means ‘mixed colours,’ but this mixture can range from

brown, white, and black, as seen with ‘Large Mixed-Colour Maize’ (Põhy Kror-ti); to violet, black, and purplish-red (Pànkryt Kror-ti); to spotted brown and black like a jaguar (Pànkryt Kroro-re and Pàt Juhtõi-re Kroro-re); and even striped black and white (Arÿihy Kroro-re Kênpei). The terms for ‘normal blue’ and ‘light blue,’ while not directly used in crop classification, are especially interesting in that they are a mixture of other colour words: ‘normal blue’ (*ihkũkũm-tycti/ihkũkũm-tycre*) literally translates as ‘brownish-violet-black’ and ‘light blue’ (*ihkũkũm-jakati/ihkũkũm-jakare*) as ‘brownish-violet-white.’

In light of the material on ethnobotanical naming as related to colour words explored here, it seems that the Canela classification of colour operates on a sliding scale or spectrum based on relative brightness or intensity and dullness. As seen in the images of bean and maize varieties below, the difference between ‘bright yellow’ and ‘weaker brownish-yellow,’ and between ‘bright red’ and ‘yellowish-red’ appears to be based on the level of brightness or intensity of the colour rather than on hue or ‘prismatic colour’ (cf. Casson 1992: 395). Similarly, while shades of light white and dark black are given their own terms (and perhaps are conceptualized as ‘bright’), the terms for colours that are in between these two extremes incorporate multiple shades of dark and light, such as browns, violets, greys, and blues. In this sense, perhaps the Canela are engaging more with the brightness or ‘value’ and the ‘relative dullness-vividness’ ‘psychophysical dimensions’ of colour, as outlined in Berlin and Kay (1991 [1969]) and elsewhere (Casson 1992: 395; Conklin 1973).

While it is not my intention here to delve into a lengthy exploration of the Canela perception of colour in general, exploring how Canela gardeners perceive colours through a possible spectrum of bright/vivid—dull can perhaps shed light on the multi-sensory

aspects of ethnobotanical classification and human-crop engagements. Through visual experiences in the landscape, Canela gardeners associate the 'brightness' of 'bright yellow' to cotton flowers and the brilliance of 'bright red' to vivid *urucum* seeds and the paint that is produced from them. The terms for 'mixed-colour' perhaps reference the mixture of browns, blacks, and reddish-purples that make up the various soil types in the Cerrado landscape. Additionally, I suggest that perception of colour and naming crop varieties with colour terms, as a 'psychophysical' experience (cf. Casson 1992: 395), involves other senses in addition to the visual as people engage with the spectrum of colour intensity in their environment. Bright red *urucum* is not only seen; its thick texture and earthy smell are experienced when making and using the ritual body paint. The same can be said of the colour black, which people feel when they apply the sticky *jenipapo* and smooth *pau de leite* black body paint. Meanwhile, gardeners find brownish-violet and brownish-yellow colours while digging through the earthy soils with one's own hands in garden plots. Even the duller 'grey' colour term, which references ashes, incorporates multiple senses as people smell the ashes from a dying fire and feel its last warmth. By naming crop varieties with colour words along the brilliant-dull spectrum, then, Canela gardeners appear to be referencing and valuing these multi-sensory experiences with their environment. In turn, the colourful crop varieties themselves seem to be valued and appreciated for the multi-sensory perceptual experiences that they afford through the long-term engagements that gardeners develop with them, as the next section explores.

Figure 8: 'Small Bright Yellow Fava Bean' (L) and 'Small Yellowish-Brown Fava Bean' (R)



Figure 9: 'Large Yellowish-Red Maize' (L) and 'Large Bright Red Maize' (R)



Figure 10: 'Small White Fava Bean' (L) and 'Small Black Fava Bean' (R)



This multi-sensory appreciation of crop varieties through classification can be explored further by looking at another way that gardeners name and categorise crops as either *impej*, that which is ‘true/original,’ ‘beautiful,’ and ‘good,’ or *ihkên*, that which is ‘less true/false,’ ‘ugly,’ and ‘bad.’ Some varieties are explicitly named as being *impej*, including ‘True/Original Maize’ (Põhy Pej-re), ‘True/Original Squash’ (Cuhkõn Cahàc Pej), ‘True/Original *Urucum* (Pym Peaj), ‘True/Original Sugarcane’ (Cãn Peaj-re), ‘True/Original Mango’ (Mac Peaj-re), and an entire category of four yam varieties known as Krêrô Pej (see Appendix A [pp. 349-372]). My research assistants described other varieties that are also known as being *impej* without being named as such, including all types of sweet manioc, the two kinds of half-bitter/half-sweet manioc, all types of fava bean, the eight other maize varieties (excluding those introduced in 2012), and ‘Small White Fast-Growing Rice’ (Arÿihy Jaka-re Kênpei). In addition, they classified other varieties as *impeaj* or *impeaj to impej*, an augmentative of *impej* meaning the ‘most original,’ ‘most beautiful,’ and ‘best.’ These include ‘True/Original Maize,’ ‘Pÿp Fish Yam’ (Krêrô Pÿp-re), ‘Anaconda Yam’ (Krêrô Tekãjkãj/Rorti), ‘Small Red Fast-growing Rice’ (Arÿihy Caprêc-re Kênpei), and ‘Tiny Red Slow-growing Rice’ (Arÿihy Caprêc-re Kênpôc).

Conversely, there is also a scale of relatively ‘bad,’ ‘ugly,’ ‘untrue,’ and ‘fierce’ or ‘dangerous’ varieties known as *ihkên* and its augmentative *ihkêãn-re*, meaning the ‘worst,’ ‘ugliest,’ or ‘most dangerous.’ My research assistants classified all types of bitter manioc and one type of inedible ‘bitter fava bean’ as being *ihkên*, although this type of fava was not included in the ethnobotanical lists we created. ‘Black Hair Bitter Manioc’ (Kwÿr Tyc-ti/Krã Jimoctyc) is the only variety they categorized as *ihkêãn-re*, because as Fernando described, it is ‘more dangerous, more bitter, [and] uglier’ than all the others.

The varieties classified as *impej* or *impeaj to impej* are directly associated with Star-Woman, the mythical figure who introduced horticulture to the Canela people, while those categorized as *ihkên* and *ihkêãn-re* are associated with Star-Woman's Canela husband, Tyc-ti (see Chapter 3 [pp. 92-95] for the entire myth). As my research assistants described, the varieties associated with either Star-Woman or Tyc-ti share attributes with these mythical figures. According to the myth as recounted by Leandro, Star-Woman is 'very beautiful, with white, almost clear-coloured skin and very long hair that was very pretty.' Fernando describes her as being 'very tall...with smooth hair and very white skin,' and he explains that the *impej* varieties resemble Star-Woman – they are 'beautiful' and 'sweet,' and some of those that are 'more beautiful' have white colouring as well, including 'True/Original Maize,' 'Pÿp Fish Yam,' and 'Anaconda Yam.' Meanwhile, Star-Woman's husband Tyc-ti, whose name literally means 'big and black,' is described as her opposite – he is large, dark-skinned, and very ugly, and no Canela woman wanted to marry him (which is why he was sleeping in the 'bachelor' area, the ceremonial centre, upon Star-Woman's arrival). Thus, the bitter manioc associated with Tyc-ti are similar to him, being ugly, 'fierce,' and 'dangerous,' and the 'ugliest' 'Black Hair Bitter Manioc' (Kwÿr Tyc-ti/Krã Jimoctyc) is similarly 'darker' in appearance as well.

There does appear to be a moral component to this dual categorization of crops, with the varieties directly associated with Star-Woman conceived as 'more beautiful' and 'better' in a combined aesthetic-moral sense than those associated with Tyc-ti. This polarization of 'better' and 'worse' crop varieties seems to mirror the conceptual division between people in the village, with 'Sun's children' living on the western side and 'Moon's children' on the eastern side, as Chapter 4 (pp. 115-116) explores. It is important to note, however, that Star-Woman is thought to have 'discovered' all 'original' species and varieties,

including *impej* and *ihkên* ones, and that gardeners seek out and maintain both crop categories (and those that are not specifically classified as either). Fernando maintains that Canela gardeners enjoy cultivating all crops, regardless of whether they are ‘good’ or ‘bad,’ and he explains that overall, the concepts of *impej* and *ihkên* are ‘the same size,’ with *impej* being ‘slightly better’ (Chapter 8 [pp. 312-322] explores this conceptualization in more detail).

Thus, it appears to me that just as both ‘better’ and ‘worse’ people are necessary for the continuation of the village space as Chapters 3 and 4 explore (pp. 91-92, 115-116), so too are both categories of ‘good’ and ‘bad’ crops essential to the creation and reproduction of forest and riverbank garden spaces. Similarly, it appears that crops that reference both humans and nonhumans are maintained and pursued in Canela gardens, as are varieties along the bright—dull spectrum, and species and varieties classified as ‘original’ and ‘introduced.’ It appears that gardeners value the multi-sensory perceptual engagements they have with a diverse array of species and varieties, and that these engagements become manifested in the dynamic process of crop naming. As Fernando states, ‘we cultivate...use, and consume all the varieties,’ and Liliana echoes his statement, saying that she ‘cannot leave behind’ any varietal, even the *ihkên* ones, and that she seeks out any varietal that ‘interests’ her.

While these are the voices of particularly skilled gardeners, other gardeners whom I know also expressed their enjoyment and pursuit of multiple species and varieties to increase the overall spectrum of diversity in their plots. The sheer number of named varieties gives an indication of how Canela gardeners value varietal diversity as a whole, with a total of 255 cultivated crop species and varieties documented in the ethnobotanical lists in

Appendix A (pp. 349-372), not including the 53 native tree species listed in Appendix B (pp. 373-376), some of which are cultivated as well. There may be more varieties that gardeners would add to these dynamic lists, since they were constantly showing me additional named seeds and cuttings throughout the fieldwork. Whether ‘good’ or ‘bad,’ ‘bright’ or ‘dull,’ associated with humans or nonhumans, ‘original’ or ‘introduced,’ diverse crop species and varieties appear to be essential to the human-plant engagements involved in gardening, and, I would venture, to the unfolding life-world as a whole.

Multi-sensory engagements between gardeners and plants

In addition to valuing and appreciating cultivated crops through ethnobotanical naming, Canela gardeners seek out meaningful relationships with diverse crop species and varieties during the planting and growing seasons. As part of their frequent visits to forest and riverbank garden spaces, women gardeners (and some men) often sing ritual songs to their growing crops. As my research assistants described, there are ritual songs (*cânticos* in Portuguese) associated with many different crop species, and a few songs intended for more than one species and their varieties at the same time. Gardeners typically sing slightly different ritual songs in their garden plots than the communal songs performed in the ceremonial centre that I explore later in this chapter.

For example, the ‘Squash Song’ (Cuhkõn Cahàc Mã Incerer-Xà)⁴⁹ is meant for individual female or male gardeners to sing to their vine crops, including squash, watermelon,

⁴⁹ I have recordings of many individual and communal ritual songs in Canela, but I was unable to have them properly transcribed into Portuguese during the fieldwork except for two communal maize songs examined in the next section that Renato transcribed. My research assistants described the meanings and certain phrases of the remainder of the songs without transcribing them word for word, and I provide their descriptions here.

potato, fava bean, common bean, and yam, as well as to sweet and bitter manioc. After the Hôxwa sweet potato festival (described below in pp. 249-250) takes place at the height of the rainy season in January or February, my research assistants explain, a gardener typically visits her garden to sing this ritual song to the growing crops. According to Fernando and my other research assistants, a gardener should pick up and suspend the crops' vines in the air while singing, as this 'pleases' the growing squash, watermelon, or other vined species. Squash varieties in particular also enjoy being rubbed with red *urucum* paste while they are growing, as this strengthens the vines and squash fruits. The song itself also 'strengthens' and brings 'happiness' to the vined crops, and Renato maintains that singing improves soil fertility as well. Fernando describes the growing crops 'running' or 'walking' toward the singer to listen closely and appreciate the words of the song, which are meant to encourage the plant's growth. Without the gardeners' singing, he explains, the growing plants become sad and weak, thereby making it difficult for them to produce an abundant harvest. The crops 'need an owner to take care of them...to sing and clean the garden,' Fernando maintains.

Another ritual song is specifically intended for varieties of the two types of gourd, Cuhkõn and Cuhtõj, and women or men typically sing it in their forest or riverbank garden plots. The song tells a 'story' and gives an 'explanation' to the gourds about how their human gardeners will care for them and how they will grow abundantly. Fernando explains the words of the song here:

"Grow now, to make me happy; the day that you are grown, I am going to harvest you and take care of you, because inside of you I am going to store all the seeds to plant next, [and] I am going to bring water in you. This is why I am singing this song to you, to make you happy." [...] They say that the gourd hears it – it could be the mother or the father who sings it...they say that the gourds will hear it and their fruits will begin blossoming. Then, when it is already realized, the mother or father...suspends the leaf and grabs the vine, same as with young people...the gourd is like a child.

Similar to the Squash Song, the gardener should hold gourd vines and ‘suspend’ the leaves during (or perhaps immediately after) singing. Through this close contact that Fernando likens to the ‘suspension’ of male youths in the ceremonial centre,⁵⁰ the gourds can ‘listen’ and pay attention to the song’s message. Liliana adds that ‘only the gourds listen’ to this song, perhaps indicating that crop species and varieties only ‘hear’ songs when they are specifically addressed. Fernando clearly identifies the growing squash plants as ‘children,’ and the ‘mother’ and ‘father’ to which he refers are the garden owners. Thus, it is a garden owner’s responsibility to sing affectionate, encouraging words to the growing gourds and handle them as they would a human child. Fernando even describes how he ‘loves’ the gourds, and it appears that for him, the ritual singing is an expression of this love. The ‘ancestors,’ he says, also conceived of gourds as ‘children,’ which is why they cultivated them and took care of them through ritual singing.

While Fernando worries that the modern-day Canela community is not cultivating gourds as often as in the past because their use as storage containers has been largely replaced by manufactured plastic, he continues to teach the ‘Gourd Song’ to the younger generation in the hope that it will encourage the cultivation of gourd ‘children.’ Peanut varieties (Caahy) also require a song to encourage their growth and remind them of the garden owners’ caretaking and affection. In the separate mini-garden on the side of the forest plot where peanuts should be planted, the female or male gardener grabs the peanut vines and sings to them, telling them to grow and be happy. The growing peanuts,

⁵⁰ It is unclear to which ritual Fernando is referring when he likens the suspension of crop vines to young boys. The reference may be linked to an activity in the male initiation ritual complex that Chapter 4 briefly describes (pp. 121-125).

my research assistants say, 'listen' to the advice of their 'mother' or 'father' and flower shortly thereafter.

While these songs can be performed by either gender, Liliana described ritual songs that typically only women sing to yam and squash varieties. The 'Women's Yam Song,' as I am terming it, can be sung by an individual woman in her garden plot while initially planting the yam cuttings and by a group of women walking around the village later in the yam growing season. Liliana's grandmother Manuela Célia taught her that long ago, the yam vines 'became dried out' during the dry season and for this reason the 'ancestor' women 'discovered' this song. When sung during planting, the song is thought to please the yam cuttings and encourage their growth. Later in the season, the words change slightly to directly address the dried out vines and foliage. A group of women will 'become animated' and decide to sing the song while walking around the main 'street' in front of the village houses late at night. The song describes how the women have just discovered that the yam vines are dried out, and shows affection for the yam crops, asking them to stay alive and continue growing.

Meanwhile, the 'Women's Squash Song' is typically sung only by individual women in their forest or riverbank garden spaces. Liliana also learned this song from Manuela Célia, and although she did not want to sing it around the male research assistants, she was eager to perform the song for me when we were alone. As Liliana explained, the song is typically performed by an older woman in the forest or riverbank garden space after the squash varieties have been growing for two or three months but have not yet fruited. First, the older woman yells loudly, calling for the squash and its vine, and then she describes her role to the growing crop:

Vine! Vine! [whispered]
How are you, squash seed?
How are you, squash seed?
Listen to me, squash; you are going to have much fruit
I am your mother and I protect you.

As part of the ritual, the woman strips one of the leaves and places it near the vine. Liliana assures me that the song and leaf ritual please the squash. It listens to the song and recognizes the gardener as its 'mother,' and will produce an abundant harvest. Women continue singing and performing other rituals throughout the squash's life cycle, especially if the crop is failing. If the squash flowers fall and shrivel up (which is usually blamed on a menstruating woman visiting the garden), the female garden owner should visit the garden with *urucum* seeds in her hand, all the while singing, 'squash, do not die!' Ritually 'feeding' the growing crops with meat is another way that human gardeners take care of the cultivated crops in their garden plots. While this ritual is performed less frequently than in the past, some families still hold a ritual feast with their crops after they have planted all the seeds and cuttings in the garden plot. Typically, the eldest male of the family and his sons-in-law hunt and kill a game animal in the forest, so that they can serve this meat to their newly planted crops. The entire family then visits the garden together, and the women cook the meat into *beribu* pies made with manioc (or less commonly with maize). Fernando explains this food sharing ritual and its importance for the crops' growth:

It is like this: when the garden owner cultivates everything...he has to look for animals – deer, *ema*, peccary – and bring them there [to the garden]. They say that we must help the things that were planted – bitter manioc, maize, rice. The garden owner says, "I will look for animal [meat] for our children in the garden to grow quickly." [The crops] are the same as children. That is why one has to clear the brush inside the garden; one cannot

leave lots of brush near the plants. When cared for well, the crops say, “our father is taking good care of us and that is why we are going to grow well; we are going to become large for our father.”

As Fernando and other research assistants describe it, the growing crops ‘eat’ the pies alongside the human family. All the crop species and varieties are said to eat together during the meal, and the meat pies help them to grow abundantly. Camila’s matrilineal family is one of the few that continues practicing the food sharing ritual every year after they have finished planting. Her son-in-law Edson usually hunts agouti, armadillo, *paca*, or deer in the distant forest regions, and then brings the game meat to the forest garden plot. Camila and her three daughters prepare the meat into the *beribu* pies, and the entire family, including the plant ‘children,’ feast on the food together. When asked why she maintains this ritual, Camila explains that the crops ‘need’ to ‘eat the meat’ to grow well and produce a larger harvest, and that they ‘become happy’ from the shared feast. The other research assistants concurred with this explanation, adding that the crops ‘grow like humans’ and therefore need the meat to develop, just as Canela human children need.

Additionally, they described the food sharing ritual as a way to ‘thank’ the crops for growing and staying in their garden plots (since unhappy crops can physically relocate to a different plot, as Chapter 7 [p. 286] discusses). Although people who do not possess shamanic abilities cannot ‘see’ the crops eating nor moving to a different plot, shamans inform the community that the crops feast on the meat and become happy and satisfied from this ritual meal. Thus, the food sharing ritual appears to be a way for gardeners to share affectionately a meal with their crop ‘children,’ express their gratitude that the crops have remained where they are, and better ensure the future happiness and growth of the cultivars.

While all crop species and varieties are thought to ‘need’ meat to assist with their developmental growth, Canela gardeners appear to conceptualize sweet manioc varieties in particular as ‘desiring’ meat more than other crops. Sweet manioc varieties, my research assistants say, will eat any type of meat, be it wild game or cow meat purchased from local cattle ranchers. By craving and desiring meat to appease their appetites, sweet manioc varieties are ‘the same as people.’ They are especially similar to Canela women who, as Fernando explains, ‘do not hunt game themselves, but rather wait for it’ from their husbands and sons-in-law. It is interesting to note that in the Canela ethnobotanical classification schema and in the Star-Woman origin of horticulture myth (see Chapter 3 [pp. 92-95]), sweet manioc varieties are conceptualized as ‘feminine’ – they are conceived as ‘soft,’ ‘calm,’ and, as described above, beautiful, ‘good,’ and ‘true’ (*impej*). Indeed, Fernando explains that in the past, sweet manioc varieties, or Kwỳrỳre in general, were known as simply *impej-re*, as in when a hunter told his wife, ‘go find the “little good ones” [*impej-re*], grate them, and save them for us to make *beribu*.’

In contrast, bitter manioc varieties are ‘masculine’ – they are fierce, dangerous, and ugly (*ihkên*), as well as ‘brave,’ ‘valiant,’ and ‘courageous,’ and they ‘kill’ wild animals with their poison. My research assistants directly associated bitter manioc with the traditional Canela male activities of hunting animals with weapons and becoming a brave warrior. ‘Hugging Vine Manioc’ (Waíputre) and ‘Not-Bitter Manioc’ (Kwỳr Xenti), the two varieties that are classified as half-sweet/half-bitter, are conceived as being *impej* along with sweet manioc, yet are ‘in the middle’ in terms of gender, being half-male, half-female. Interestingly, these gendered categories correspond directly to the amount of toxic cyanogenic-glucoside in the manioc’s tuberous roots. The ‘feminine’ sweet manioc contains negligible amounts of the toxin and does not require processing prior to human

consumption; the ‘masculine’ bitter manioc contains high amounts of the toxin and does require intensive processing (cf. Elias et al. 2000); and the ‘in-between’ genders half-sweet/half-bitter varieties are thought to be slightly ‘less’ poisonous than the bitter varieties.⁵¹ For the food sharing ritual, then, Canela gardeners should appease the ‘feminine’ sweet manioc varieties by ‘feeding’ them more meat than the bitter and half-bitter/half-sweet manioc varieties and the other crops.

Overall, the examples above shed light on the necessity of ritual singing and food sharing to Canela gardening practices and human-plant engagements. Similar to the general and more individualized gendered gardening techniques and activities explored in Chapters 4 and 5 (pp. 137-150, 162-184), through singing to and sharing food with cultivated crops, female and male gardeners appear to show their affection for their plant ‘children’ and encourage them to become ‘happy’ and live ‘well.’ Additionally, in these rituals gardeners and plants appear to be similarly conceived as utilizing multiple senses to interact with one another. Canela gardeners use their voices to sing to the plants, their tactile sense to hold and sometimes rub red paint on the growing vines, and their sense of smell and taste while eating meat pies in the ritual feast. Plants also ‘taste’ and ‘smell’ the delicious meat during the food sharing ritual, and they ‘hear’ the ritual songs.

The multi-sensory relationships that emerge between humans and plants during these rituals include a parent-child component, as evidenced in the Canela gardeners’ own interpretations and explanations. Liliana explains that a woman is the ‘mother’ of any crop

⁵¹ The exact composition of the toxin present in the half-sweet/half-bitter manioc varieties is unclear. According to my research assistants, the tapioca of the Waíputre variety contains ‘poison’ while the pulp does not, and the pulp of the Kwÿr Xenti (‘Not-Bitter Manioc’) variety contains a ‘small amount’ of the toxin. It would be interesting to research the bio-chemical compounds of these varieties to learn more about these indigenous categories of manioc.

that she plants herself, and it becomes her responsibility to care for and sing to the crops that she planted. Fernando describes how crops need to be sung to by their ‘mothers’ and ‘fathers,’ and directly states that crops are ‘the same as children.’ Like human children, the plants need sustenance while they grow and ‘mature,’ and perhaps for this reason the food sharing ritual is conceived as crucial to plant development. Many ethnographic studies of lowland South American indigenous communities have explored how food sharing is an important way of building consubstantial kinship bonds among human families (cf. Overing and Passes 2000; Passes 2000). This is certainly the case for Canela matrilineal families, in which all the family members eat from the same bowl or plate and, I would argue, seem to identify eating together as a fundamental aspect of being or becoming kin. Similarly, it appears that the Canela develop consubstantial kinship bonds with their growing plants through food sharing as well. Ritually sharing food, I would contend, creates, maintains, and solidifies the embodied parent-child tie between Canela gardeners and crop children.

Restrictions connected to human and plant life cycles

Another way that engagements among humans and plants emerge in the Canela life-world are through the food and sex restrictions tied to human and plant life cycles. According to my research assistants, these restrictions have been passed down from the ‘ancestors’ and are integral to becoming *impej*, in this sense apparently conceived as becoming ‘well’ in a holistic sense (see Chapters 5 and 8 [pp. 182-184, 206-207, 319-320] for a detailed exploration of the connection between *impej* and overall ‘wellbeing’). Known as *më ipiyakri tsà* (‘Canela restrictive device’) in Canela (Crocker and Crocker 2004:

94) and *resguardo* in Portuguese, the food and sex restrictions form an important part of male and female life cycles. For boys and men, there are restrictions during the male ritual initiation complex and ear piercing ritual described in Chapter 4 (pp. 122-123, 132) and when becoming a skilled hunter, log racer, singer, or shaman as Chapter 7 describes (pp. 276-280). Women traditionally undergo restrictions during their first menstruation, and both women and men face food and sex restrictions throughout a woman's pregnancy and until her infant is around six months old. During this time, the mother and father of the foetus (and subsequently infant) are prohibited from engaging in sexual intercourse because, as my research assistants explain, this activity could be 'dangerous' for the parents and their growing child.

New parents should partake in a number of food restrictions as well. According to my research assistants, while a woman is pregnant she and her husband are prohibited from eating 'heavy' foods, especially various meats, and typically only consume rice, either 'dry' or made into *mingau* (a type of porridge). Consuming the prohibited foods, Liliana and others inform me, can negatively affect the infant's health once it is born. If a pregnant woman or her husband eat pork or beef, for example, the baby will have a 'wound' on its head, and eating grilled meat or cow tongue will give the baby a 'wound' on its tongue. Similarly, eating the tripe or liver of a cow is prohibited because it will give the baby a stomach ache or diarrhoea. A pregnant woman should refrain from eating chicken until the baby can walk, although my research assistants explained that this prohibition is followed less frequently than in the past.

The couple should also avoid eating wild game, for it will lead to various problems: deer meat will give the baby 'sores' on its skin; *paca* meat will make the baby 'thick' or

unhealthily fat; coati meat will give the baby itchy or 'uncomfortable' skin; and porcupine meat will make him or her unhealthily skinny. Eating other foods can have a negative impact on the mother's health. A pregnant woman who eats the meat in a *beribu* manioc-meat (or maize-meat) pie will develop spots on her face, or her face will turn completely 'black' once she gives birth. If she eats potato buds, she will similarly develop a spotted backside. While these foods do not affect her husband's health, he must also refrain from eating potato buds during her pregnancy, as these will make the baby have a 'wounded' or 'sore' nose once it is born. Liliana also discusses the activities the pregnant woman and her husband should refrain from doing. The woman should not touch a wooden spoon to her mouth for it will cause a delayed birth, and she must avoid sleeping heavily or during the day because this will lead to 'problems' with the baby.

Once the baby is born, the restrictions change and lessen in severity as time goes on. Immediately after the baby's birth, Fernando and Renato describe how the father should remain lying down inside the house and only consume rice porridge until the baby's umbilical cord falls off. Both the mother and father refrain from bathing the 'upper half' of their bodies until the umbilical cord falls off as well. After this happens, Fernando explains that the father rubs a leaf from the Hotre \grave{y} un plant on the infant's body, and makes tiny bracelets out of the fibrous leaf for the baby to wear. According to my research assistants, this will protect the baby from developing an illness or pain caused by 'heavy' foods.

The new parents should still refrain from eating the prohibited 'heavy' foods, including meat and sweet foods such as sugarcane, mango, banana, papaya, and most other fruits, for these items will give the baby diarrhoea or stomach pains. The father continues eating

only rice until the infant is around six months old so the child will ‘grow fast and be strong,’ as my research assistants describe. Meanwhile, the new mother can begin eating cow meat in order to produce milk for her infant, as Liliana advised her daughter Joaquina when she gave birth in July 2012. When the baby is around two months old, the mother’s diet can include common bean and fava bean, and by three months, she can eat ‘almost anything’ except for ‘heavy’ and fatty meats such as pork and wild game.

While the mother is constantly holding and cuddling her baby during this time, the father cannot hold his child until he or she reaches six months of age. Neither parent should visit the garden plots until the infant is six months old as well, because the ‘souls’ (*mēkarõn*) of deceased Canela, who normally reside in forested areas near garden plots, can harm the baby (see Chapter 7 [pp. pp. 264-265, 269]). Joaquina and her husband Vítor strictly followed these restrictions after their daughter was born, relying on Liliana’s support to care for the infant and sustain the family with her garden produce, as the couple could not create or manage their own garden plot during this time.

Similarly, men and women partake in food and sex prohibitions while cultivating their growing crop ‘children’ as well, especially peanut, fava bean, yam, maize, squash, and gourd. My research assistants inform me that of all the crops grown in Canela gardens, peanut varieties (Caahy) planted without their shells require the most restrictions while they are growing. While peanuts planted with their shells do not necessitate any restrictions, my research assistants did not elaborate on the reasons behind the different treatment for peanuts without or with their shells. When planting peanuts without their shells, the gardener should not touch the peanuts with his or her bare hands, as this will cause ants to attack the crop. He or she must place the peanut seeds on a piece of bark

from the Crĩĩn-re tree, and transfer them from the bark directly into the hole so as not to touch the seeds directly. While the peanut crop is growing and until it flowers and matures, the male or female gardener cannot eat any 'heavy' foods such as meat and fish. Wander explains that eating meat during this time, even if one washes one's hands after the meal, will 'affect' and 'cause harm' to the peanuts. According to Wander and my other research assistants, a gardener shows his or her 'respect' for the peanut crop by undergoing the restrictions. It is interesting to note the similarities between Canela and Panará peanut cultivation including the food restrictions undertaken during the growing season, although growing peanuts and the restrictions associated with them are exclusively male activities in the Panará case (Ewart 2005: 25).

Gardeners who plant fava bean varieties must also show their care and attentiveness while planting and tending to the growing plants. Planting fava bean, my research assistants say, requires the 'most care' and should be done with clean hands. While the crop is growing, male and female gardeners must refrain from eating the liver of any animal, as this will inhibit an abundant fava harvest. They cannot eat tripe either, for this will dry out the fava bean pods and lead to an insect infestation in the garden. Camila says that while her fava varieties are growing, 'I do not eat the fat from any animal – pig, *paca* liver, peccary...[otherwise], the fava will not give a good harvest.' She also explains that smoking tobacco next to the growing fava or bitter manioc will make the crops 'bitter' and inedible, and will make bitter manioc have stronger 'poison' than usual (although many gardeners overlook this prohibition). When gardeners intercrop fava bean with bitter manioc and hang the fava vines from the manioc sticks as described in Chapter 4 (pp. 140-141), they should refrain from eating animal tails, for this will prevent the two crops from successfully growing together.

As with the food restrictions for parents of human children, violating a food prohibition associated with a growing crop species can physically affect the crop in negative ways. If a gardener eats native *macaúba* (Ronhàc; *Acrocomia aculeata*) or *bacuri* (Cũmxê; *Platonia insignis*) fruits while growing yam varieties, for example, the yam tuber and/or vine will become rounded and hard like the shape and consistency of these fruits, and will not produce a good harvest. Eating *macaúba* is also prohibited when growing maize varieties, as the corn kernels will become rounded and inedible. According to Liliana and Camila, consuming *macaúba* fruits during the planting and growing seasons will ruin all the crops growing in the garden, making them similarly round, hard, and inedible. They agree that gardeners should also refrain from eating animal fat while growing gourds and from eating pork fat in particular while growing squash varieties, as this will inhibit the squash vines' growth.

In addition to food restrictions, the physical condition of a gardener can have a similarly physical or 'bodily' effect on growing crop 'children.' A woman who is menstruating or pregnant should avoid visiting the garden space and specifically being near varieties of bitter and sweet manioc, sweet potato, squash, and common bean. The presence of a menstruating woman can cause all growing crops to 'dry out' and is therefore 'dangerous' for the plants' wellbeing, as my research assistants explained. If a menstruating woman spends time in the centre of the garden plot where bitter manioc is usually planted, the manioc roots will become rotten and putrefy, and sweet potato will become dried out and inedible if she visits its mini garden next to the forest plot. Pregnant women should also avoid visiting the centre of the garden and the areas where squash and common bean varieties are growing, as they will cause the flowers of these species to die and thus the squash fruits will never mature. When some of Liliana's squash crop in her backyard

garden did not produce fruit in May 2012, for example, she speculated that the crop had failed because her pregnant daughter Joaquina or granddaughter Patrícia had walked too close to the growing plants.

Certain physical activities are also forbidden in the garden space, for they will have a detrimental effect on the growing plants. Camila and Liliana recounted how their 'grandfather' Dirceu instructed them to refrain from having sex in garden plots in order to 'respect the garden' and its crops. Ignoring this restriction, he told them, causes the plants to 'putrefy.' Defecating in or immediately nearby the plot is also prohibited because, according to my research assistants, the plants 'dislike the smell.' Camila added that her grandparents taught her to avoid talking loudly or fighting with family members in the garden space, as this will upset the crops. Extending the parent-child connection between gardeners and plants even further, my research assistants described how physical traits can be 'passed down' from the gardener parent to his or her plant 'child.' Someone who has good, strong teeth, for example, should plant the maize crop so that it too develops 'beautiful teeth,' or rows of kernels. If a gardener with bad teeth plants maize, the ears of corn may have 'failed' kernels that are unsuitable for consumption.

Thus, it appears that the restrictions for parents of both human and crop children shed light on the embodied and consubstantial nature of Canela conceptualizations of parenting and growing or making humans and plants throughout the life course. The foods that parents consume have a direct bodily effect on their human child, so much so that eating prohibited foods results in physical injuries, illnesses, or discomfort for the infant, while refraining from such foods and eating only rice makes the child physically strong and healthy. Additionally, the parents' embodied activities such as engaging in sexual

intercourse, bathing, and visiting garden plots affect the growing human child as well. In the same way, gardener parents can negatively affect their plant children if they eat prohibited foods, carelessly handle seeds, or have sexual intercourse in forest and riverbank garden spaces, while refraining from these activities and affectionately caring for the crops helps them become 'beautiful,' 'strong,' and 'well' in a holistic sense. Even physical traits such as having 'good teeth' can be 'transmitted' to both human and plant children by their parents.

Just as the prohibitions for pregnant mothers and their male partners, which are common throughout lowland South America (cf. Rival 1998), continue after the child is born, so too do the restrictions for gardener parents continue throughout the natural life cycle of the growing crops. Although the restrictions for new parents of human children eventually lessen and end after the child reaches around six months old, the embodied link between mothers, fathers, and children remains through the conceptualization of sharing the same 'blood' (*caprôô*) throughout their life courses (cf. Crocker and Crocker 2004: 94) and through multi-sensory, consubstantial engagements of living, eating, working, and sleeping together. Gardeners appear to create and maintain similar multi-sensory embodied connections with their plant children until the crops are mature, although the concept of shared 'blood' substance does not seem to apply. Overall, then, perhaps Canela parenting can be thought of as a series of embodied engagements between parents and children that take on different forms as the human or plant child grows and develops. In this way, parenting emerges an unfolding series of multi-sensory encounters in which Canela women and men are involved in the processual 'making-in-growing' or 'growing-in-making' (cf. Ingold and Hallam 2014: 5) of human and plant children.

If gardeners continue to engage with their growing plant children throughout their lives, it is worth exploring here how the Canela (human) community conceptualizes plant life cycles. According to my research assistants, seeds and cuttings are 'infants' who require special care and attention, as the previous Chapter 5 (pp. 198-200) explores in detail. Fernando described how gardeners compare human and plant 'infants' in a conversation we had in August 2012:

[The seed] is like an infant; it stays saved, just as a child who stays inside his mother, and when he is born people will take care of him. The mother takes good care of him and does not let anything bad mistreat him. When he is grown up, his mother does not have to take care of him anymore, for he takes care of himself. With cultivated crops, the garden owner him- or herself takes care [of the crops]. When they are already grown, the gardener still cares for them.

Here we can see that while there are certain similarities between saved seeds and fetuses that 'stay inside' their mothers, plant children appear to require more care and attention throughout their lives than human children do, the latter of which grow up to become adults and take care of themselves. While seeds and cuttings not yet planted are already considered infants, planting itself may be significant to the plant's life cycle. Since planting typically includes men digging the holes and women inserting the seeds as Chapter 5 (p. 189) describes, perhaps this moment is a kind of 'birth' of plant children, with men and women working together to make and grow their seed and cutting infants. Once planted, gardeners conceive of the crops as growing children who require attentive care, as Fernando explained in the same conversation:

People take care of plants the same as they do [with] people. If one does not take care [of the plants], the brush overtakes them, and they become very angry and sad, as human children do. Nowadays, the mother uses perfume and has to cut her hair and paint [herself] with *urucum* and *pau de leite*, and they say that the [crop] child will grow quickly. She paints herself, and they say that it is pure happiness [for the crops]!

In these ways, then, weeding the brush and cleaning the garden space appear to be forms of plant 'childcare' that help the growing crops grow 'quickly' and become strong, as well as preventing them from feeling 'angry' and 'sad,' states of being that parents also try to prevent their human children from experiencing. The sun and rain also play parental roles to the growing plant children. Fernando describes how the sun 'protects' and 'helps' the plants, and how the rain is another kind of 'mother' to the crops, 'feeding' and 'sustaining' them with water as a mother feeds her baby breast milk. Similarly, human gardeners also 'sustain' their crop children through 'feeding' them meat in the food sharing ritual, and their ritual songs help the crops grow abundantly and become 'happy.'

When the crops in garden spaces mature and become ready to harvest, they appear to be conceptualized as 'adults' who have reached the end of their natural life cycles. Liliana's father Paolo Eduardo, who was a well-known shaman, told her how certain plants would become 'old' over time, and with his special shamanic abilities, he could 'see' them in this late stage of life. Varietals of bitter manioc that were left in the ground for two-to-three years, for example, appeared to Paolo Eduardo as 'old people' who had already had 'children' and 'grandchildren' of their own. Fernando explains that when crops are harvestable, they have already passed through adulthood and their lives have 'ended,' so people can consume them 'without problems.' He further specifies that people do not eat plant children, but rather the (recently deceased) 'adult' plants, and that this is 'normal' behaviour for humans to undertake. Liliana agrees that mature crops that are ready to harvest are 'the same as being dead,' and being eaten by humans is their natural next step. Thus, it appears that the Canela conceptually separate their roles as parents of plant children while the crops are growing and their roles as consumers of harvested 'dead adult' plants. Eating harvested crops does not seem to be considered cannibalistic in any

sense, for these 'dead' plants have naturally passed on and they are meant to be eaten by humans, as is the case for game animals killed for their meat.

There does seem to be a cyclical aspect to plant life cycles, however. Instead of simply 'dying' and ceasing to exist, some of the seeds and cuttings from the 'dead' harvest are saved for the next planting season, when they become 'live' infants. There are some indications that crops must be fully cooked to be completely 'dead.' The shaman Reinaldo informed me that if ears of corn are not thoroughly roasted they will give the person who eats them a stomach ache because the maize is still 'alive.' Liliana explains the cyclical nature of plant lives in the following way:

It is like this – [harvesting crops] is the same as death. However, if I harvest a seed that I want to increase, I protect it well. During the first harvest, I have already set aside a separate part [of the seeds] to save and to not die. I have to save them well...I do not want the seeds to die as people die and not have any more of them. The harvest of crops is the same as people. Just as people become ill with some problem and the family, the mother or father, has to protect them [by] finding a remedy to make them better. If I did not take care of the seeds that I harvest, it would be the same as an illness! [...] If I take good care of the seeds, keeping them saved well, then the crops...stay alive! All the time and year after year.

In this view, then, the crops that people eat are 'dead,' and if someone eats the entire harvest of a particular varietal, then that varietal will be 'dead' forever. Saving seeds and cuttings, on the other hand, will ensure that the varietal 'lives,' for the saved seeds become 'alive' through the act of seed saving itself. By rubbing the seeds with oils and placing them in a dry container, the storage techniques described in Chapter 5 (p. 199), Liliana and other Canela women gardeners bring the seeds to life in a way, and ensure that the varietal will 'live' for generations to come. Thus, perhaps Canela women, as the primary seed savers, symbolically and materially 'conceive' the infant seeds and cuttings through the embodied acts of saving them for the next season. Both women and men

serve as the mothers and fathers of plants during their childhood. By the end of their adulthood, the plants naturally 'die' until some of their seeds or cuttings are saved, at which time they 'live' again and the plant cycle of life continues. Throughout this entire cycle, Canela gardeners appear to value cultivated crops through multi-sensory, embodied food sharing and ritual singing, as well as the food and sex prohibitions that this section describes.

Communal engagements with cultivated crops

If gardeners develop multi-sensory, embodied engagements with their crops that resemble relationships between parents and human children while the crops are living, what happens when the crop 'children' reach the end of their natural life cycle? Apart from being consumed by individuals and families in the matrilineal household, most crop species and their varieties are ritually celebrated at the end of their lives with different types of harvest festivals. There are community-wide celebrations for the first harvest of fava bean, squash, sweet potato, cultivated cashew fruit (Ahkrýt; *Anacardium occidentale* L.), native *chapada* 'cashew' fruit (Ahkrýt-re; *Anacardium* L.), and *buriti* (Crowa) fruit.

In these rituals, the elders of the lower moiety age set who lead the *pró-khãmmã* (see p. 118 in Chapter 4; cf. Crocker 1990: 375), must taste the first harvest of these species to ensure they are 'safe' for general consumption. Those who are not part of the council, including children, young adults, and women, are forbidden from eating the crop before it is tested and approved by the male elders. The family who collects the first harvest of fava bean varieties in the community, for example, must prepare a fava dish, usually rice with fava or occasionally *beribu* manioc pie with fava instead of meat, for the elders of

the council to taste. Usually, the male elders tell the female head of the household and her daughters to prepare the food and present it to them in the ceremonial centre in the afternoon. Once they have eaten the fava and declared it safe, the council will 'liberate' the crop by allowing the entire village to harvest and consume the fava varieties growing in their garden plots. As my research assistants informed me, anyone who eats their fava crop before this ritual will be bitten by various insects, including one that burrows deep into the skin. The first harvest of squash requires the same ritual as fava, including the women of the family cooking and presenting the squash to the council, the male elders consuming the squash, and the liberation of the crop for the entire community. A similar fate of being plagued by insects will also affect anyone who violates the squash harvest ritual, and young people who hide fava bean or squash crops from the male leadership council will develop 'spines' on their skin as a public display of how they violated the prohibition. Both of these first harvest rituals occur in May or June, when the fava and squash crops become mature.

During the sweet potato first harvest ritual, women present cooked sweet potato to the male elders, who slowly chew it while drinking water. This technique, my research assistants told me, helps the men to determine whether the crop will make them ill. If the tasting is successful, then all families can harvest and consume sweet potato until the end of the season, when once again consumption of sweet potato varieties is restricted to the male elders only. The consequences for young men and women who violate these norms are more severe than for other crops, owing mainly to a mythic story in which a young woman, either pregnant or with a new born child, transforms into an old woman after eating sweet potato. Thus, the research assistants explained, young people who eat sweet

potato during a restricted period will also age immediately, developing wrinkled skin and grey hair.

The first harvest rituals for cultivated cashew and *chapada* cashew follow the same formula of presenting the first harvest to the male elders for their tasting and approval. For cultivated cashew, the family whose garden produced the first harvest gives the raw fruit to the elders, and the crop's consumption is restricted to older males only at the end of the season. Young people who eat the cultivated cashew fruit while it is restricted will develop spots all over their faces after having two or three children. Since *chapada* cashew is not 'cultivated' per se, anyone can bring its first harvest to the male elders when it ripens in September. After listening to a ritual song associated with the *chapada* cashew, the elders taste the crop and liberate it for the rest of its fruiting season.

There are also ritual songs associated with the *buriti* fruit first harvest ritual. The community as a whole sends a basket of the *buriti* fruit to the ceremonial centre and presents it to the leadership council. Before testing the fruit, the appointed elders of the council sing five ritual songs in the ceremonial village centre. Four of the songs are sung facing each cardinal direction starting with the east, then north, south, and west. The elders then perform a final song in the centre of the ceremonial area. After the singing, the entire council consumes the fruit, signifying that it is liberated until the end of the fruiting season, when it is only available to the older men. According to my research assistants, young people who eat the fruit during the prohibited periods will become emaciated or be attacked by an insect or arachnid, such as a spider, scorpion, ant, or mosquito.

In addition to these rituals for first harvests, the community ritually celebrates sweet potato and other vine crops during the Hôxwa (literally 'Sharp or Pointed Leaf') festival in February or March when sweet potato varieties are typically ready to harvest. The festival takes place during the 'Unnamed Season' of the annual ceremonial cycle in between the 'Regeneration Season' and the 'Wuhtỳ (Wè?tè) Season' (cf. Crocker 1990: 99; see Chapter 4 [pp. 119-125] for more details). The central component of the festival is the 'Sweet Potato Song' (Jàt mã hàhkrihkrit) that men sing in the ceremonial centre of the village. The male lead singer leads the ritual, using his maraca made out of a gourd variety to keep the beat of the song. Women also participate in the singing, albeit behind the men on the outskirts of the ceremonial centre. In this way, my research assistants explained, during the song the men become the 'sweet potatoes' of the women. Although sung at the end of the growing season, the research assistants inform me that the purpose of the song is to 'help the sweet potato grow well.'

Similar to the song performed by individual gardeners for sweet potato in garden plots, in the communal ritual song the singers tell all the sweet potato varieties that they are their 'children' and that they must grow 'fast and well.' The song is intended to benefit other vine crops as well, including varieties of watermelon that are harvested around the same time, squash, fava bean, some types of common bean, and yam. Thus, no ritual singing is necessary during the first harvest rituals of fava bean and squash, because these crops have already 'listened' to and become 'happy' from the Sweet Potato Song during this time. For Canela men and women, the Hôxwa festival is an 'animated,' fun ritual that some compare to Brazilian Carnival that is celebrated around the same time of year. Men and women ritually dance along with the singing, and the festival is said to make both people and vine crops feel 'happy' and 'well.'

Maize is the only crop that the Canela community ritually celebrates throughout its life cycle, during separate planting, growing, and harvest festivals. The planting ceremony usually takes place during the Regeneration Season in November or December, when gardeners typically plant maize varieties in forest garden plots. During my fieldwork, however, the planting ritual occurred in July 2012 because the ritual 'owner' of the maize ceremonies decided to plant a separate maize garden near the riverbank, where crops mature faster than those growing in forest plots (see Chapter 4 [pp. 136-137]). Traditionally, the *pró-khãmmã* chooses which man becomes the owner of the maize ceremonies, but nowadays, my research assistants explained, the person often nominates himself for the role. The planting ceremony begins with the ceremonial owner presenting maize seeds to the leadership council in the ceremonial centre. In July 2012, the owner Sílvio and his grandson brought kernels of 'Large Red-Yellow Maize' (Põhy Caprêc-ti) to the centre, although Fernando informed me that any varietal of maize will suffice depending on the owner's personal preference. Wrapped up in a piece of cloth, Sílvio presented the kernels to the council, saying, 'I am bringing maize to sing the song and [so that] I can plant it.'

Next, he began singing the 'Maize Song' (Põhy Jacrer) for the maize planting ceremony. This song includes three slow and three fast parts sung in that order, and tells the story of maize that is angry with a woman in the garden and is humiliating her. She is 'taking' or harvesting one maize plant while another one is humiliating her. Traditionally, the men's Red (Kàà-mã-?khra) Regeneration moiety circles around the centre while the singer sings, and the young men bring mats out to the centre where the symbolic 'maize house' is located. Meanwhile, the men of the Black (A?tùk-mã-?khra) Regeneration moiety grab leaves and place them on the heads of those men in the opposing group. None of this took

place in July, however, and after Sílvio sung the ritual song by himself, he returned to his house in the village with the same maize kernels he had brought with him. The next day, having not eaten anything since the planting ritual, he visited his riverbank garden and planted the maize. After the maize owner plants his crop of maize, the planting season has been ‘liberated’ and other families can plant their maize seeds whenever they choose. As Fernando explained, the maize seeds become ‘happy’ from the planting ceremony and its ritual song. A transcription of the song follows here:

Table 5: Maize Planting Ritual Song (Põhy Jacrer)

Song Lyrics in Canela	Description
<i>Wa huru jaheé</i> <i>Wa huru jaheé</i> <i>Ně hãã hỳỳ, hãã hỳỳ</i> <i>Ně hãã hỳỳ, hãã hỳỳ</i> <i>Ně wa cumẽre heé, pryyhy cukrere</i>	First slow ritual song
<i>Wa huru jaheé</i> <i>Wa huru jaheé</i> <i>Ně hãã hỳỳ, hãã hỳỳ</i> <i>Ně hãã hỳỳ, hãã hỳỳ</i> <i>Ně wa cumẽre he, pryyhy tuúre he</i>	Second slow ritual song
<i>Wa huru jaheé</i> <i>Wa huru jaheé</i> <i>Ně hãã hỳỳ, hãã hỳỳ</i> <i>Ně hãã hỳỳ, hãã hỳỳ</i> <i>Hô mǎrǎ quêê tẽre, waha cujaáre</i>	Third slow ritual song
<i>Wa huru jaheé</i> <i>Wa huru jaheé</i> <i>He xôahô-nõ hà,</i> <i>hũjaha hêê xôahô-nõ hõ, xôahô-nõ hõ</i> <i>Ně hũjaha hêê, xôahô-nõõ</i> <i>Ně wa cumêêre he, pryyhy cukreére</i> <i>Ně hũjaha hêê</i> <i>Ně wa cumẽẽre he, pryyhy cukreére</i> <i>Ně hũjaha hêê</i>	First fast ritual song
<i>Wa huru jaheé</i> <i>Wa huru jaheé</i> <i>He xôahô-nõ hõ, hũjaha hêê</i> <i>Xôahô-nõ hõ, hũjaha hêê</i> <i>Xôahô-nõ hõ, ně hũjaha hêê</i>	Second fast ritual song

<i>xôahô-nõ hõ, hùjaha hêê</i> <i>Wa cumêêre he, pryyhy tuúre henê hùjaha hêê</i> <i>Nê wa cumêêre he, pryyhy tuúre he, nê hùjaha hêê</i>	
<i>Wa huru jaheé</i> <i>Wa huru jaheé</i> <i>He xôahô-nõ hõ, hùjaha hêê</i> <i>Xôahô-nõ hõ,</i> <i>Xôahô-nõ hõ, nê hùjaha hêê</i> <i>Xôahô-nõ hõ, hùjaha hêê</i> <i>Xôahô-nõ hõ, nê hùjaha hêê</i> <i>Ho mārã quêê tēêre, waha kujaha, nê hùjaha hêê</i> <i>Mārã quêê tēêre, waha kujaha, nê hùjaha hêê</i> <i>Wa huru jaheé</i> <i>Wa huru jaheé</i>	Third fast ritual song

During the maize growing season, men perform other ritual songs associated with maize and the maize log racing rituals, during which the upper and lower age-set male moiety groups compete against one another in a series of ritual races with logs cut in the ceremonial ‘Corn’ style (cf. Crocker 1990: 100). The first song, known as Põhy Jõpĩ Jacrere, and the second song, known as the Ahtyc Mã Ahkra (literally the ‘Black Regeneration moiety’ song), both reference the log races, and they are a ‘couple’ so should be sung one after another. Typically, a lead singer and a group of young men sing the first song during the end of the dry season in September (if the maize is planted early as was the case in 2012) and the second song at the beginning of the rainy season in November or December.

Performed in the ceremonial centre only, Fernando explained that the growing maize plants can ‘hear’ the songs, which bring them great ‘happiness.’ Some shamans also say that the maize plants ‘walk’ from the gardens to the ceremonial centre to listen to the songs. The logs cut in the maize style also ‘hear’ and ‘become happy’ from the singing. By bringing happiness to the crop, these songs are thought to encourage maize growth and

help ensure an abundant harvest. In the transcription of the second song below, it is possible to see how the lead singer and the groups of men interact with each other and reference their log racing activities:

Table 6: Second Ritual Maize Log Race song (Ahtyc Mă Ahkra)

Song Lyrics in Canela	Description
<i>Huxiii Hiii</i>	Spoken – is a ‘liberation’ of the lead singer
<i>Cruc, cruc, cru</i>	Young men stepping on the ground three times
<i>Xôôô hôhô, xôôô hôhô</i>	Yelled by the young men
<i>Mě aquêtjê japunhã, caa mẽ icuràhto mẽ amji</i> <i>Jatom to amor – riimã ikôt rỳ̀ ator</i>	Young men cursing/calling names at the ‘enemy’
1) <i>He wara, ramujĩĩ hĩĩ</i> <i>He wara, ramujĩĩ</i> <i>Waraaa haa mujĩĩ hĩĩ</i> <i>Waraaa haa mujĩĩ hĩĩ</i> <i>Wara, ramujĩĩ hĩĩ</i>	Lead singer singing
<i>Huxiii Hiii</i>	Spoken – is a ‘liberation’ of the lead singer
<i>Cruc, cruc, cru</i>	Young men stepping on the ground three times
<i>Xôôô hôhô, xôôô hôhô</i>	Yelled by the young men
<i>Por mẽaquêtjê japunhã rỳ̀ ite ato haj~ryy</i>	Cursing/calling names at the ‘enemy’ who they beat during the log race
2) <i>Jará hiicojeé he, jará hiicojeé hee</i> <i>Jará hiicojeé he, jará hiicojeé hee</i> <i>Mă xôôôre he, mă xôôôreé</i>	Sung by the lead singer
<i>Huxiii Hiii</i>	Spoken – is a ‘liberation’ of the lead singer
<i>Cruc, cruc, cru</i>	Young men stepping on the ground three times
<i>Xôôô hôhô, xôôô hôhô</i>	Yelled by the young men
<i>Mar caa, mẽaquêtjê japunhã, ikôt amjimã to gahpan riimã to acator</i>	Young men cursing/calling names at the ‘enemy’
3) <i>Ně hariii pêwa mỗỗhỗỗ hỗỗ</i> <i>Ně hariii pêwa mỗỗhỗỗ</i> <i>Haa, harii hii, nẻ hariii pêwa mỗỗhỗỗ hỗỗ</i> <i>Nẻ hariii pêwa mỗỗhỗỗ hỗỗ</i> <i>Jahaaahi, jujuúri jahaaa</i>	Sung by the lead singer

<i>Jujuúri jahaaa, jujuri jahaaa, jujuri jahaaa hêê</i>	
<i>Huxiii Hiii</i>	Spoken – is a ‘liberation’ of the lead singer
<i>Cruc, cruc, cru</i>	Young men stepping on the ground three times
<i>Xôôô hôhô, xôôô hôhô</i>	Yelled by the young men
<i>Por Caa aquêtjê japunhã, rỳ ìkôt gōkre erààxà to ate amjkêrkêt Hamrê quêha increr, increr kam to tẽ, ihkênpej</i>	Young men cursing/calling names at the ‘enemy’
4) <i>Pànàri Cajômô, wa jũũrêêhê Pànàri Cajômô, wa jũũrêêhê hêê Peá increr maà apkjê nẽ mō Põhy jō pahhi Jurkwa wỳr, quêha mentuwajê hakànpê mẽ pa, pa, pa, porteé apu mō hanẽ</i>	Sung by the lead singer
<i>Hamrê quêha ramã põhy cupu to ajkrut-re, nẽ harwa mã Cumã ihcahty nẽ kam cuxi cuwari, quêha nō Peá increr mor kôt cupy nẽ maá càà wỳr to mō, nẽ càà jahkà kam to hanẽ, quêha hyrmã mẽ, ihtàmwx`y nō hara coxêê to tẽ, quêha camaá to cumã ihhêj, nẽ nẽẽ to cacwin nare. Peã prohnō ramã hyrmã xa nẽ amjimã, põhy cupu pijakrut ita py. Hamrê quêha hapỳamã increr kama to tẽ.</i>	Spoken by the lead singer
5) <i>Pànàri Cajômô, wa jũũrêêhê Pànàri Cajômô, wa jũũrêêhê hêê Hamrê ita caxuw quêha Mehcunẽá pyt cjêj-xù Mẽ wỳỳỳhỳj, ita caxuw Mẽhkên apu mẽ awx~un. Hamrẽ.</i>	Sung by the lead singer

Finally, the community performs a maize harvest ceremony after the sweet potato festival occurs in February or March. The harvest ceremony does not include a ritual song, because, as my research assistants explained, a song was already performed during the planting ritual. As with the planting ritual, the ceremonial owner must harvest the first

crop of maize from his garden plot. He then crushes the mature ears of corn into a powder and serves this to the elders who try the first harvests of other crops. Once they have tasted it and approved the crop as safe, then the entire community can harvest their maize crops as well. In 2012, Sílvio and his family gave their first crop of maize to the elders in November, because he had planted the crop that much earlier in the year.

In the afternoon of the same day (or immediately after the Hôxwa, since the two ceremonies can sometimes occur at the same time), the lead singer calls the young men to the ceremonial centre to play Põhy Prỳ (Prỳ = shuttlecock). This is a game involving shuttlecocks made out of ears of corn that groups of men toss to each other, seeing how long they can play without letting them hit the ground. Sílvio and his family made the shuttlecocks for the harvest ceremony in November 2012, and all the male moiety groups played together until late in the afternoon. The game, according to Liliana and others, is meant to increase the maize harvest, and Crocker (1990: 100) notes a relationship between how many times the shuttlecock is tossed without hitting the ground and the abundance of the harvest. Overall, my research assistants say, the harvest festival is intended to make the maize seeds 'happy,' which will therefore ensure that there is always a successful maize harvest year after year.

Although these collective ceremonies are diverse and complex, it appears that overarching themes connect them together. A major theme of all the harvest rituals, I suggest, is the ceremonial value given to different crops at the end of their natural lives. The chosen elders of the leadership council who are allowed to taste the first crops have the most prestigious positions in the community, as they lead the ceremonial, political, and socioeconomic decision-making on a community-wide scale. Thus, the connection

that these elders develop with the crops they taste both displays and strengthens the value accorded to the plant species and varieties involved in the rituals. As my research assistants explain, crops are set aside for the first harvest rituals 'because they have value,' and are therefore too important and valuable to be eaten without a ritual 'proof of freedom' by the prestigious elders.

While the crops are growing, they are usually taken care of on a more individual or familial scale (an exception being the maize growing festival), which is similar to how young children are mainly cared for by their matrilocal family members. At the end of their lives, however, the crops have gained enough prestige to be accorded a ritual in the ceremonial centre, just as male elders acquire powerful positions in the ceremonial centre when they are older and may be nearing the end of their lives. Perhaps the crops involved in first harvest rituals can be conceived of as the 'elders' of the garden, who are ritually brought to the ceremonial centre to be celebrated and adored.

Additionally, a second theme that seems to emerge through these harvest rituals (and the planting and growing rituals for maize) is the promotion of the harmonious engagement of people and plants. In the ritual songs, people encourage crops such as sweet potato and maize to 'be happy' and 'well,' and people show their 'respect' for the crops by refraining from consuming them until the elders perform the ritual tasting. For maize varieties especially, the three rituals throughout the crop's life demonstrate the Canela community's ongoing caretaking and support of maize, and the people's desire to ensure the maize is 'happy' and 'satisfied.' The community therefore appears to value and seek out harmonious engagements with crops over time and in multiple spaces. Whether naming seeds at home, planting and tending to growing crops in forest or riverbank

gardens, or ritually celebrating harvested crops in the village ceremonial centre, Canela people place great importance on their relationships with crop species and varieties.

Conclusion: making and growing human and plant ‘children’

As the myriad examples in this chapter highlight, Canela gardeners appear to develop intimate, affectionate relationships with their cultivated crops in various ways. Whether through ethnobotanical naming and saving diverse seeds and cuttings, ritual singing to and sharing food with growing crops, undergoing restrictions that exhibit a bodily tie between people and plants, or communally celebrating recently harvested crops, the lives of gardeners and plants become intertwined over time and in garden and village spaces. These unfolding engagements appear to incorporate multiple senses on the part of both humans and plants, as gardeners sing to, touch, and share food with plants, and as plants ‘listen’ to the songs, ‘eat’ the shared meat, and ‘move’ within and between garden plots, perhaps even ‘visiting’ the ceremonial centre to listen to communal songs sung in their honour.

While Canela men and women, girls and boys form important social links with each other through working in the garden, eating, and communally celebrating harvests together, I suggest that cultivated crops are not merely mediators for human social engagements but rather form an integral part of ‘bio-social’ encounters themselves in the ever-unfolding ‘bio-sociocultural life-world.’ In this sense, cultivated crops are moving and growing beings with capacities for multi-sensory entanglements with humans. Thus, based on the human-plant encounters explored in this chapter, I posit that both humans and plants

participate in the 'growing-in-making' or 'making-in-growing' (cf. Ingold and Hallam 2014: 5) of themselves and of the emergent life-world.

Pursuing this approach further, I also suggest that these human-plant entanglements become especially valued and meaningful throughout the life course of both humans and plants and can be understood through a Canela 'aesthetics of landscape.' As my research assistants' descriptions in this chapter indicate, gardeners appreciate and value the ongoing, embodied encounters they develop with saved seeds and cuttings, plants growing in the garden, and harvested crops that are then consumed and provide sustenance. Plants, too, are thought to appreciate these relationships as well, becoming 'happy' from the ritual singing and sharing food, and responding to their gardener parents' adherence to the ritual prohibitions that keep plants 'strong' and help them 'grow well.' How these ongoing encounters become meaningful for both humans and plants emerges, I suggest, through the 'bio-sociocultural aesthetics' theoretical approach that emphasizes unfolding human-nonhuman relationships and the subsequent multi-sensory, aesthetic-moral value placed on these relationships. This chapter focused on the specific engagements between Canela gardeners and plants that take on a parent-child component and are integral to the life-world. The following Chapter 7, meanwhile, explores how Canela shamans develop specific engagements with plants that exhibit both similarities to and differences from those of gardeners and that form an important aspect of the unfolding 'bio-sociocultural life-world' as well.

Chapter 7

‘Plant-People,’ ‘souls,’ and shamanic powers in forest and village spaces

Introduction

Canela shamans engage with cultivated plants and a variety of other nonhuman beings in ways that are distinct to the shamanic profession. In this chapter, I explore how shamans develop the specific perceptual capabilities necessary to interact with nonhumans, particularly with Canela and white ‘souls’ and with the Plant-People ‘master spirits’ of specific crop species and varieties. Only shamans can ‘see’ and interact with these entities, who usually reside away from the village in forest garden plots and in other forest spaces. Thus, the chapter begins with an examination of how the Canela conceptualize these forest spaces where these nonhuman beings are known to live. I posit that forest gardens and the broader forest areas are ambiguous places where potentially dangerous encounters with deceased souls, as well as more familiar and friendly encounters with Plant-People master spirits and with plants and animals, can occur. The chapter continues with a section exploring the nature of the Canela and white souls and of the Plant-People master spirits, as well as the distinct engagements a shaman forms with each of these three entities. Who are the deceased Canela souls, known as *mēkarōn*,⁵² is a major focus

⁵² *Karō* is the singular form and *mēkarōn* is the plural form. I am roughly translating these terms as ‘soul’ and ‘souls’ in English. Crocker (1993) and Crocker and Crocker (2004) translate *karō* alternately as ‘ghost,’ ‘soul’ or ‘spirit.’

of this section, as is an examination of what constitutes a white person's soul (*pehjarohti*) and why the two are conceptualized as distinct entities. In addition, the section examines who are the Plant-People master spirits and how the Canela conceptualize their 'animacy' or intentionality, given that they are not thought to possess their own 'souls' as humans do.

Following this discussion on the nature of the Plant-People and other nonhuman beings such as 'souls' that form part of the bio-sociocultural life-world, the chapter moves on to explore what it means to be a Canela shaman (*kay*) who has unique access to understanding and engaging with these entities. In this third section, I examine how a man (shamans are predominately male) develops his shamanic powers by undertaking strict food and sex restrictions and through intimate relationships with specific deceased souls. Using various examples of men becoming shamans, I explore how the restrictions and the assistance of familiar souls help to heighten the shaman's multi-sensory perceptual abilities beyond that of a normal Canela person. I also undertake a brief exploration of the abilities and activities that distinguish someone as a 'great' shaman, or *kay pej*.

In the fourth section, I examine the three main shamanic modalities through which shamanic powers manifest themselves: the ability to communicate with nonhumans, especially Plant-People master spirits; the ability to transform into animals; and the ability to heal using a laying of the hands or blowing smoke technique. I posit that a shaman's primary role in the bio-sociocultural life-world is to serve as an intermediary, whether between Plant-People and human gardeners in forest garden plots, between animals and other beings in the forest landscape, or between deceased Canela 'souls' and living people in the village space. In addition, I suggest that the engagements between shamans and

Plant-People, which largely take on an affectionate and familiar aspect, appear to be distinct from shamanic encounters with ‘souls’ that are more ambiguous or even dangerous.

Finally, the chapter concludes with a further exploration of how shamanic encounters with plants and Plant-People, alongside the engagements between gardeners and plants explored in the previous chapter, appear to be integral to the unfolding life-world. While much of the ethnographic literature on shamanism in lowland South America has tended to focus on shamanic encounters with animals and supernatural entities that take on a predatory-prey component, I suggest that for Canela shamans, engagements with Plant-People master spirits develop an affectionate component that parallels the empathetic, parent-child engagements between human gardeners and plants. Additionally, I briefly explore how the existence of ‘soulless’ Plant-People may lead to a re-conceptualization of the notion of ‘animism’ in lowland South America and beyond.

Ambiguity of forest and forest garden spaces

For Canela families, including men and women, girls and boys, forest garden plots are typically conceived as places of both hard work and respite, where overall happiness or ‘being well’ can be developed and maintained (as Chapter 5 [182-184, 206-207] explores in detail). Matrilocal families spend valued time together during planting and harvesting seasons, couples find solitude while staying near the plots alone, and gardeners of both genders engage in caring, affectionate relationships with their growing crop ‘children’ as the previous Chapter 6 (pp. 228-235) explores. Meanwhile, in these same forest plots, shamans have access to encounters with Plant-Men and Plant-Women who appear to and

communicate with the shaman. According to the shaman Reinaldo, every crop species and variety has a corresponding Plant-Couple that represents the interests of their species or variety to the shaman. These Plant-People, who appear to be some kind of ‘master spirits’ (cf. Fausto 2008), are friendly and bring great joy to the shaman who can communicate with them, as the section below (pp. 283-287) explores in detail.

In the more remote forest areas, especially the Caxàt-re kô ‘real forest’ eco-region (see Table 1a [p. 39]), male hunters also develop close relationships with their wild game prey. Through strict food and sex prohibitions and the practice of steaming his eyes with herb-infused boiling water, a hunter develops the ability to ‘see’ well (*intoo-kapôk*, literally ‘eye-flaming’ [Crocker n.d.b: 3-4]) and engage with the animals he seeks to kill. My research assistants explained that hunters who have developed their abilities can communicate with animals, and that the animals themselves say the hunters are their ‘fathers’ and gather around them. While it is unclear whether hunters conceive of their prey as ‘children’ (the way that gardeners conceptualize their crops), it does appear that hunters seek out communicative engagements with wild animals in remote forest spaces. Thus, for gardeners and hunters forest areas can be spaces where desirable and meaningful encounters with cultivated crops and wild animals take place.

At the same time, gardeners and hunters are aware of the potential dangers present in forest eco-regions. Some wild animals such as snakes pose a threat to humans, and during my fieldwork, one man died from a snakebite while walking in the forest. Gardeners take great care in planting the *fava danta* plant that repels snakes in the corners of their forest garden plots, and they usually burn small paths leading to the plots since snakes prefer to hide in long grasses. Hunters are at more of a risk of encountering a snake, and indeed

many young men whom I know said they did not like hunting in densely forested areas for fear of snakes. Men and women also express their fear of encountering nonhuman souls of deceased Canela and white people in forest spaces. As my research assistants explained, these souls reside in forested areas, including forest garden plots, and they desire to bring living souls back with them to the 'land of the dead.' Fernando described how deceased souls come 'looking' for living ones, and that once a living soul has travelled to the deceased souls' domain and 'eaten' with them, he or she will die and 'never return' to the living world again. In order to protect oneself from these souls, Liliana explained how living people should paint themselves prior to visiting forest garden plots and other forested areas:

[My father] always said...if you visit the garden, you have to paint [yourself] with *pau de leite*; you have to cut your hair; you have to paint your whole family. If you all do not do this, a soul [*karõ*] will see you there and think, "Ah-ha! Another *karõ* is here without body paint, let us take the children with us!" Then, it will grab the children [the children's souls], and you will never know – you cannot see it, because you are blind to it.

As this explanation highlights, without the 'protective' body paint, the deceased souls 'see' the unpainted person as another soul and will try to 'grab' him or her, which leads to the living person's becoming ill and perhaps dying if his or her soul cannot be 'rescued' from the deceased souls. Although people such as Liliana who do not possess shamanic abilities cannot 'see' the deceased souls, shamans such as her father warn them of the dangers that deceased souls in forested areas pose. Encounters with the souls of deceased white people, while much less common, can also take place in remote forest regions. These souls, known as *pehjarohiti*, appear to be conceptualized as much more dangerous and deceitful than Canela souls. Liliana explained that the white souls particularly 'enjoy' deceiving and disturbing ('*mexendo*' in Portuguese) living Canela people, especially

shamans who have developed the perceptual capabilities to 'see' and listen to the white soul's false promises of wealth and power. While deceased Canela souls can sometimes help shamans, shamanic encounters with white souls usually result in the deaths of the shaman's family members and/or himself, as the following section explores.

Living white people, who can be similarly dangerous and untrustworthy, also sometimes pose a threat in forested areas of the Canela territory. For example, Renato informed me that from 2002 to 2005, many Canela families were afraid of visiting their forest garden plots for fear of retribution by their white neighbours over the death of a white man who was supposedly killed by a Canela man (he fled the territory shortly after the killing occurred). Their fears were confirmed in 2005, when, my research assistants told me, someone from the dead white man's family killed a 14-year-old Canela boy to avenge their relative's death. Due to the real danger present in forest garden plots during this time, some families had not visited nor cared for their crops in forest plots, and Renato described how a widespread period of hunger occurred in Escalvado as a result.

During my fieldwork, I also found out that some whites, with the assistance of a few Canela people, were illegally logging *ipê*, *pau d'arco* (both from the *Tabebuia* genus), and other native tree species in the hillside forests located on the southeast side of the territory (see Map 5 [p. 8]). Although my research assistants showed me where the logging was taking place on a map, they were afraid of discussing it much further. They told me that researching these issues, especially in the nearby town of Barra do Corda where the timber is sold, would be a 'life-threatening' endeavour (*'risco de vida'* in Portuguese), and

I took their advice.⁵³ In these ways, the presence of living whites brings as much (or perhaps even more) danger to Canela forested areas as their deceased white souls.

It therefore appears that forest areas, including forest garden plots, occupy an ambiguous place in Canela conceptualizations of the landscape. While forest gardens are spaces where gardeners seek out desirable and affectionate relationships with plants and more distant forested areas serve as places where hunters and hunted animals appear to engage in meaningful encounters, forests and forest gardens simultaneously serve as the habitat of dangerous animals, Canela and white souls, and sometimes as the invaded territory of living white people.

Meanwhile, it appears that many Canela people conceive of nearby white towns as even more dangerous places in which exploitative and deceitful relationships abound. According to my female research assistants, some women who receive the Bolsa Família governmental social assistance payments are deceived into entering a creditor-debtor relationship with local cattle ranchers in nearby towns, who promise highly valued cow meat in exchange for the woman's Bolsa Família debit card. These women typically do not receive what they were promised, and become 'indebted' to the rancher who lies about how much they owe him. In white towns, then, Canela women (and men) become dependent on white people for cow meat and for manufactured goods such as cloth, metal tools and shotguns, and cooking oils, coffee, and sugar. They are also largely dependent on white truck drivers for rides between Escalvado and white towns, since during the fieldwork only one Canela truck driver was regularly driving this route. One

⁵³ Indeed, the rate of assassinations of environmental and land activists in Brazil has increased over the last 12 years, with the main perpetrators of the killings loggers and local landowners (Global Witness 2014: 18-19). If it were possible, I would like to research illegal logging in the Canela territory in more detail.

such white driver is a 'hit man' (or perhaps is the brother of one; the distinction was unclear) who is known throughout the region for his violent occupation. Although Liliana and her family told me they were frightened of this man, they would take rides from him if needed. Thus, although the nearby towns and their white inhabitants are often met with trepidation, Canela men and women are dependent on these dangerous people and places for the goods and services on which they rely.

Conversely, the village seems to be the conceptual opposite of white towns, as a place where caring and affectionate (and perhaps 'safer') relationships among Canela men and women, girls and boys, occur on a daily basis (see Chapter 4 [pp. 125-132]). While deceased Canela souls and living white people do sometimes visit the village and enter people's houses, overall the village seems to be conceived as a safer space full of meaningful engagements among living Canela. Thus, I suggest that perhaps the village, forested areas, and nearby white towns exist in a conceptually triadic relationship of relative safety or danger, a hypothesis to which I return in the following Chapter 8 (pp. 306-307). As one moves from the village, through the forests, and into nearby towns, one's relationships with a variety of human and nonhuman beings change from being relatively safe, friendly, and caring, to being almost entirely dangerous and deceitful. Geographically and conceptually in-between the village and nearby towns, forest areas, including forest garden plots, appear to serve as important intermediary spaces for Canela gardeners, hunters, and shamans.

The nature of nonhuman 'souls' and Plant-People in forest spaces

In these intermediary forest spaces, deceased Canela souls reside in a world that is described as being 'parallel' to that of the living. In this land of the dead, the souls exist in a manner similar to living Canela, engaging in everyday activities such as eating and having sexual intercourse. As Crocker and Crocker note (2004: 86), however, the souls perform these activities with 'less pleasure' than their living counterparts do. Fernando explains that in the land of the dead, the male and female souls even have 'babies' that then transform into animals. While it is unclear whether these soul 'babies' develop into 'adults,' Fernando's comments highlight the human-like activities in which the deceased souls engage. Reinaldo expands on the human-like attributes of deceased souls, saying that the souls appear to a shaman as the 'same type as a person;' that is, with similar attributes as living Canela people. Unlike living humans, the souls do not possess bodies per se, and as disembodied entities, they can exist in multiple locations simultaneously. Based on the information that shamans have imparted to him, Fernando describes the nature of souls as similar to 'energy;' they are 'light' and can travel or 'fly' long distances:

The "life" of *mēkarõn* – the shaman says that today, they are here [in the territory]. However, if they want to travel, at the same time as they are here, they are in Barra [do Corda]; they are in São Luís perhaps. The "life" of the *mēkarõn* is like this – it is similar to energy, a telephone, a phone call – it is quick and light...They can walk. In addition, they say that *mēkarõn* observes from a long distance. [...] They fly as well. They transform into birds; they transform into any type of thing in any way. [...] Even if the door is closed or locked with a key, they pass through and enter [the house]! Nothing impacts them; nothing interferes with them.

As Fernando's explanation highlights, deceased souls also have the capacity to transform into animals, plants, and objects, and they often appear to living people in these temporarily embodied forms. Shamans in her family told Liliana that if a hunter kills a

game animal that is 'dry' inside, the animal is a 'transformation' of a deceased Canela soul. Liliana and Fernando both described how souls often transform into the Têhtê bird (see Appendix C [p. 377]) and sing its song, 'têh-tê, têh-tê' at midnight to 'invite' the souls of living relatives to the land of the dead. Similarly, Liliana and her daughters explained that deceased souls sometimes transform into bitter manioc to 'grab' the souls of young girls and women. While souls transformed into bitter manioc are particularly dangerous to living humans, their transformation into other garden crops can be beneficial for the harvest. Liliana informed me that the presence of souls transformed into growing crops in one's garden can result in a 'famous' garden; that is, one with an abundant harvest:

They say that [the souls] transform [into crops] and then leave, and the crops become very famous. [...] I asked my father, "why do these souls enter into the middle of these crops?" "The *mêkarõn* only make movements within our crops. Even sweet potato – the *mêkarõn* transform into sweet potato and shortly thereafter, they leave. They only transform and then leave again for other places. Because the *mêkarõn* are very different, they are very complicated. They will transform in one place, and at the same time, they will go somewhere else. And you will never see it." My father told me this!

Thus, although Liliana cannot observe the souls herself, she knows they have been present because of her father's instruction, since he was an accomplished shaman. Indeed, people who do not possess shamanic abilities can rarely detect which animals or plants are transformed souls (an exception being a game animal after it is killed). Only shamans can truly 'see' the deceased souls, either as transformations of plants and animals or as disembodied soul entities that appear as 'similar to people.'

As omnipresent entities with seemingly endless transformational capabilities, the deceased souls could appear at first glance to exist indefinitely. The duration of their existence in the land of the dead or elsewhere, however, is a complicated issue. According to Crocker (1993: 72) and Crocker and Crocker (2004: 86), the souls transform in a linear

fashion, first turning into large animals and then smaller ones, and finally into plants before ceasing to exist entirely. My fieldwork indicates, however, that the transformational capabilities of Canela souls are perhaps more fluid. According to Fernando's and Liliana's explanations, souls are able to transform quickly in and out of animal and plant forms whenever they desire. This is not to say that the souls are immortal, and as Crocker's (1993) research indicates, an individual deceased soul may eventually cease to exist. Overall, though, the land of the dead will never be empty, as the souls of newly deceased Canela are constantly arriving. Thus, it appears that there will always be souls who exist simultaneously in multiple locations and in different forms.

Since the deceased souls are 'complicated' entities, as Liliana points out, perhaps their nature can be elucidated further through a brief comparison with Canela Evangelical Christian conceptualizations of 'souls.' A 'believer' (*crente* in Portuguese) herself, following the Assembly of God church that was established in the village in February 2012, Liliana explained to me that the deceased Canela souls are those who 'stay here' and reside 'in the land.' Meanwhile, the baptized Christian soul (*alma*) is an 'alive body' that goes to heaven, or to hell if it commits a wrong act such as theft or fighting. Vítor, Liliana's son-in-law and the Canela leader of the Assembly of God church, agreed that only a baptized person's soul is 'protected' and can either reside in heaven 'forever' where there is no suffering, or alternatively go to the 'fire' (*fogo*, or hell). According to Liliana, an unbaptized Canela person still has a Canela soul (*karõ*) that avoids hell or heaven and simply stays 'on the earth' upon death.

Thus, the primary distinction appears to be the location of the different types of souls after death – whether they stay in Canela territory or leave for the Christian locations of

heaven or hell. The forms these entities take also differentiates them. While Canela souls are constantly transforming into various forms and are most likely not eternal, the baptized soul in heaven is said to take the same form as the living person's body had on earth and never change for all eternity. In addition, baptized souls stay in heaven (or hell) and do not bother living Canela, while the Canela souls frequently interact with shamans and entice living souls back to the land of the dead, thereby bringing illness and death to people living in Escalvado. This is not to say that Evangelical Canela conceptualize the baptized souls as 'good' in contrast to the 'bad' Canela souls. Rather, it seems that Canela souls occupy an ambiguous place in the Canela world, having the ability to harm and even kill the living while simultaneously helping gardeners with crop harvests and assisting the shaman in various ways, as the following sections describe (pp. 276-280, 290-293).

In addition to these Canela souls, the souls of deceased white people (*pehjarohti*) are sometimes known to inhabit forest spaces in the Canela territory as well. Canela people typically encounter these white souls while they are alone in remote forest areas. Liliana told the story of her grandfather Rodrigo's encounter with a white soul long ago:

Rodrigo was a great shaman. One day, he was hunting in the forest. There is a large hill there that is very beautiful, and there is a large hole inside it. Rodrigo was hunting inside the hole of this hill. The swine was running in the middle of the brush, and Rodrigo grabbed his knife to kill this animal; he cut the swine, but did not catch it. [Suddenly], a can of money appeared! I do not know why the animal transformed into a can of money. Rodrigo said to himself, "What is this?" He grabbed it, wrapped it in a cloth, and began walking away. The owner of the money whispered, "*psiu, psiu!*" "Who is doing that?" Rodrigo asked himself. [...] Then, a white person appeared – he seemed like a living person, but he was a *pehjarohti*. "Ah-ha, you have my money! Give it to me and I will take care of it for you. You will receive it; I will not take it from you. Go home; build and renovate your house, and then I will mark a day for you to take all the money." Rodrigo gave the money to the white soul, and the soul said, "Now you are *mine!*"

Despite the white soul's promise that he would return the money, Rodrigo visits the same hill multiple times to collect it and comes back to the village empty-handed. When he

finally receives the money and brings his family to a nearby white town to purchase meat, his sons spend it on *cachaça* liquor and get into an altercation with their father. Rodrigo and his daughter died shortly thereafter, and the family blamed both deaths on Rodrigo's encounter with the deceptive white soul. Liana describes the effect the white soul's relationship with her grandfather had on her family:

Rodrigo died, and then his daughter died. It is very sad; it is a large sadness. There are people that speak about these things; that the ways of the white souls are like this. They enjoy deceiving people. [...] If people trust them, their whole family will die! The white soul receives the family. It is frightful! Because the white soul will give the money, but soon after he will want to receive payment. He does not want the family's things; he wants the family itself!

Through its false promises of wealth and power, the white soul enticed Rodrigo into a dangerous relationship that came with a high price to himself and his family. Crocker (n.d.b: 12) similarly describes how white souls tend to engage in trickery and deceit and often kill the shaman's relatives. Thus, it appears that just as living whites are conceived as dangerous and deceitful, tricking Canela women into creditor-debtor relationships and rarely fulfilling their promises to Canela people, so too are white souls conceptualized as dangerous entities within forest landscapes, and pursuing ongoing relationships with them will almost certainly have dire consequences.

In contrast to the ambiguous Canela souls and the dangerous white souls, however, the Plant-People living in forest (and apparently riverbank) garden plots seem to be conceptualized as friendly, helpful, and nonthreatening entities. According to my research assistants, only shamans who have developed the specific capabilities can communicate and interact with the Plant-People. Reinaldo explains that every species and variety has its own Plant-Man and Plant-Woman that appear 'as if they were people,' although they

retain certain characteristics that correspond to the morphology of their species or variety.

Similarly, Liliana describes how her father Paolo Eduardo informed her that he could ‘see’ the Plant-Man and Plant-Woman associated with ‘every cultivated crop’ in the garden. Paolo Eduardo explained that the Plant-People of distinct varieties could be differentiated by their size and shape, as well as by the ‘decorations’ (*enfeites*) they wore. Thus, he described ‘Cobra Bitter Manioc-Woman’ (Kwỳr Awari) as tall and beautiful with distinctive bright red ‘bracelets’ around her leaf-arms, referencing the reddish colour of this variety’s leaves and stick. Meanwhile, ‘Tortoise Arm Bitter Manioc-Woman’ (Kwỳr Pakran-re/Caprãñ Jũkee) was short and stalky, similar to the short stick of this variety. Paolo Eduardo described Sweet Manioc-Woman as beautiful, and Maize Woman as ‘the most beautiful’ with long, flowing white hair and perfect teeth, most likely references to the maize tassel and straight rows of kernels, respectively. He also had many encounters with the ‘maize-women’ of particular varieties. ‘True/Original Maize Woman’ (Põhy Pej-re) appeared to him with long ‘blonde’ hair, similar to the light yellow tassel on this variety, while ‘Red-Yellow Maize Woman’ (Põhy Caprêc-ti) had red hair similar to the red tassel it develops while growing. Paolo Eduardo described another type of Maize-Woman as being very small, perhaps referencing ‘Small Maize’ (Põhy Kyri-re).

Reinaldo informed me that all of the plant people are friendly and ‘beautiful’ (*impej*) in their distinct ways. Overall, he said, the Plant-Men are taller and larger than the Plant-Women and the shaman himself. The Plant-Men and –Women of ‘True/Original Maize,’ ‘Large Red-Yellow Maize,’ and ‘Large Mixed-Colour Maize’ have appeared to Reinaldo, as has the Maize-Woman of the entire species, whom he described as beautiful with long,

shiny hair. Peanut-Woman has appeared to Reinaldo as a very tall plant-woman with white hair and dark skin, perhaps referencing the length of the peanut vine and the dark brown colour of the peanut itself. Reinaldo also described one type of Fava-Woman as having a painted face, which may refer to multiple fava varieties that are categorized as being 'painted' (see Appendix A [pp. 357-361]). Meanwhile, he explained that Sweet Manioc-Woman is beautiful with white skin and hair, Bitter Manioc-Woman also has long white hair, and Sweet Potato-Woman is even more attractive and desirable, enticing Reinaldo with her kind words and affection. He described Banana-Woman as being very tall and beautiful as well, perhaps referencing the height of many banana varieties. In addition, Reinaldo informed me that he converses with Sweet Potato-Man and the Plant-Men and -Women associated with squash, rice, watermelon, pineapple, avocado, and cashew, although he did not describe their physical attributes in detail.

These Plant-Men and -Women interact with shamans in apparently friendly and inviting ways, kindly voicing the wishes and desires of their representative species or varieties for the shaman to hear. I therefore suggest that perhaps these beings are 'master spirits' who speak on behalf of the species or variety they represent (cf. Fausto 2008, 2012). According to Reinaldo and other research assistants, the Plant-People are overall friendly beings who possess the capacity to express emotions, speak, and to move around, as the next section explores. All of my research assistants agreed, however, that these 'master spirits' do not possess their own 'souls' (*měkarõn*). Thus, it appears that the Plant-People are differentiated from deceased souls by the friendly and affectionate engagements they develop with Canela shamans, as well as by their 'soulless' existence. I return to a broader discussion of how this 'soullessness' affects the 'animacy' of the Plant-People master spirits in the conclusion of the chapter (pp. 297-299).

While the Plant-People often speak on their behalf, plants themselves also appear to be conceptualized as having agentic abilities including communication, consumption of food, and movement. Animals possess similar capacities as plants, and objects appear to have slightly more limited capacities. According to Reinaldo, different animal species communicate with one another and all plant species and varieties converse with each other, often in order to decide to relocate to another garden as a group if their human gardener 'parents' are not treating them well. Another shaman, Dirceu, told his family that household objects would greet him and each other, indicating that objects communicate amongst themselves. Similarly, animals, plants, and objects are all thought to consume and 'need' food as humans do. Animals clearly consume their prey, be it flora or fauna, and plants 'eat' meat with their garden owners during the food sharing ritual that Chapter 6 (pp. 232-235) describes. Dirceu explained to his family that even objects such as wooden pestles can become 'hungry' for food, in this case, for rice that the pestle pounds and perhaps 'consumes' in this way.

One main distinction between animals and plants versus objects, however, is their relative mobility. While animals are freely mobile and plants can physically move to a different garden when they desire (explored in more detail below [pp. 283-286]), objects are incapable of their own movements. As with the Plant-People master spirits, possessing intentional capabilities that are similar to humans does not imply that these nonhuman beings have souls. In fact, my research assistants were insistent that neither Plant-People, plants, animals, nor objects possess their own souls. Regardless of their lack of 'souls,' however, Plant-People and other nonhuman beings appear to engage in multi-sensory relationships with shamans just as deceased souls do, albeit in more friendly and affectionate ways than the ambiguous Canela and dangerous white souls.

Becoming a shaman: heightened perceptual human-nonhuman engagements

Learning how to become a shaman and cultivate shamanic abilities is a lifelong process that involves extended perceptual entanglements with myriad nonhuman beings. The term for a shaman in Canela, *kay*, refers to the shamanic occupation and the state of being that enables shamanic abilities (cf. Crocker n.d.b). Being in a state of *kay* is not constant and will vary throughout the shaman's lifetime depending on various factors such as age, commitment to food and sex prohibitions, and the favour of the deceased souls with whom the shaman engages. According to my research assistants, younger shamans usually exhibit the most potent shamanic powers, although this is not always the case. A *kay pej* (variant of the term *impej*) is an especially powerful shaman, while a *kay cahàc* is a 'regular' or 'common' shaman.

As Fernando explained, a person becomes a shaman either through the active pursuit of shamanic abilities by engaging in food and sex prohibitions, or through experiencing a life-threatening illness or accident that makes him or her attuned to learning shamanic powers from Canela souls. Pursuing the shamanic profession does not automatically make someone a shaman, however, since only the souls themselves ultimately decide to which living Canela person they will teach the heightened perceptual abilities. The souls must 'like' the person they are training, and they are especially attracted to a neat and clean physical appearance (cf. Crocker n.d.b: 5, 13) that can be better achieved through strict food and sex prohibitions. While the majority of shamans are men, during my fieldwork there were two women in the village who were known to have developed shamanic abilities, and Crocker and Crocker (2004: 87-88) mention the existence of women with

shamanic powers as well. I encountered several younger and older men who were known as shamans in the village, although Fernando lamented that the great shamans of the mythical-historical past were more powerful than modern-day ones:

In the past, the shaman underwent a large, serious *resguardo* [period of restrictions] for eight to nine months, or even a year or 14 months, to become very skilled. People who work in health become like this. They say that, back then, the shaman was very knowledgeable, very skilled, because he undertook a large *resguardo*. That is why the *mēkarōn* gave the knowledge to these people. [...] This type of person cured illnesses and saved people at the same time, and they say that he could see thieves and find things that had been robbed. Nowadays, shamans say, "I can see, I can imagine," but I do not think it is as it was before. These first shamans were transformed by the *mēkarōn*; the *mēkarōn* handed them their knowledge.

As Fernando's discussion highlights, to become a shaman one must initially be approached by a deceased Canela soul or souls. Often this takes place during a traumatic event such as a prolonged illness or serious injury. For example, in June 2012, a log fell on Pedrinho's shoulder and seriously injured him during one of the log races associated with the final celebrations of the Pep Cahàc male initiation ritual complex (see Chapter 4 [pp. 121-125]). His family members later explained that while sitting in front of his house that night, a soul approached Pedrinho and promised to cure him. The following day, the news spread around the village that Pedrinho was now a shaman and was already developing the abilities associated with that state of being. According to his granddaughter, Dirceu was also initially approached by a soul after sustaining a serious injury from a log during a ritual log race. Paolo Eduardo, on the other hand, first encountered a soul after becoming ill from a serious snakebite near his forest garden plot. The soul of his deceased father approached him and healed the wound, and immediately afterward Paolo Eduardo began developing his shamanic abilities. Indeed, my research assistants explained that a

deceased relative's soul often initially approaches the aspiring shaman and shows him how to improve and refine his shamanic powers.

In addition, Fernando's quote underscores the importance of undergoing strict food and sex restrictions for a substantial period to initially develop and become 'very skilled' in shamanic abilities. The prohibitions are similar for men who want to develop their hunting, log racing, ritual singing, or shamanic abilities. Reinaldo informed me that a longer 10 or 12-month period of undergoing the prohibitions is more desirable as it will heighten one's abilities, yet a minimum length of three or four months can also suffice. During this time, the man must avoid sexual intercourse with women and 'heavy' foods such as most meats and animal organs, *beribu* meat and manioc (or maize) pies, and *farinha d'água*, a heavier type of the staple toasted manioc flour. He must also keep the water he drinks and uses to bathe separate from those who are not partaking in the prohibitions.

A man wanting to develop his shamanic abilities subsists mainly on *farinha seca*, or dry toasted manioc flour, peanuts, and 'True/Original' Maize (Põhy Pej-re). Reinaldo, for example, underwent a longer 10-month prohibition period without eating meat or 'touching' women, and he says he was able to 'perceive' as a shaman as a result. When the snake first bit Paolo Eduardo and his father's soul approached him, he and his nuclear family abstained from eating game meat for three months. The nuclear family undergoing prohibitions together is common, since husbands, wives, and their children appear to share an embodied connection throughout their lives (see Chapter 6 [pp. 242-243]). Paolo Eduardo also underwent several longer restrictive periods throughout his lifetime in order to maintain and improve his shamanic state. As Crocker (n.d.b: 3) notes, the restrictions

are thought to temporarily prevent pollutants from entering the body, but their purifying effects are not permanent and must be periodically undertaken to cleanse oneself of 'polluting' heavy foods and sexual intercourse.

My research assistants informed me that the food and sex restrictions fundamentally change a person's appearance, making him or her more 'beautiful' (*impej*) and physically attractive to humans and nonhuman beings. Someone who frequently undergoes the restrictions, Fernando said, has 'clearer eyes, teeth that do not break, and hair that stays black and never turns grey.' He or she appears cleaner and tidier and becomes *ihȳi*, or 'strong,' 'healthy,' 'happy,' and able to experience pleasure. As Liliana described in Chapter 5 (pp. 172-174), there is also a correlation between physical strength and staying awake, so that those who often partake in the prohibitions do not require more than a few hours of light sleep each night and can endure long walks in the forest during the day without becoming tired.

Conversely, those who refrain from undertaking the restrictions develop an unattractive physical appearance. According to Renato, their skin becomes the undesirable yellowish colour of squash or 'Large Red-Yellow Maize' (Põhy Caprêc-ti). Those people who refrain from undergoing the restrictions are thought to experience weakness and sadness (*mě peh xà* or *ihpêc xà*) which manifests itself in sleeping heavily for long periods and staying at home instead of visiting the gardens (see Chapter 8 [pp. 316-319] for a detailed discussion of strength and weakness). In addition to changing one's physical appearance and abilities, undergoing the restrictions for long periods seems to alter one's perceptual abilities. The restrictions improve the aspiring shaman's senses, so that, as Fernando describes it, he can 'smell as well as a dog' and 'listen' to and 'see' nonhuman beings such

as Plant-People, plants, animals, objects, and of course, souls. Thus, the purpose of the restrictions for shamans appears to be twofold: firstly, to make the shaman more desirable in order to initially attract the souls and other nonhumans with whom he wishes to engage; and secondly, to heighten his perceptual abilities further so that he can continue to develop and maintain multi-sensory relationships with these nonhuman beings.

In these ways, then, the process of acquiring and maintaining shamanic abilities can perhaps be likened to learning how to garden, in that both the novice gardener and the shaman learn how to develop long-term relationships with nonhuman beings, especially cultivated plants, in which they utilize multiple senses. There are important differences, however, that appear to set apart shamanic knowledge acquisition from other types of multi-sensory learning. A novice gardener (and perhaps a novice hunter) primarily learns from his or her human elders, who teach specific techniques and practices to the younger generation through verbal and nonverbal communication that I term an 'education of affection' (see Chapter 5 [pp. 195-198]).

Meanwhile, the novice shaman becomes 'enskilld' through encounters with a nonhuman soul or souls, who give their 'knowledge' to the shaman. Additionally, the shaman's education leads to an altered state of consciousness in which his perceptual abilities seem to be heightened and thus more powerful than those who are not shamans. While gardeners can become experts who engage with their growing crops through singing, touching, and sharing food, these multi-sensory perceptual abilities unfold differently than those of the shaman. Perhaps being taught by a soul instead of a human, when

coupled with intense food and sex prohibitions, is what enables shamans to enter into the unique *kay* state of being.

This is not to say that all shamans acquire the same level of shamanic powers, however. As the terms 'regular shaman' (*kay cahàc*) and 'great shaman' (*kay pej*) indicate, there is a gradation of shamanic power that is based on multiple factors. Younger shamans can usually possess especially powerful abilities, although older shamans who undergo strict restrictive periods can develop these abilities again. It seems that those who are skilled in other areas such as hunting may have a higher likelihood of also becoming great shamans. Paolo Eduardo, for example, was a particularly skilled hunter who regularly killed wild game for his family, and he later became a great shaman as well. Overall, though, a shaman's level of greatness could depend most on his relationship with his soul 'teacher.' Souls are attracted to and 'like' certain people before they become shamans and it could be that souls also decide which shamans they would like to become especially great and powerful. Thus, the shaman's relationship with his soul teacher appears to be the defining characteristic of developing and maintaining shamanic powers.

The three shamanic modalities

With the help of his soul teacher, the shaman's powers typically manifest themselves through three main activities, or as I am terming them, the three 'shamanic modalities.' The first modality, the ability to converse with animals, objects, plants, and the Plant-People master spirits, has received the least analytical attention in the ethnographic literature. Nonetheless, my research indicates that this modality is a central component of shamanic powers that merits serious inquiry. A shaman who possesses this

communicative ability pursues relationships with a variety of nonhuman beings. While the soul teacher is involved in the development of the shaman's heightened perception, it does not directly participate in these encounters.

Shamanic encounters with animals are commonly found in mythic storytelling, in which great shamans interact with various animals and even travel to their 'villages' to bring those species' knowledge and ceremonial activities back to the Canela (see Chapter 3 [pp. 105-106] and Appendix D [pp. 427-437]). In the myth of the powerful shaman Kruwapure, for example, Kruwapure visits the underwater village of the alligators and learns about the ritual songs and activities associated with the Wuh-tỳ festival from the alligators, including the alligator chief. With his heightened abilities of perception, Kruwapure is able to interact with the nonhuman alligators and bring their valuable ritual knowledge back to his own village. While it seems that modern-day shamans cannot visit animals in their otherworldly 'villages,' they can develop the ability to converse and interact with different animal species they encounter in the forest while hunting, fishing, or working in the garden plot. As Reinaldo explained, all animals, including fish and alligator, can converse with a shaman who has developed his communicative abilities through long restrictive periods.

Some shamans also converse with various objects and artefacts found in the house and around the village, including wooden sticks, the *buriti* palm roof and walls of a house, and *tucum* and other plant fibres. Dirceu was especially known for his ability to interact with objects such as woven palm mats, cloth, gourd bowls, and wooden pestles. He told his family that all 'material' could communicate, even the elements of fire and water. While the rest of his family was sleeping inside the house, Dirceu would hear the household

objects begin to speak. The gourd bowls and maracas would greet him and each other, saying 'hello' (*hopââ* in Canela) and often telling him their needs or desires. In addition to the wooden pestle that complained it was 'hungry' for rice (as described on p. 275 above), the empty gourd bowl would complain that it was thirsty because its 'mother' did not refill it with water. As the sole interlocutor with these objects, Dirceu was responsible for informing his human family of the objects' grievances, which were seen as legitimate. Satisfying the objects' desires was important to Dirceu and his family, and he therefore frequently engaged in conversation with the objects to learn about their current state of wellbeing or dissatisfaction.

Similarly, plants and Plant-People are said to communicate their wishes to the shaman as well. According to my research assistants, plants sometimes complain to the shaman if they feel the garden owners are neglecting them. Bitter manioc, for example, cries out to the shaman if part of its tuber is left in the ground or if it is left lying in the hot sun. Reinaldo explained that the bitter manioc 'does not enjoy' being neglected, and Dirceu told his family that the manioc would cry out in pain if ignored in this way, saying 'my mother treated me badly, I am in pain, I am sick, [the] mother left its child!' Sweet potato also complains to the shaman if carelessly left in the ground. Paolo Eduardo recounted to his daughter how newly planted maize will cry 'like a baby with a fever' if its owners ignore it, eliciting the shaman for help. Only a shaman can hear these cries, and as my research assistants explained, it is therefore his responsibility to listen to the growing crop species and varieties and bring their complaints to the human garden owners and to the entire village when necessary.

At other times, the Plant-People master spirits appear to the shaman to speak on behalf of the species or variety that they represent. According to my research assistants, a shaman must undergo an additional period of food and sex restrictions in order to 'see' and communicate with the Plant-People in particular. These master spirits appear to the shaman while he is visiting or working in the forest or riverbank garden plot. Renato recounted how his father Edcar, who also has shamanic powers, once fainted while planting sweet manioc in his forest garden. When he awoke, three beautiful Sweet Manioc-Women appeared and began talking to him, perhaps the master spirits of three different sweet manioc varieties. Edcar claimed to have interacted with beautiful Maize-Women and a Maize-Man in the garden plot as well.

During their conversations with the shaman, the Plant-People give him instructions and advice on how their representative species or variety should be treated. Sweet Manioc-Woman, for example, advises Reinaldo where she is going to live before disappearing into the earth. Similarly, Sweet Potato-Woman tells him to pay attention to where she is living in the ground, and asks for a complement on her appearance, assuring him she is 'tasty.' Sometimes the Plant-Man and Plant-Woman of a species give different advice to the shaman. Maize-Man reminds Reinaldo where the maize plants are living in the garden and encourages him to converse with them while they are growing. Meanwhile, Maize-Woman tells him how to eat the ear of corn once it is harvested. Bitter Manioc-Man always speaks to Reinaldo before Bitter Manioc-Woman, and any complaints they might have are made in that order. Reinaldo also converses with Yam-Man and Yam-Woman when they first sprout out of the ground, informing them that they will be cooked and eaten once they are harvested.

Through regular visits to the garden plots of his matrilineal family and others, the shaman interacts with many plants and Plant-People and learns which species and varieties are satisfied or dissatisfied with their care. Sometimes a shaman advises the male elders in the ceremonial centre that he will be visiting the plants and Plant-People of many garden plots, as Fernando explained:

The shaman tells the entire community in the patio [ceremonial centre]: “look, no one should go to the garden today. I am going to review all the crops from every garden. Afterward, tomorrow, you all will see your own crops again.” Everyone hears him and no one visits [his or her] garden. When it is the rice or maize season, or the season of anything new, the shaman goes to the gardens and grabs the [crops]. The maize has already sprouted and is already grown, and he pulls on the point of the leaf. He grabs it...[and] he says that Maize-Woman is beautiful! He says that she has smooth, beautiful hair. Shamans who do these things see yam, sweet potato, everything. The shaman passes through the gardens until the afternoon, and then he returns to the patio, saying, “I have reviewed all your crops, and everything is well.” [...] He says that Cobra Bitter-Manioc-Woman is also beautiful. He says that they are just like people! Without being a shaman, one cannot see [these things]. Only a shaman can see.

It is unclear why growing plants and the Plant-People master spirits both appear to converse with the shaman. It could be that the plants relay more specific, individualized complaints of feeling pain or sadness to the shaman, while the Plant-People give him more generalized advice on the caretaking of the entire species or variety they represent. Nonetheless, it does appear that the input of both entities is helpful for the shaman to determine the wellbeing of a garden's inhabitants. If the plants and Plant-People in many gardens appear to be generally 'happy,' the shaman returns to the village and assures the male leadership council that the growing crops are 'well' and will therefore produce an abundant harvest, as Fernando described. Conversely, if there is widespread dissatisfaction among the growing crops, the shaman reprimands the entire village in the ceremonial centre. He also informs individual gardener parents, sometimes passing on

specific requests. Dirceu, for example, advised his family members that the sweet potato's preference is to be stored in well-constructed holes underground.

Overall, the shaman typically advises the garden owners to pay more attention to and actively care for their plant 'children' through regular visits with their growing crops and by maintaining a well-kept and tidy garden plot. If the garden owners consistently fail to keep their plot clean and pay attention to the crop species and varieties, the growing plants will physically re-locate to a better-managed garden. In these cases, Reinaldo informed me, he hears the Plant-People telling him, 'our father [or mother] is not taking care of us; let us go over there – our friends [*compadres*] seem happy!' Reinaldo 'sees' them walking away in a single-file line in the afternoon, in a similar fashion to how a Canela family usually walks in a group. While the stalks and vines of the crops remain in the original garden plot, my research assistants assure me that the Plant-People and the plants themselves have left and will not return during that growing season. Maize and manioc leave behind their 'hair,' but they and the other crops will not bear any fruit. The gardener couple who ignores their growing crops and the shaman's advice will therefore have a terrible harvest consisting of shrivelled, dried out and inedible crops.

Thus, it appears that the shaman's interactions with growing plants and with the Plant-People master spirits are as essential to ensuring successful harvests as the gardener parents' care for and attention to their crop children. While the shaman's relationships with the growing plants and Plant-People seem to be grounded in affection and caretaking, shamans are not conceptualized as the 'parents' of growing crops as female and male gardeners are. Rather, the shaman seems to be a type of friend or confidante to whom the plants and Plant-People express their concerns, suggestions, and complaints.

In addition, the shaman's encounters with the Plant-Women appear to take on a more seductive gendered aspect. Shamans, who are almost exclusively male, describe and emphasize their encounters with the physically attractive Plant-Women much more than their interactions with the Plant-Men. Reinaldo described Sweet Potato-Woman in particular as being '*gostosa*,' which is a euphemism in Portuguese for being sexually attractive that plays on the dual meaning of the word 'tasty.' With their beautiful long hair and skin colours, the Maize-Women, Sweet Manioc-Women, and other Plant-Women seem to attract and seduce the shaman. Perhaps the seduced shaman is more likely to listen to the Plant-Women's instructions and advice. Whatever the motivations for this seduction, the shamans certainly express their excitement at encountering a stunningly beautiful Plant-Woman in the garden and seek out future engagements with her. It is interesting to note that while seduction and attraction are well-documented components of the relationships between Amazonian hunters and their animal prey (cf. Fausto 2008, 2012; Viveiros de Castro 2011), in this case it appears that human-plant relationships may incorporate a seductive aspect as well. Whether seductive or confiding, however, it seems to me that shamanic encounters with plants and Plant-People have an overarching friendly and affectionate component that is similar to yet distinct from gardener-crop engagements. Additionally, with his heightened perceptual communicative abilities, the shaman serves as an intermediary between human gardener parents and their crop children.

While many shamans develop this communicative ability to interact with beautiful Plant-Women and other nonhuman beings, it is much rarer to acquire the second modality of

transforming oneself into nonhuman beings, especially animals (and rarely plants).⁵⁴ Only a few expert shamans develop transformative powers over time. Through the training and assistance he received from his father's soul, and through undergoing many long restrictive periods, Paolo Eduardo became an especially powerful shaman who eventually acquired the ability to transform. Liliana recounted that on more than one occasion, Paolo Eduardo entered into a trance-like state, appearing to be light-headed and 'crazy' (*doido* in Portuguese), and then transformed into a cobra. The perceptual abilities necessary to transform are so great, my research assistants informed me, that few modern-day shamans can achieve this state. Paolo Eduardo described to his daughter the physical toll that transformation took on him. Reinaldo, meanwhile, freely admitted that he never possessed the 'power' to transform, only the power to converse with nonhuman beings and to cure illnesses. Most instances of shamanic transformation exist in mythic storytelling, as the myth of Yah-wuh in Appendix D (pp. 437-451) displays. In part of Liliana's version of the myth, she describes how the great shaman turned into a bird:

Yah-wuh was a great shaman who transformed [with the help of] a 'soul' [*karõ*], and that soul was also a master. Yah-wuh flew to another village, another Indian tribe. He brought back ornaments, artisanal crafts from the other Indians to our village. Hàc Jarati – that headdress made from macaw feathers, he brought back from another village. He transformed into a parrot. The story of Yah-wuh is very beautiful. He talked with another shaman from another village. The other shaman had been saying, "I am more of a master than Yah-wuh. Call for him, I want to try out our master! I have the power of being a master, and he has the power as well. We will see who has more power!" The other shaman was from another village, from Porquinhos, and he could 'see' as well. [...] Then, Yah-wuh made the same movements as a bird that flies [flapping his arms]. Shortly after, Hukryc [the other shaman] also performed the same movement, and made baby bird feathers on his skin, similar to the feathers of a baby parrot. Yah-wuh waited to see the other shaman's power; his feathers had not emerged yet. When Hukryc was already covered in feathers, Yah-wuh saw his power. Then, Yah-wuh's feathers emerged on his arms and his entire body, all of a sudden. Shortly after, he began to fly. Hukryc remained rooted in the centre, in the same manner, with only a small amount of feathers.

⁵⁴ While Reinaldo assured me that shamans can develop the ability to transform into plants as well as animals, he admitted that he does not possess the ability himself, and neither did I hear of shamanic transformation into plants in mythic storytelling. It would be interesting to explore whether this type of transformation has occurred or continues to occur for Canela shamans.

In the two other versions of the myth I recorded (in Appendix D [pp. 437-451]), Yah-wuh also undergoes intensive food and sex restrictions in order to develop his transformative powers. For both the mythical Yah-wuh and the modern-day Paolo Eduardo, then, the prohibitions appear to have heightened their sensory capabilities, and their long-term relationships with the souls who cured them seem to have facilitated the further development of these capabilities. While the purpose of developing these transformative powers is not straightforward, it seems that this shamanic modality highlights the shaman's engagements with animals and possibly his helpful intermediary role. Yah-wuh used his heightened perceptual powers to 'become' a parrot, for example, and then used this intimate access of the bird's 'perspective' to fly to other villages and bring back decorative arts, which benefitted the Canela people as a whole (cf. Viveiros de Castro 1998). Although Yah-wuh was not relaying the parrot's point of view to the Canela people, as in the first shamanic modality, he utilized his shamanic transformation into a hawk to assist the human community.

This is less clear with Paolo Eduardo's transformation, since the exact reasons behind it are unknown. It is interesting to note, however, that Paolo Eduardo became a master healer of snakebite, and once even cured his son-in-law's rattlesnake bite that is usually fatal. Perhaps Paolo Eduardo's transformation into a cobra assisted his curative powers. Whatever the case, it seems that Paolo Eduardo needed to become intimately close to the cobra and access its perspective in order to transform into this being. Moreover, in both cases the shaman's engagement with the animal into which he transforms appears to take on a markedly different form than his engagements with plants – for Paolo Eduardo, transforming into a cobra was a physically exhausting and even 'dangerous' experience, and turning into a parrot for Yah-wuh required intense concentration and

exertion as well. Thus, perhaps Canela shamanic transformation into animals incorporates more of the predatory or dangerous aspects that are typically associated with shamanic abilities in lowland South America (cf. Wright 2013).

For the third shamanic modality of healing with one's hands and/or blowing tobacco smoke, once again the shaman's relationship with deceased souls becomes significant. Shamanic curing is an important part of everyday life in the village, and most families have a preferred shaman, typically a relative, to whom they turn when an illness strikes. As my research assistants explained, a person usually becomes ill after a direct encounter with a deceased soul or through disregarding food and sex prohibitions. This latter reason can cause one's family members to become ill as well, especially children and the elderly who are more susceptible to illness than mature and healthy adults. Being ill means that one's soul has left his or her body and is travelling to the land of the dead. If the deceased souls who reside there convince the living soul to stay with them, this will result in the person's death. Fernando explained the serious effects of a 'missing' or 'travelling' soul for a living Canela person:

It is dangerous. That is why, when a person's soul is far away, he feels weakness, he only likes to sleep, and when he sits up, soon after he will be almost asleep again. People say that when the *karõ* is far away, a person becomes like this. He is partly weak, and becomes sad and angry, because his *karõ* is not with him.

The goal of shamanic curing rituals, therefore, is to bring the ill person's soul back to her body so that she will become 'well' again and stop feeling weak, tired, sad, and angry. In one instance of shamanic healing, Wander recounted how the shaman Antônio cured his wife Vilma after she suddenly collapsed and became unconscious while watching a ritual log race in the village. Wander could tell that she had a 'sickly soul' (*'adoentada de alma'*

in Portuguese), and Vilma's uncle Antônio quickly rushed over to perform the curing ritual. He began smoking tobacco and fell to the ground, lying next to her. Antônio then touched Vilma's body with his hands while sweating profusely. Afterward, he quickly jumped up to a standing position, and she did the same. Lastly, Vilma had a drink of water and was 'well' again, according to Wander. Antônio explained that Vilma had been near death, but that he had cured her by travelling to the land of the dead and retrieving her soul. By mimicking her collapse, laying his hands on her, and smoking, he was able to follow her soul and bring it back to her body.

This technique, my research assistants informed me, can also cure long-term illnesses. In April 2012, Liliana's sister Marlina was very ill, having experienced a months-long sickness that prevented her from retaining food. Near the end of the month, her sisters decided that she needed treatment by a young shaman named Wilson. Marlina was so weak (*ihpêc*) that her sisters transported her to the shaman's house in a wheelbarrow, and they were concerned that she was near death. Once inside, Wilson placed his hands on Marlina's body and dripped water on her, and then blew smoke over her while chanting. After he performed this technique, Wilson ran around the outside of his house a few times. He informed the family that the soul of Marlina's father Paolo Eduardo had taken her soul, but that Wilson himself had returned it to her body. The ritual cured Marlina and she slowly recovered from her unnamed illness.

Some shamans also use medicinal plant remedies in tandem with the laying of the hands technique, although as Crocker (n.d.b: 2) notes, people who do not possess specific shamanic abilities can also heal with medicinal plants. In August 2012, for example, Joaquina was experiencing a prolonged intestinal illness and sore breasts after giving birth

to her daughter a month previously. After a visit with the white nurses at the village health post failed to cure her illnesses, she visited Ayrton, a shaman who is a friend of the family. He identified the cause of her illnesses as *ahkacrõt*, or the smell of an elderly person's corpse who had died nearby her house around the time she gave birth. Ayrton performed the laying of the hands curing ritual and 'sucked out' the corpse smell that had entered Joaquina's body. Additionally, he gave her herbal tea infusions of *casca de pau* (literally 'stick bark' in Portuguese; could be *pau d'arco*, *Tabebuia aurea*) and mango seed and leaf for her intestinal troubles. The curing ritual and herbal remedies worked together, and soon after Joaquina's symptoms subsided. Reinaldo informed me that he also uses various plant remedies in conjunction with his curing rituals for different types of snakebite and for fever, headache, and the flu.

In these curing rituals, Reinaldo described, the shaman with his heightened perceptual abilities can 'see' the souls who are trying to take the ill person's soul with them to the land of the dead. He tells his patient's family that they must take special care of the ill person, because his or her soul is not currently in the body. During the curing ritual, Reinaldo uses his 'fingers and hands,' and blows tobacco smoke on the patient's body to 'remove the sickness and throw it away.' He also invites his soul teacher to help search for the patient's living soul, while telling the other deceased souls to 'stay away and leave us [the living Canela] alone.' The powerful force of his soul teacher's assistance in curing the ill patient has a physical impact on the shaman; throwing him to the ground and making him appear 'dead.'

Reinaldo's description of this curing technique provides some insight into the nature of the shaman's relationship to the deceased souls. It appears that the shaman develops an

intimate relationship with his soul teacher, starting with the initial encounter and continuing throughout the shaman's training by the soul and the curing practices that involve the abilities of both parties. For the shaman, this relationship is an embodied one that engages all the senses – he uses his heightened vision to 'see' the soul and uses touch and taste through the laying of the hands and blowing tobacco smoke techniques. His entire body is involved when it is thrown to the ground by the sheer force of the connection between himself and his soul teacher. Conversely, the shaman avoids intimate, embodied engagements with those deceased souls that are not helpful to him and are potentially dangerous. As Reinaldo notes, the shaman usually tells these other souls to 'leave us alone,' including himself in the declaration. While encounters with the dangerous souls are inevitable (since they are often enticing living souls out of their bodies), the shaman does not cultivate and develop these relationships as he does with his soul teacher.

With all three of these shamanic modalities, the shaman appears to serve as a helpful intermediary between humans and nonhuman beings in forest and village spaces. Despite the physical toll that transformation and healing can take on the shaman, his powers are essential to mediate between humans and animals and between living people and deceased Canela souls. Meanwhile, the shaman's communicative engagements with plants and Plant-People appear to be less physically taxing and perhaps even enjoyable, as he affectionately cares for (and is sometimes seduced by) these friendlier entities.

There are instances, however, when shamans use their unique perceptual powers to harm people within and outside of the village. These harmful shamans are still known as *kay* in Canela, but are typically called 'witches' (*feiticeiros*) in Portuguese. Crocker and Crocker

(2004: 90-92) discuss instances of 'witchcraft' that occurred as late as the 1970s, yet they also note that revealing oneself or others as a witch is unheard of, since witchcraft is by nature usually practiced in secret. I did not hear of any current or recent attacks by witches during my fieldwork, and the only examples of witchcraft that my research assistants openly discussed were from mythic-historical storytelling. One such story that Leandro recounted is the tale of Peliga Prai-re, a shaman from the neighbouring Apaniekra village of Porquinhos:

Peliga Prai-re came from the nearby village of Porquinhos; he was Apaniekra. He was log racing and lost to a Canela man. He cried with rage and began singing. Peliga Prai-re put a sick armadillo in the Canela village. He also performed witchcraft on someone in the Canela village, but another [Canela] healer saved the person. Peliga Prai-re treated the Canela village badly on a number of occasions.

In this story, the external forces of Peliga Prai-re negatively affect the entire Canela village, and a Canela shaman uses his abilities for healing purposes only. In another story told by Leandro, the Canela shaman Bajilim is a 'witch' who performs both harmful and helpful acts:

Bajilim was a master with vegetables – maize, sweet manioc, among others. He could also cure all illnesses. He was friends with Seberinho, also a master, who was from a different Timbira tribe. Both of them were witches, and they killed many people, both men and women. Seberinho arrived in his Chinela⁵⁵ village, and someone killed him. Bajilim was Canela, and he could transform himself into any type of animal. He would transform into a cobra, a jaguar, a giant anteater, a deer, just as a game to show people what he could do. Bajilim removed the deceased souls from the village – this is what a good healer does.

Bajilim is an ambiguous figure; on the one hand, he is a powerful healer and gardener who protects the Canela people from the dangerous deceased souls and on the other, he is a

⁵⁵ The 'Chinela' people referred to in this story are most likely the Canela-Kencatêjê, a group that, according to Azanha (1984: 49), lived near the Chinela stream in Maranhão until a 1910 massacre forced them to disperse as a group, with some of the survivors joining neighbouring Krahô and Apaniekra villages.

known witch who freely kills people. His transformations into various large and dangerous animals 'as a game' is a display of power to the other villagers, similar to the transformative powers of the culture hero Awkhêê that were seen as dangerous and frightening to the Canela people as a whole (see Chapter 3 [pp. 107-109] and Appendix D [pp. 404-411]). To the villagers in the story, Bajilim appears to be an awe-inspiring yet potentially threatening shaman who can simultaneously look after and wreak havoc on Canela society.

Although a modern-day Canela shaman most likely does not use his powers for destructive witchcraft, the potential to help or harm seem to both be inherent aspects of the shamanic abilities that he develops through extended engagements with the similarly ambiguous deceased souls. It appears that modern-day shamans, and the community as a whole, tend to emphasize the shamanic role of helpful mediator over the dangerous and harmful role of witch that shamans could possess if they so desired. Now that gardening has become such an important part of the Canela life-world, as I have explored throughout the thesis, I would also suggest that a shaman's helpful role as mediator between humans and cultivated crops (and their master spirits) is perhaps becoming more central to developing and maintaining shamanic abilities as well.

Conclusion: shamanic encounters with plants and nonhuman 'animacy'

This chapter has explored the various ways that shamans use their unique perceptual abilities to engage with a variety of nonhuman beings in forest and village spaces. The second and third shamanic modalities, the ability to transform into animals and the ability to cure through engagements with nonhuman souls, are shamanic powers that have been

documented in many indigenous communities throughout lowland South America (cf. Viveiros de Castro 1992; Fausto 2008; Wright 2013). Shamanic engagements with medicinal plants are well documented in the ethnographic literature as well (Shepard Jr. 2004; Milliken and Albert 1997; among others). While these abilities certainly form important parts of past and present Canela shamanic experience, this chapter also sheds light on the centrality of shamanic encounters with cultivated crops and the Plant-People master spirits. These encounters seem to be a defining aspect of being or becoming a Canela shaman, with shamans enthusiastically describing and perhaps even looking forward to the friendly and affectionate multi-sensory engagements they develop with a crying maize plant or a stunning Sweet Potato-Woman master spirit.

Perhaps shamanic transformations into animals were more common in the past, when hunting was more central to Canela subsistence and shamans were primarily responsible for accessing the animals' 'points of view,' as Viveiros de Castro (1992, 1998, 2011) describes for the Tupi-Guaraní-speaking Araweté and in his 'perspectivist' theoretical framework. Now that the Canela community relies almost entirely on horticulture for subsistence, however, the shamanic ability to converse with plants and Plant-People and convey their messages to human gardeners seems to have emerged as an integral component of the unfolding Canela life-world. Without shamanic mediation, gardeners would not fully understand their crop children's needs and desires or if they were dissatisfied, and most likely many more displeased crops would leave garden plots, resulting in poor harvests. Thus, in this view, the affectionate, caring relationships between shamans, plants, and Plant-People are not antithetical to the more 'traditional' shamanic powers of transformation and healing, but have rather unfolded as another

transformation in the vibrant and dynamic Canela 'bio-sociocultural life-world' involving humans and nonhumans.

While this chapter explores the nature of the friendly plants and Plant-People, the more ambiguous deceased Canela souls, and the dangerous white souls in this unfolding life-world, a further discussion of the 'animacy' or intentionality of 'soulless' animals, objects, plants, and Plant-People is necessary. In many lowland South American indigenous communities, similar 'souls' or 'inner vitalities' are attributed to humans and to a variety of nonhuman beings, and as Descola (2009) argues, these shared 'vitalities' are what forms the basis of the 'animist ontology.' In the Canela life-world however, lacking a soul does not appear to preclude animals, objects, plants or Plant-People master spirits from sharing human-like attributes or from possessing agentic capacities.

On the contrary, I suggest that these beings' 'animacy' emerges through multi-sensory engagements with each other and with humans, particularly shamans. Canela shamans and non-shamans alike describe animals, objects, plants and Plant-People as 'similar to people' due to the sensory and emotive capabilities of these entities – namely, they can consume and taste food, listen to and speak with the shaman in the Canela language, and can 'become happy' if their desires are met. Although objects cannot move of their own accord, animals can move freely and plants can physically relocate to another garden. Plant-People seem to have even greater powers of movement, as they can appear to the shaman in various locations within forest and riverbank garden plots.

These slight differences in intentional capacities, combined with the apparent non-existence of nonhuman souls, lead me to conclude that Canela 'animism' seems to operate on a sliding scale, similar to the Ecuadorian Runa's 'scalar view of animacy' as

described by Nuckolls (2010: 353). In this view, the deceased Canela souls (and perhaps the white souls) would be at the top of the animate scale, having highly developed 'agentive' capacities of movement, transformation, and communicative powers. Although they are disembodied, as 'pure' souls they appear to be highly intentional and powerful beings. Human beings, I suggest, would be conceptualized as slightly 'less' intentional than the deceased souls – they possess their own souls and can think, move, and express emotion, but they rarely possess transformational powers and cannot exist in more than one location at once as the deceased souls can. (In this sense, a shaman with transformational abilities may have similar agentive capacities as a deceased soul).

Following humans, I posit that Plant-People master spirits would be next in the hierarchy of intentionality. They do not possess souls, yet they can speak, express various emotional states, and manifest themselves to shamans whenever they choose. The master spirits' complete freedom of movement and their ability to represent entire crop species and varieties appears to set them 'above' plants and animals in this scale. Plants and animals would seem to exist on the same level of 'animacy,' as they are soulless yet possess similar embodied agentive powers of thought, emotion, and physical movement. Objects and artefacts would fall slightly below plants and animals on this scale, since they can think and express emotions but cannot move of their own accord. Few, if any, things in the unfolding life-world would be classified as 'inanimate' within this scale, since myriad human and nonhuman entities are constantly growing and making themselves and each other through time and space. As Dirceu pointed out, even 'materials' such as fire and water have communicative abilities and in this sense participate in the unfolding life-world comprised of multi-sensory entanglements as well.

When approached in this scalar way, perhaps Canela conceptualizations of nonhuman 'animacy' become clearer. For the Canela, it appears that the 'soul' is not the site of consciousness or the intentional 'mind.' Rather than being located in a pre-existing inner vitality, I posit that the intentionality or 'mindfulness' of animals, objects, plants, and Plant-People master spirits in the Canela life-world emerges through emotive and communicative multi-sensory engagements with each other and with human beings, especially shamans. Although these nonhuman beings may not be as 'mindful' as living humans with souls, or as the deceased souls themselves, they are sentient beings who can communicate with humans in an emergent, phenomenological way, without the mediation of a shared symbolic inner 'soul.'

Ingold's (2000, 2008) notion of the phenomenological 'meshwork' that enmeshes all sorts of persons and things through time and space can be an analytically useful concept here. The communicative, multi-sensory relationships between humans and diverse nonhuman beings emerge along the 'threads' of the meshwork (cf. Ingold 2007a: 81), and together form the fluid and dynamic 'bio-sociocultural life-world.' In this sense, certain 'threads' such as those between gardener parents and crop children become meaningful and valued in forest and riverbank garden spaces, as do those among Canela matrilineal families in the village space. Canela shamans, however, have developed heightened perceptual abilities that allow them to create unique 'threads' of engagement with all sorts of nonhumans in the forests and the village, thereby expanding and enriching the life-world and the 'aesthetics of landscape' through which it is valued in new and interesting ways.

Chapter 8

Conclusion: dualisms and triads emergent in the Canela ‘bio-sociocultural life-world’

Introduction

In the Canela ‘bio-sociocultural life-world,’ certain individual and communal experiences emerge as perceptually salient and thus shape the life-world’s structure as it unfolds and transforms over time and through space. While the previous chapters focus on how human and nonhuman individual and communal phenomenological perceptual experiences in village and garden spaces emerge in the Canela life-world, in this concluding chapter I explore the overlapping dualistic and triadic structures that appear to take shape through and alongside human and nonhuman life processes. Similar to other Jê-speaking communities, the Canela appear to conceptualize their relational life-world in oppositional and complementary dualisms and triads.

Drawing from the works of Lévi-Strauss (1963), Maybury-Lewis (1979a, 1979b), Melatti (1979), Ewart (2003, 2013), and Crocker (1990), in the first section of the chapter I explore how the Canela conceptualizations of dualistic and triadic structures compare to those of other Jê communities such as the Krahô and the Panará. In particular, I examine how Canela notions of space, landscape, and ethnobotanical classification shed light on the dualisms and triads of the life-world as well as the emergent nature of these structures. Rather than conceiving of various complementary and oppositional relationships in the Canela life-world as static and unchanging, I draw from and expand upon the literature on

Jê 'dualistic organization' to ponder the transformational aspect of these relationships. Additionally, I explore whether a phenomenological approach to these structures, as I have laid out in this thesis, provides a more comprehensive way of understanding how an indigenous community such as the Canela conceptualizes the myriad human-nonhuman, biological-sociocultural engagements in their life-world.

To explore Canela dualisms (and implicit or explicit triads) further, in the second section I address the Canela oppositional concepts of *impej*, or that which is 'beautiful,' 'true/original,' and 'good,' and *ihkên*, that which is 'ugly,' 'false/less original,' and 'bad.' Related to these oppositional concepts is another pair – *ihyti*, or 'strength' and 'happiness,' and *ihpêc*, or 'weakness' and 'sadness.' These two related pairs of opposites appear to inform much of Canela daily life, including gardening activities and human-plant relationships (see Chapter 5 [pp. 172-174, 182-184]). In this section, I examine these concepts in more detail, particularly how *impej* and *ihkên* appear to be linked to Canela holistic conceptualizations of wellbeing and its lack. Through an exploration of this oppositional pair as manifested in garden work and other social activities, classification of and engagements among plants and people, and myth (especially in the Sun and Moon and Star-Woman mythic stories explored in Chapter 3 [pp. 90-99]), I posit that both concepts are necessary for the combined biological/ecological, sociocultural, and cosmological reproduction of the Canela life-world. Additionally, I ponder whether the asymmetry of the *impej-ihkên* pair, with *impej* described by one of my research assistants as being 'a bit better' than *ihkên*, is conducive to Lévi-Strauss's (1963: 131) theory of 'asymmetrical triads' underlying apparent dualisms in Jê social structure. Whether there is a third concept or conceptual pole in addition to *impej* and *ihkên* is explored, as is the

shifting relationship between this especially significant conceptual pair and the dualistic and triadic spatial organization of the Canela life-world.

To conclude the thesis, I address the ongoing tensions between the structural aspects of the Canela life-world explored above and the embodied, multi-sensory phenomenological experiences of humans and nonhumans discussed throughout the previous chapters. As a reflection of the broader tension between structure and individual that continues to inform and shape social-cultural anthropology as a whole, it is not my intention to provide a superficial 'fix' to the structural/phenomenological tension in the Canela ethnographic material. Rather, I posit that the 'bio-sociocultural aesthetics' theoretical framework postulated in Chapter 2 (pp. 66-69) perhaps provides a way forward of more fully addressing this tension and recognizing the limits of a purely structural or phenomenological approach to human-environment engagements.

The 'bio-sociocultural aesthetics' framework that I put forward in this thesis is an attempt to merge the two approaches through a focus on bio-sociocultural phenomenological emergence and growth that leads to meaningful human and nonhuman experiences which are, in turn, shaped into particular 'structures' as life unfolds. Not only does this framework address a particularly significant tension in anthropology and in my fieldwork data, but it also, I contend, provides a comprehensive way to approach Canela human-plant engagements, including gardening practices and varietal diversity maintenance. In all its transformations and continuity, this thesis has attempted to show how Canela gardening and varietal diversity maintenance have become valued in the Canela community, in particular for the intimate, often affectionate engagements among human gardeners and cultivated plants. Thus, I postulate whether the 'bio-sociocultural

aesthetics' framework could add a new and innovative approach to analysing ethnobotanical knowledge acquisition, transmission, and maintenance. What this 'ethnobotany of the senses' would look like forms the concluding thoughts of this thesis, which will hopefully be a useful contribution to future research on indigenous and local human-environment engagements and knowledge in lowland South America and beyond.

Oppositional and complementary dualisms and triads: placing the Canela in the larger Jê context

Jê-speaking communities in central and northeast Brazil have become well-known in the ethnographic literature for their apparent 'dual organization' of space and of people. Villages are commonly conceptualized as being divided between the male ceremonial and socio-political centre and the female domestic 'periphery' of houses (see Chapter 4 [pp. 116-117]), and kinship organization and naming appear to exhibit dualistic structures as well (cf. Maybury-Lewis ed. 1979). As Maybury-Lewis (1979a: 2) points out, it was Nimuendajú who initially 'stressed that dual organization was the key to the understanding of the Jê-speaking peoples.' Drawing from Nimuendajú's initial suggestion, the various publications of researchers from the Harvard Central Brazil Project focused almost exclusively on the dualities in Jê and Bororo kinship and spatial structures (cf. Maybury-Lewis 1979a, 1979b; Lave 1979; Melatti 1978, 1979; Da Matta 1973, 1982). Many anthropologists studying these communities during and after the project have continued to delve deeply into further explorations of Jê dual structures manifested in social organization, kinship, ritual, and exchange (cf. Seeger 1981, 1989; Lea 1986; Coelho de Souza 2002, 2004; Falleiros 2005; among others).

Early on, however, Lévi-Strauss (1963: 121, 131) critiqued the concept of 'dual organization' as 'illusory' and belying a more 'fundamental organization which is asymmetrical and triadic.' Thus, an ongoing debate between Maybury-Lewis and Lévi-Strauss regarding the nature of dualities (or triads) in central Brazil ensued, which, as Ewart (2013: 22) notes, has been addressed by 'virtually all scholars' whose research focuses on Jê social organization. Instead of simply reproducing the main arguments of this debate here, I draw from Ewart's (2013: 19-24) eloquent interpretation of Maybury-Lewis's and Lévi-Strauss's theoretical standpoints in light of her ethnographic material on the Panará, as this interpretation has close parallels with my own data on Canela conceptualizations of dualisms and triads.

While the argument between Maybury-Lewis and Lévi-Strauss stems from both ethnographic and theoretical disagreements, Ewart (2013: 20-21) focuses on the theoretical level, particularly whether Jê social organization has an essentially dualistic or triadic nature. Maybury-Lewis emphasizes Jê dualisms, Ewart (2013: 21) points out, due to his conceptualization of duality as a 'universal tendency' to 'think in twos' (Maybury-Lewis 1960: 42; in Ewart 2013: 21). He references this idea in his later work as well, arguing that Jê-speaking and Bororo peoples' 'have a binary view of the universe. They state quite explicitly that their societies are imbued with oppositions, because opposition is immanent in the nature of things' (Maybury-Lewis 1979a: 12-13). In this view, the binary dualities of centre/periphery, male/female, culture/nature, and so on exist without reference to their surroundings, which are not pertinent to the dual concepts themselves (Ewart 2013: 21; citing Maybury-Lewis 1960: 39).

Meanwhile, Lévi-Strauss (1963: 151-152) creates a theoretical distinction between diametric and concentric dualisms, the former of which is apparently symmetric and static, and the latter of which is dynamic and ‘contains an implicit triadism.’ As Ewart (2013: 20) describes, this triadism can best be understood as existing among the centre, periphery, and that which lies beyond the periphery; that is, the surrounding environment. Diametric and concentric dualisms exist in relation to one another, however, meaning that the diametric type is never as static or symmetrical as ‘one might tend to imagine’ (Lévi-Strauss 1963: 135). Rather, Lévi-Strauss (1963: 151) argues that concentric dualism mediates between diametric dualism and explicit triadism, resulting in his hypothesis that dualism and triadism are inseparable – ‘since dualism is never conceived of as such, but only as a “borderline” form of the triadic type.’

In his later work, Lévi-Strauss expands on the inseparability of dualisms and triads with his concept of ‘dynamic disequilibrium,’ which Ewart (2013: 23; citing Lévi-Strauss 1995: 63 and Maybury-Lewis 1989: 104) notes is in response to Maybury-Lewis’s idea of ‘dynamic equilibrium.’ Instead of representing fixed contrasting pairs that are ‘ideologically timeless and primordial’ (Ewart 2013: 22-23) as Maybury-Lewis does, Lévi-Strauss’s concept emphasizes the instability and therefore inherently transformational nature of asymmetrical *Jê* dichotomies. Thus, while the specific conceptual pairs may be modified and transformed over time and space, the apparent preference among *Jê*-speaking peoples to conceptualize their ‘societies’ (or what I would term their encompassing ‘life-worlds’) in terms of dualisms and (implicit or explicit) triads remains.

Throughout her recent monograph, Ewart (2013: 82) draws on Lévi-Strauss’s ‘dynamic disequilibrium’ as a particularly useful way of understanding shifting Panará dualisms.

Since the community's initial contact with the larger Brazilian national society in 1973, for example, the 'hierarchical opposition' between moieties in the ceremonial centre has shifted focus to an opposition between the young and the old, and between the Panará and the Brazilian national society itself, whose members are now referred to as *hipe* (Ewart 2013: 82). According to Ewart (2013: 19-20, 23), the concepts of *panará*, or 'people,' and *hipe*, which translates as 'enemy/others/white people,' form a 'key opposition' in contemporary Panará thought through which other dualisms are manifested as well. The division between 'nature' and 'culture,' which Ewart (2013: 22) points out may not accurately reflect Jê categories of thought anyway, is therefore not relevant to Ewart's study, since the Panará themselves clearly emphasize the opposition and interactions between *panará* and *hipe* in their current-day life experiences.

Similarly, the modern-day Canela conceptualize their relationship to Brazilian society in oppositional terms as well, through the concepts of *měhĩn* ('people;' literally plural 'us/we' + 'flesh'), which refers to the Ramkokamekra-Canela themselves and other Timbira communities, and *cupě̃n*, which also translates into 'enemy,' 'Other,' and/or 'whites.' As the previous Chapter 7 (pp. 265-267) explores, this opposition is unequal and hierarchical, with the *měhĩn* being dependent on the *cupě̃n* for certain goods and services and fearing threats of violence from the more 'powerful' neighbouring whites. This opposition extends beyond living bodies to deceased spirits or 'souls,' the *měkarõn* of the *měhĩn* and the *pehjarohti* of the *cupě̃n* (see Chapter 7 [pp. 268-272]). The *měhĩn* versus *cupě̃n* dualistic pair appears to be a 'key opposition' (cf. Ewart 2013: 23) as it is for the Panará, shaping Canela interactions with and conceptualizations of outsiders, including neighbouring Brazilian farmers and cattle ranchers, and Brazilian and foreign governmental and non-governmental workers, schoolteachers, health care workers,

missionaries, and anthropologists. It also appears to inform spatial organization in both the Panará and the Canela life-worlds. As Ewart (2013: 235) points out, studies of Jê dual organization tend to ‘stop at the edge of the village,’ but her study goes beyond the margins of the ‘periphery’ to explore the people and spaces that the Panará conceptualize as non-Panará. For the Canela, it appears that the village, forest spaces, and neighbouring non-Canela towns exist in a tertiary relationship of relative safety and danger, as Chapter 7 (p. 267) suggests. Thus, conceptualizing the shifting relationship between ‘Self’ and ‘Other’ appears to shape many aspects of the Canela life-world in both dualistic and triadic ways.

This is not the only way that the Canela appear to conceptualize spatial organization, however, as Chapter 4 explores (pp. 154-158). Based on my research assistants’ discussions of different village and garden spaces, I hypothesize that the Canela conceive of two sets of pairs – the ceremonial centre/outer circles of houses, *and* the riverbank/forest garden spaces, that also form a triad of village – riverbank garden – forest garden. Lévi-Strauss (1963: 151-152) outlines a related dualistic relationship between the central village circle, associated with ‘cleared ground,’ and the ‘peripheral waste land,’ and their tertiary relation to the surrounding environment, or uncultivated ‘virgin land.’ This use of landscape terminology does not accurately reflect Canela classification of land types, given that the Canela cultivate crops in both backyard gardens behind the ‘peripheral’ houses (which are clearly not located in ‘waste land’) and in the nine eco-regions surrounding the village which constitute various types of cultivable and cultivated land, none of them completely untouched.⁵⁶ Nevertheless, Lévi-Strauss’s (1963: 151)

⁵⁶ While my research assistants once described the Caxàt-re kô ‘real forest’ as ‘virgin’ when discussing illegal logging, they more frequently described it as an eco-region with fertile soil in which gardens are sometimes

focus on the environment as the 'frame of reference' for 'concentric dualisms' resonates with the Canela material, as does the ability of concentric dualisms such as the village centre/outer circles of houses and riverbank/forest gardens to transform into a triadic structure.

Another way to enrich our understanding of Canela dualisms and triads, as seen in spatial organization and elsewhere, is through a brief analysis of Melatti's (1979) 'opposition of oppositions' for the Krahô and Crocker's (1990: 328) 'modifying triads' for the Canela. According to Melatti (1979: 46), 'every opposition between two elements is opposed by another opposition which negates the first one,' resulting in pairs that are both oppositional and complementary. Basing his analysis on Krahô transmission of names and ritual activities, Melatti (1979: 48-49) uses as his primary example the relationship between men and women. While the two genders are conceptually opposed in the socio-political organization of village space, with women 'totally excluded from political life,' certain rituals and naming transmission affirm and 'insist upon the equality of the sexes' (Melatti 1979: 48, 79). Thus, the 'opposition of oppositions' such as that between men and women displays the complementarity between the two elements, since by being compared at all they must share 'something in common' (Melatti 1979: 79).

Crocker (1990: 192-193) agrees with this conceptualization for Canela oppositions as well, and discusses how the Canela 'bridge' differential concepts such as male/female to turn them into similarities. In his view, the 'opposition of oppositions' is an 'important principle' that 'can be applied almost everywhere among the Canela' (Crocker 1990: 193).

cultivated. Crocker (1990: 332) identifies an opposition between a Canela village (*khri*) and what he terms the 'uncut virgin forests' (*a?kuuni*). My research assistants did not express this opposition to me, however, nor did they use the term '*a?kuuni*' when discussing the nine eco-regions or 'land types' that they classified.

Certain conceptual oppositions that can become complementary in daily life include inner/outer, 'kin' (consanguines)/affines, women/men, youth/elderly, and individual/solidarity, among others (Crocker 1990: 183-193). Many of these oppositional or complementary pairs can also form triads, and Crocker (1990: 325, 327) recognizes the relevance of Lévi-Strauss's 'fundamentally asymmetrical and triadic system behind the dualisms' for the Canela.

My intention here is not to dissect Crocker's (1990: 325-328) intricately complex breakdown of Canela oppositional versus complementary pairs or his understanding of 'fixed,' 'modifying,' or 'generating' triads.⁵⁷ Instead, let us briefly explore Crocker's transformation of complementary and oppositional dualisms into complex triadisms, particularly what he terms the 'modifying' type (Crocker 1990: 328). An example of a modifying triad is the relationship among a deceased Canela 'soul' (*karõ*; or what Crocker terms 'ghost'), a living Canela person, and a Canela shaman. While the 'ghost' and the shaman, and the living Canela and shaman, are each paired separately, the ghost and living Canela exist in opposition to one another, with the ghost's presence dangerous to living people without shamanic powers (as Chapter 7 [pp. 290-293] describes). The opposition between ghost/living Canela, however, is 'modified by the shaman's intercession,' due to his complementary relation to each of the other actors (Crocker 1990: 328). In this way, the oppositional pair becomes a modifying triad, through the 'bridge' (*hapàà* in Canela) of the two complementary pairings (Crocker 1990: 328).

⁵⁷ While my fieldwork research reveals many similar and a few radically different relational pairs and triads, I am not questioning Crocker's rich ethnographic material collected over five decades, and I intend to draw from his vast collection of binary and tertiary structures for my own future fieldwork research on the subject.

For Crocker (1990: 337), the Canela tendency to form conceptual triads reflects their desire to ameliorate or mediate conflict within the village because ‘triads as a pattern, especially in the modifying configurations, make the resolution of problems more feasible and likely.’ It does appear that the Canela are less inclined to factionalism and socio-political strife, as demonstrated in the permanency of the large primary village of Escalvado over the past 45 years. What is perhaps most significant about Canela dualisms and triads for this thesis, however, is how continuity and transformation emerge through and with both forms. Take the above triad of village – forest garden – riverbank garden, for example. The combined mythic-historical record indicates that Canela cultivation of two separate annual garden plots is a relatively recent innovation (as Chapter 3 [pp. 77-78, 87-88] explores); thus, the complementary pair of forest/riverbank garden and the related triad with the village are likely recent transformations. Nevertheless, I posit that the focus on a complementary duality between the two gardens and their tertiary relationship to the village space reflects the ongoing continuity of the dualistic and triadic forms themselves.

Additionally, the classification of soils into pairs that complement each other as a husband and wife do (see Chapter 1 [pp. 37-39]) has not been previously recorded in the ethnographic literature. Whether these complementary pairs are a recent transformation or have been conceptually relevant for the Canela for some time, it appears to me that they are further manifestations of the Canela preference for dualisms (and implicitly for triads). As Crocker (1990: 183) points out, his research assistants ‘preferred to answer questions in terms of “paired” opposites,’ whether oppositional or complementary. I had a similar experience with my research assistants, especially when discussing gardening knowledge and activities, as the garden techniques and practices of forest and riverbank

plots were almost entirely explained in complement to one another (i.e. 'we do X in the forest plot, and Y in the riverbank plot'). It seems that the dualisms and triads related to gardening activities are perhaps the most significant transformation of these forms in the Canela community's recent history, and it has been my purpose in this thesis to explore how Canela gardening has emerged as a simultaneously continuous and transformational aspect of the unfolding life-world.

While Lévi-Strauss (1963) long ago identified and addressed the dynamic and transformational nature of Jê dualisms and triads, grappling with the dynamism of Jê social organization continues to be a major focus of ethnographies on these central and northeast indigenous Brazilian communities. In her recent monograph, for example, Ewart (2013: 235) displays how the dual organization of the Panará village is not static, but rather the result of an ongoing process of construction, as people build, modify, and tear down houses. This processual aspect of Jê 'life-worlds' is apparent for the Canela as well, and is particularly seen in everyday gardening activities and individual and communal rituals that centre on the life processes of human gardeners and nonhuman cultivated crops (see Chapter 6 [pp. 228-235, 247-257]).

I posit, however, that these processes are part of an ongoing unfolding of the combined biological and sociocultural Canela 'life-world,' and that the dualistic and triadic structures emerge along the processual pathways that form the 'life-world' itself. This phenomenological approach outlined in Chapter 2, with its emphasis on dynamic processes of growth and making (or 'growing-in-making', cf. Ingold and Hallam [2014: 5]), perhaps allows for a more nuanced understanding of Canela (and wider Jê) structural patterns. For instead of fitting processes of transformation and continuity *within* all-

encompassing societal structures, the phenomenological approach put forward here suggests that the processes themselves *form* and *give shape* to various structures over time and in space.

Thus, while Ewart's (2013: 236-238) conclusion that Jê groups differ from Tupi-Guaraní communities with their focus on 'self and other as mutually reflective' instead of emphasizing 'human transcendence' is a useful comparison of the two sets of beliefs and practices, I am unsure of the classification of Jê 'being' versus Tupi-Guaraní 'becoming.' The idea that Jê 'complexity lies in the social organization of what *is* the physically inhabited world' (Ewart 2013: 238; original emphasis) is compelling, but I would posit that what '*is* the physically inhabited world' is itself constantly unfolding and 'becoming' through and alongside myriad human and nonhuman life pathways. Tupi-Guaraní groups may indeed be focused more on achieving transcendental states than Jê groups are, but I suggest that a Jê community such as the Canela does focus on the 'becomings' (cf. Ingold and Pálsson eds. 2013) of humans and nonhumans, particularly cultivated crops, and that these ongoing processes more fully come to light through the phenomenological lens.

Impej and ihkên

Throughout my fieldwork, the conceptual division between that which is (or perhaps 'becomes') *impej* and that which is *ihkên* was the dualistic pair to which my research assistants most frequently referred. Although Crocker (1990: 187-188) finds that 'the Canela do not comment or say very much about things that are beautiful (*mpey-ti* [*impej-ti*]) versus those that are very ugly (*?khêán-re* [*ihkêãn-re*]),' in my research, this pair was central to discussions of myth, classification of crops and of people, and states of being

holistically ‘well’ or ‘unwell,’ among other topics. Imbued with multifaceted meanings, the concepts require unpacking here. The term *impej* or *pej* refers variously to that which is ‘beautiful,’ ‘true’ or ‘original,’ and ‘good.’ It has moral connotations, and as Chapter 5 (pp. 182-184, 206-207) explores, pursuing the ongoing state of becoming *impej*, especially through garden work and human-plant encounters, appears to be highly valued in the Canela life-world. Crocker (1990: 188)’s assessment that the Canela ‘highly value beauty’ is consistent with my findings, and is seen in the way in which Canela gardeners sort through diverse arrays of multi-coloured bean varieties, commenting on their appreciation for the ‘beauty’ or ‘goodness’ of the diversity as a whole (see Chapter 5 [pp. 204-205]).

The concept’s significance in everyday life can be seen in the common greeting that people frequently exchange upon meeting each other, where one person asks ‘*Apej?*’ (‘*Tudo bem?*’ in Portuguese; literally ‘are you *impej* [good/well]?’) The other person typically responds with ‘*Impej*’ (‘I am good/well’). As Lilita informed me, occasionally one responds with either ‘*ipej*,’ meaning ‘I was unwell but now I am better,’ or ‘*ihkên*,’ meaning ‘I am unwell,’ such as while a woman is menstruating. Thus, the concept of *ihkên* is conceived as all that is opposite of *impej*, referring to a state of being or becoming unwell or ‘bad,’ as well as that which is ‘ugly’ and ‘untrue/false’ or ‘less original.’ It too has a moral component, being conceived as slightly ‘worse’ than *impej*, and it is tied to fierceness and bitterness especially for ‘masculine’ crops such as bitter manioc varieties (as Chapter 6 [pp. 225-226] explores). The two concepts can also be intensified, as Fernando explained, through the augmentatives *impeaj to impej* (‘even more beautiful, good, true’) and *ihkêãn-re* (‘even more ugly, bad, false’). In this way, it appears that there are two pairs, *impej/ihkên* and *impeaj to impej/ihkêãn-re*, that display different levels of

intensity, similar to Canela colour categories that seem to be based on intensification (brilliance or dullness) that Chapter 6 (pp. 220-224) explores.

The concepts appear to be integral to the Canela life-world, as seen particularly in the mythic origin of people. While Chapter 3 (pp. 90-92) discusses this origin myth in detail, here I focus on the binary categorization of Canela people that the myth creates. In the mythic story, Sun creates human children who have smoother, shinier hair and are 'pretty' (*impej*), while Moon creates children who have curly, unruly hair and are 'uglier' (*ihkên*) than Sun's children. Fernando points out that Sun's children, who live on the western side of the village, bear more similarities to Sun than Moon's children, those who reside on the eastern side, do to Moon. He also clarifies that while *impej* and *ihkên* are indeed oppositional concepts, they are the 'same size' and *impej* is only 'slightly better' than *ihkên*.

Thus, while people from the western side sometimes joke about how those from the eastern side are 'uglier' and are 'liars,' the moral component to these statements appears to be different than a Western conceptualization of 'good' versus 'bad.' Due to the east-west marriage rule (see pp. 115-116 in Chapter 4), all Canela families incorporate both Sun's and Moon's children, both the *impej* and the *ihkên*. Another instance in which a 'bad' or at least 'worse than good' component is necessary is during the Fish festival, which is 'sponsored' by the Mëhkin male ritual group that Fernando described as 'liars and deceivers.' Indeed, the group's primary role is to make jokes and deceive others during the festival, and according to Fernando they are *ihkên* (see Chapter 4 [pp. 119-125] for a brief discussion of the Canela annual festival cycle, and Crocker [1990: 189; 275-276] for a more comprehensive analysis). In myth and ritual, then, it appears that both the

'good' and the 'bad' are essential for the continuity of human lives within the Canela life-world.

Ethnobotanical classification is another area in which the necessity of the 'good' or 'beautiful' as well as the 'bad' or 'ugly' becomes clear. Canela gardeners classify certain varieties of maize, squash, yam, bean, sweet manioc, *urucum*, sugarcane, and mango as *impej* and a few types of maize, yam, and rice as the augmentative *impeaj to impej*, while all bitter manioc varieties are categorized as being *ihkên* and one type in particular is known as *ihkêãn-re* (see Chapter 6 [pp. 225-226]). Those varieties that gardeners categorize as *impej* or its augmentative are conceived as more 'beautiful' and more 'true' or 'original' than others, and are associated with the mythical introducer of cultivated crops, Star-Woman, while the *ihkên* or *ihkêãn-re* varieties are 'uglier' and 'less original,' being associated with Tyc-ti, Star-Woman's Canela husband. Nevertheless, my research assistants emphasized that Star-Woman introduced all crop species and varieties to the Canela community and taught the people how to grow, harvest, prepare, and consume the diverse food crops, which the mythic story as told by Marcelino in Chapter 3 (pp. 92-95) highlights as well.

Thus, although the *impej* varieties are known as being 'better' and 'truer' than others, both the good and the bad (and the 'best' and the 'worst') crop varieties and species form part of the mythical heritage of Star-Woman and are valued as such. Part of valuing the ethnobotanical knowledge that Star-Woman imparted on the Canela community appears to be maintaining the species and varietal diversity that she introduced, and many gardeners therefore continue to cultivate multiple varieties of both *impej* and *ihkên* crops. For example, the gardeners with whom I conducted research typically cultivate multiple

varietals of sweet and bitter manioc, regardless of the fact that the bitter manioc is known as 'ugly,' 'less original,' and 'more dangerous' or bitter than the sweet varietals, which is connected to its high levels of toxic cyanogenic-glucoside that necessitates intensive processing before consumption. Similarly, Lilia continues to cultivate two varietals of yam that she actively dislikes and refers to as being *ihkên* (although they are not specifically classified as such), because, she says, she 'cannot leave them.' Maintaining many different crop varietals and species in the garden, Lilia states, is 'beautiful this way,' and in this sense the diversity itself – including everything that is good, better, bad, and worse – is valued and meaningful as being *impej* overall. Therefore, perhaps we can extend the incorporation of 'good' and 'bad' elements as necessary for the continued maintenance and expansion of the cultivated plant lives in the Canela life-world as well.

While the discussion of myth, ritual, and crop classification may indicate that the concepts of *impej* and *ihkên* are static or unchanging – referring to having simply 'good' or 'bad' attributes – I suggest that the terms actually incorporate dynamic and transformational aspects, particularly when they refer to states of being or becoming 'good' or 'bad' (or perhaps holistically 'well' or 'unwell'). When referring to one's behaviour, for example, being *impej* or *ihkên* is malleable and can change over time. Crocker (1990: 188) describes Canela behaviour as 'ranging between "a little good and a little bad,"' with the 'little bad' referring to being *ihkên* rather than *ihkêãn-re*. Examples he gives for this behaviour are children being 'naughty' and adults being 'nasty' (Crocker 1990: 188). My research assistants gave similar descriptions of behaving in a 'good' or 'bad' manner. According to Fernando, behaving in an *impej* manner means 'being generous,' while those who behave in an *ihkên* way 'mistreat' others.

When referring to states of being or ‘feeling,’ my research assistants linked the concepts of *impej* and *ihkên* to the terms *ihțyi* and *ihpêc*, respectively. As Chapter 5 (pp. 172-174) explores, *ihțyi* refers to notions of ‘strength,’ ‘health,’ and ‘happiness,’ while *ihpêc* refers to ‘weakness,’ ‘frailty,’ and ‘sadness.’ The expert gardeners in Chapter 5 describe *ihțyi* as directly associated with visiting and working in the garden, including interacting with growing plants, while its opposite *ihpêc* is associated with remaining in one’s ‘mother’s house,’ refraining from garden work and the intimate, embodied inter-species engagements it entails. One can also become strong, healthy, and happy through undergoing the food and sex prohibitions discussed in Chapter 6 (pp. 236-237). As Liliana describes, young people (especially young men) who want to ‘become happy’ and ‘feel a great strength’ undergo the prohibitions passed down by the ‘ancestors.’

Meanwhile, those people who do not participate in the restrictions and ‘eat anything’ become *me pêc xà*, which she roughly translates as ‘those who are weak, sad or lazy’ (*me ?pek* = ‘those weak: the people who are weak and sad’ according to Crocker [1990: 185]). While those who feel or become *ihțyi* are working all the time, rising early to prepare food and have everything ‘prepared’ for their day of garden or housework (for women), people who feel or become *ihpêc*, Liliana says, ‘only create anger...they do not like to speak, nor to play; they only create anger and speak badly about others.’ Crocker (1990: 185) describes this state of being as ‘introspection,’ noting that the ‘weak’ and ‘sad’ people are ‘motivated by little self-liking or self-esteem,’ and contrasts it with ‘joy and fun,’ or *amyi-?khin* (‘self-liking: euphoria’) and a sense of humour (*hapak-tu tsà*; ‘ear-swollen activity’). Although my research assistants made the comparison between *ihțyi* and *ihpêc* instead, the focus on joyfulness versus sadness remains relevant here.

It is interesting to note that these terms for 'happy/strong' and 'sad/weak' and their oppositional pairing bear a striking resemblance to the Panará concepts of *suakiin* ('energetic, sociable') and *suangka* ('lazy, unsociable'), which are similarly linked to that which is 'beautiful' (*inkiin*) and that which is 'ugly' (*nangka*) (Ewart 2013: 176). For the Panará, people who are *suakiin* work and talk together, and have 'increased overall intersubjective availability' (Ewart 2013: 178) that plays out in distinctly gendered ways. Those Canela gardeners who feel *ih̀t̀ỳi* similarly seek out more 'intersubjective' engagements with other human gardeners and with their nonhuman plant 'children,' and these engagements are gendered as well, with women interacting with saved seeds and growing plants in affectionate ways that are differentiated from male gardeners' relationships with cultivated crops (see Chapter 5 [pp. 190-205]). In the same way as a Canela person who is feeling *ih̀p̀êc* will remain 'immobile and quiet inside the house,' as Liliana describes, a Panará person who is *suangka* will stay 'indoors or out of sight behind the house,' manifesting his or her sadness in a 'withdrawal from intersubjective engagements' and a 'radical reduction in spatial movement' (Ewart 2013: 179). As Ewart (2013: 179) notes, one who is mourning the death of a kinsperson becomes *suangka*, and Liliana describes a similar situation for her sister Camila in Chapter 5 (pp. 177-178), whose 'sadness' (*ih̀p̀êc*) over the death of their classificatory 'father' made her stay at home and prevented her from cultivating and visiting her garden plot.

There appears to be one key difference, however, between how the two groups conceptualize the terms they discuss. Ewart (2013: 179) describes *suakiin* as the 'basic condition of being Panará when life is good,' and *suangka* as a 'state that is acquired...the basic absence of *suakiin*.' On the other hand, for the Canela it seems that both *ih̀t̀ỳi* and *ih̀p̀êc* are states that a person works toward becoming over time and in diverse spaces. As

Liliana points out, one becomes ‘strong,’ ‘happy,’ and ‘healthy’ through the very practices of rising early, working in the house and in garden plots, and undergoing food and sex restrictions, just as one becomes ‘weak’ or ‘sad’ through sleeping in, staying at home and not working, and eating anything without restriction. Both states of being involve ongoing, active engagement (or disengagement) through and within the Canela life-world, and in this way I suggest that they are rather states of ‘becoming,’ requiring a constant flow of effort in one direction or the other.

If *ih̄tȳi* and *ih̄p̄éc* are dynamic states of transformational ‘becoming,’ perhaps the related multivalent concepts of *impej* and *ih̄k̄ên* incorporate a dynamic component as well. For in addition to the multiple meanings listed above, it appears to me that the terms *impej* and *ih̄k̄ên* may also refer to being or becoming ‘well’ or ‘unwell’ in a holistic sense. When Liliana discusses what it takes to have an ‘*impej* life,’ for example, she mentions working hard in garden plots, interacting with her cultivated plant and human ‘children,’ and generally being emotionally and physically satisfied (that is, healthy and well-fed). In this way, she equates ‘happiness,’ ‘health,’ and ‘strength’ with ‘goodness’ and ‘beauty,’ perhaps indicating that an ‘*impej* life’ is about maintaining overall ‘wellness’ or ‘wellbeing.’ Being physically and emotionally ‘well’ in this embodied sense is not a given state, however, and once again, it appears to require ongoing effort to create and maintain it. According to my research assistants, becoming ill or suffering from hunger interferes with this holistic wellness of being ‘*impej*,’ as does not maintaining a forest or riverbank garden plot (or only maintaining one of them). As Renato describes, growing diverse garden crops enables one to eat well and become ‘*impej*,’ here signifying ‘beautiful,’ ‘good,’ and I would venture, ‘well.’

While my research assistants did not discuss in detail becoming ‘unwell’ or having a ‘bad’ life in this holistic sense, Crocker (1990: 188) can provide some insight here with his description of how the concept of *ihkêãn-re* is used when referring to shamans who practice witchcraft. A shaman who ‘kills other people with his spells’ (Crocker 1990: 188) is one of the few categories of people that is classified as ‘very bad,’ or in Crocker’s terms, ‘wicked’ or ‘evil.’ While witchcraft is practically unheard of in the contemporary Canela life-world, the mythic stories explored in Chapter 7 (pp. 293-295) highlight that shamans who became witches in the past engaged in ongoing food and sex prohibitions and relationships with deceased ‘souls’ in order to create and maintain their especially heightened perceptual powers. Thus, it appears that extreme ‘badness’ or even ‘wickedness’ is a transformational state of becoming as well, necessitating continual multi-sensory, embodied effort to create a ‘bad’ or perhaps ‘unwell’ life. Therefore, I suggest that those Canela who become *ih̄t̄yi* feel an embodied happiness, which over time leads to a holistic ‘wellness,’ or becoming *impej*, while those who become *ihpêc* experience sadness that can lead to becoming overall ‘unwell’ or *ihkên*.

Owing to the previous section’s emphasis on Jê and specifically Canela triadic structures, it is worth exploring here whether the dualistic pair of *impej/ihkên* could potentially exhibit a conceptual triad as well. According to Crocker (1990: 328), a resulting triad is impossible for this pair, since the ‘good’ and the ‘bad’ ‘do not have a modifying third element and do not form a product in Canela thinking.’ While this may be the case, the material on ethnobotanical classification reveals a third term, *cahàc*, which may possibly be conceptually significant along with the dualistic pair.

Throughout the creation and modification of the ethnobotanical lists, my research assistants often contrasted *impej* or *pej* crop varieties with those that are *cahàc*, meaning ‘common’ or ‘regular.’ Yam varieties, for example, they initially divided into two categories, Krěô Pej – ‘True/Original Yam,’ and Krěô Cahàc – ‘Regular/Common Yam’ (see Appendix A [pp. 352-353]). Later on in the fieldwork, however, it emerged that Canela gardeners typically divide yam varieties into three categories: one for the ‘best’ and ‘most beautiful’ (*impeaj* or *peaj*) varieties of ‘Pỳp Fish Yam’ (Krěô Pỳp-re) and ‘Anaconda Yam’ (Krěô Tekãjkãj/Rorti), although they belong to the ‘Regular Yam’ classification; another for the four varieties classified as Krěô Pej; and a third for the twelve other ‘Regular’ yams that are truly common (*cahàc*). Although none of the yam varieties are specifically classified as *ihkên*, the ethnobotanical triad of *impej* – *cahàc* – *ihkên* may appear in the classification schema overall. Some varieties, for example, are specifically named and categorized as *impej* (see above and Chapter 6 [pp. 225-227]), others as *cahàc* (the yams mentioned above, as well as all types of squash – Cuhkõn Cahàc, two types of fava bean, one watermelon variety, both types of *acerola*, and one kind of orange), and still others as *ihkên* (bitter manioc varieties).

The possibility of an ethnobotanical triadic structure can also be seen in the overlapping dualistic pairs of *impej/ihkên* and the augmentative *impeaj/ihkêãn-re*. With regard to manioc varieties, my research assistants divided them into two or three categories – either opposing all bitter varieties (*ihkên*) with all the sweet and half-sweet/half-bitter varieties (*impej*), or creating a triad of the ‘most dangerous/bitterest’ Kwỳr Tyc-ti bitter manioc variety (*ihkêãn-re*), the other *ihkên* bitter manioc varieties which were known as ‘half-ugly’ or ‘half-bad’ in this context, and the rest of the ‘beautiful’ and ‘good’ sweet and half-sweet/half-bitter varieties. While the ‘most beautiful’ augmentative is not used in this

instance, we can see how it is employed in relation to ‘beautiful’ and ‘regular’ yam varieties above. These examples, with their complex pairings that can be simultaneously dualistic and triadic, perhaps reveal some ‘implicit triadisms’ (cf. Lévi-Strauss 1963: 152) within the seemingly binary *impej/ihkên* pair, at least as it is employed in Canela crop classification. Whether Canela gardeners conceptualize certain crop varieties as existing in a triadic structure is the subject of future research, which I intend to explore through further fieldwork on binary and tertiary structures with respect to Canela ethnobotanical classification and beyond.

Regardless of whether these potentially triadic structures are indeed conceptually significant, the ‘good’ and the ‘bad’ as a dualistic pair certainly appears to be central to how the Canela community structures and makes sense of their unfolding life-world. This pair exhibits an oppositional quality, as seen in the contrasts between those people, plants, or mythical figures who are ‘beautiful’ and ‘good’ or ‘true,’ and those who are ‘ugly’ and ‘bad’ or ‘less true.’ As Crocker (1990: 335) states, the ‘good’ and the ‘bad’ are categorically opposed and ‘never in parallel with each other,’ similar to the contrasts between light and dark and the ‘folk Catholicism’ concepts of ‘God’ and ‘Satan.’

My research assistants discussed a similar oppositional nature between *impej* and *ihkên*, while also emphasizing the inclusion of both categories in the life-world. Although different crop varieties fall under various categorizations – ‘good,’ ‘better,’ ‘bad,’ ‘worse,’ and even ‘regular/common,’ Fernando tells me that in the garden plot, ‘it makes no difference...people cultivate all of them [the varieties].’ Similarly, Liliana states that she cannot cultivate only those varieties whose taste or physical appearance she prefers, but

rather must ‘grow everything.’ ‘Even if I do not eat it [a certain varietal],’ she says, ‘I will grow it.’

With respect to myth, my research assistants focused on the necessity of both beautiful Star-Woman and ugly Tyc-ti, as well as pretty, intelligent Sun and ‘worthless’ Moon, and their human ‘children’ with some similar oppositional qualities. Finally, even the states of becoming ‘well’ or ‘unwell’ and the corresponding feelings of ‘happiness’ or ‘sadness’ appear to form part of a holistic whole, with people in the process of becoming one or the other throughout their lifetimes and both states seemingly inherent to the life-world as a whole. Therefore, although *impej/ihkên* are strongly oppositional concepts, perhaps the necessity of both to form the life-world imbues them with a complementary component as well. Both concepts are the ‘same size,’ in Fernando’s words, and perhaps they have a dichotomous, complementary (albeit slightly unequal) relationship as well as an oppositional one.

Conclusion: ways forward with ‘bio-sociocultural aesthetics’ and an ‘ethnobotany of the senses’

This thesis is an attempt to bring to light the value and importance of gardening and varietal diversity maintenance in the indigenous Canela life-world, through the ‘bio-sociocultural aesthetics’ theoretical approach that emphasizes multi-sensory, embodied phenomenological experiences while simultaneously recognizing the larger structures that unfold through and alongside myriad human-nonhuman entanglements. In this chapter, and in Chapter 4 to a lesser extent, I have focused on the larger structures that

appear to unfold in dualistic and triadic ways. Meanwhile, Chapters 5, 6, and 7 centre on diverse, emergent human and nonhuman life processes and how certain engagements among humans and nonhumans become valued and meaningful through gardening practices, individual and communal ritual activities, crop classification, and varietal diversity maintenance. Additionally, throughout the thesis and particularly in Chapters 1 and 3, I have focused on the continuity and transformation of the emergent Canela life-world, with a focus on the combined biological-sociocultural and mythical-historical contexts that inform and give meaning to the transformational world in which the modern-day Canela community and its antecedents live and have lived.

Exploring the continuity and transformation of both phenomenological experiences and the structures that are formed through these experiences, I suggest, allows for a more comprehensive understanding of why a formerly semi-nomadic community such as the Canela have become contemporary horticulturalists with a dual garden plot system where species and varietal diversity thrive. While this shift toward biodiverse gardening has been and continues to be informed by historical, socio-political, socio-cultural, cosmological, ecological, geographical, socio-economic, and aesthetic factors, I hypothesize throughout the thesis chapters that these myriad aspects form part of an overarching 'bio-sociocultural life-world.' In conjunction with this hypothesis, I suggest that the 'aesthetics of landscape,' understood as an embodied, multi-sensory way of approaching the life-world, informs how Canela gardeners value and give meaning to specific human-plant engagements in forest and riverbank garden spaces. Thus, I posit that the 'bio-sociocultural aesthetics' framework brings to the fore not only the structural forms and phenomenological experiences that shape the Canela life-world, but also how humans

(and nonhumans) invest these experiences and structures with combined aesthetic-moral value.

While this framework appears to be especially useful to explore and analyse the ethnographic material on the Canela life-world that I collected, whether it is relevant for understanding human-environment engagements in other contexts or 'life-worlds' requires some fleshing out here. In the edited volumes of Ingold and Pálsson eds. (2013) and Árnason et al. eds. (2012), for example, the theoretical concepts of 'biosocial becomings' and 'aesthetics of landscape,' both of which deeply inform and influence the theoretical framework outlined in this thesis, are employed in various ethnographic contexts. In terms of 'biosocial becomings,' Vaisman's (2013: 113) contribution explores how shed DNA in an Argentine court case leads to a reconsideration of the body as 'extending' beyond its skin and into the environment, while Praet's (2013: 203) paper examines how humanity is an 'ongoing fabrication' in the Chachi Ecuadorian indigenous community. While the two contributions deal with markedly different ethnographic material, they come to similar conclusions regarding the unfolding of human life processes as inseparable from biological, ecological, and environmental processes. In the *Landscape beyond land* volume (Árnason et al. eds. 2012), meanwhile, contributions such as those of Grant (2012) and Pérez (2012) explore the combined aesthetic-moral components of everyday experiences with the landscape for the indigenous Nivaclé of the Paraguayan Chaco and the Native American Hopi of the U.S. Southwest, respectively.

Drawing from these examples, it is possible to see how the 'bio-sociocultural aesthetics' framework, which combines an analysis of biological-social life pathways with aesthetic-moral value of such pathways, could potentially prove useful to future studies on human-

environment relationships in lowland South America and elsewhere. Indeed, with many scholars calling into question the binary division between humans and their environments (cf. Descola 2013a, 2013b; Kohn 2013) and others focusing on the importance of multi-sensory aesthetic experiences in everyday life (cf. Overing and Passes eds. 2000; Ewart 2008; 2013: 176; Howes and Classen 2014), one can see how the 'bio-sociocultural aesthetics' framework could simultaneously address these increasingly significant anthropological topics. The framework could be relevant for local communities as well, especially those groups similar to the Canela who are facing daunting threats to the unfolding landscapes or environments in which they live. With an estimated 70-100 percent habitat loss for native species in central Maranhão over the next few decades (Feeley et al. 2009: 12383; see Chapter 1 [p. 36]), understanding how and why local inhabitants such as the Canela value and maintain species and varietal diversity through the theoretical framework formulated here takes on alarming significance. It is possible that the framework could assist local communities experiencing deforestation and habitat loss by shedding light on their use and valuation of biological diversity in the Cerrado, Amazonia, and throughout the world.

Additionally, the 'bio-sociocultural aesthetics' framework could potentially inform a new approach to analysing local environmental knowledge acquisition, transmission, and maintenance. For the Canela, the framework sheds light on the ongoing, embodied processes of learning and knowing how to garden, which include intimate relationships among human gardeners and growing plant 'children,' as Chapters 5 and 6 explore (pp. 195-200, 244-247). Through what I term the 'education of affection,' that plays out in distinctly gendered ways, Canela girls and boys learn how to engage in multi-sensory perceptual encounters with cultivated crop species and varieties in forest and riverbank

garden spaces. If we were to extend this focus on embodied perceptual entanglements as an integral part of gardening knowledge and varietal diversity maintenance beyond the indigenous Canela life-world, what would this approach look like?

I posit that perhaps through an 'ethnobotany of the senses' or 'sensory ethnobotany,' intimate, sometimes affectionate human-environment engagements could be explored in various contexts. For while the focus on multi-sensory, empathetic relationships between human gardener 'parents' and plant 'children' has distinctly Canela aspects, an overarching emphasis on intimacy and sensory experiences appears in two recent studies on Western gardening practices as well. In Degnen's (2009) ethnographic account of backyard gardening in northern England, for example, she finds that English gardeners intimately interact with their growing plants through 'consubstantial relationships of identification' (Degnen 2009: 160-161). Similarly, Jepson (2014: 148) discusses how a therapeutic gardening project in Scotland reveals that gardening is a 'sensual' process that can 'allow people to feel that they have reconnected with significant sensual aspects of being human, through interactions with earth or soil, plants and tools.' Therefore, it is possible that a 'sensory ethnobotany' that focuses on the multi-sensory ways that people interact with plants can expand our understanding of how gardeners in contexts ranging from the indigenous Canela village to a Scottish therapy programme learn and know about, as well as appreciate, the diverse species and varieties growing in their gardens.

'Sensory ethnobotany' in this sense would not be solely focused on individual perceptual experiences, however, but would additionally explore how those experiences shape environmental knowledge acquisition and transmission, especially including ethnobotanical classification and varietal diversity maintenance. For the Canela, sensory

perception appears to affect both crop classification and maintaining (or losing) specific varieties, as gardeners name and continue to cultivate varieties based on colours, shapes, sizes, and tastes that they aesthetically-morally value. Thus, through a 'sensory ethnobotany' approach perhaps similar aesthetic-moral judgements related to plant naming and maintenance could be found in other 'life-worlds' as well. It is important to recognize, however, that Canela gardeners appear to value not only specific varieties, but also varietal diversity as a whole. Rival (2001) finds a similar appreciation of diversity 'for its own sake' for the indigenous Makushi gardeners of Guyana, and Balée (2013: 165-166; citing Lovejoy 1936: 51) connects the Platonic 'principle of plenitude,' referring to a valuation of overall diversity, with Tupi-Guaraní trekking and horticultural communities.

Throughout the fieldwork, my Canela research assistants consistently returned to this overarching appreciation for species and varietal diversity in their garden plots, and a primary aim of this thesis therefore became an exploration of the myriad ways that gardeners value and make sense of their biodiverse gardens. For throughout all its recent transformations and continuities, the Canela 'bio-sociocultural life-world' as it has emerged today is fundamentally centred on engaging with and maintaining a wide diversity of crop 'children' that enrich and sustain the Canela human community. It is my hope that the ethnography and theory that have emerged throughout this thesis contribute to studies on indigenous and local ethnobotanical knowledge, gardening practices, and varietal diversity maintenance (and loss) in lowland South America and throughout the world. Finally, for the Canela, it is my hope that this thesis has provided a way to keep alive their rich understanding of and interactions with cultivated crops.

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Appendix A

Ethnobotanical 'living lists' of cultivated crop species and varieties in Canela territory

Table 1: Varieties of maize (*Zea mays* L., Poaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Põhy Pej-re	True/original maize	Small, white kernels; eaten as part of young men and women's <i>resguardo</i> food and sex prohibition period
Põhy Caprêc-ti	Large red-yellow maize	Large reddish-yellow kernels; produces a large harvest and used to make <i>beribu</i>
Põhy Krór-ti	Large mixed colour maize	Kernels have mixed colours of white, brown, and black
Põhy Tyc-ti	Large black maize	Large black kernels
Põhy Tohrom-ti	Large mixed colour maize	Kernels are mixed purple and white
Põhy Kryi-re	Small maize	Yellow kernels and has a short stalk; 'friend' of Põhy Pej-re (Kryi-re = small)
Põhy Jaka-ti	Large white maize	Large white kernels
Põhy Jĩi-re	Hairy-tail maize	Has a hair 'tail' off the end of the ear; not very tasty (Jĩi-re = hairy tail)
Põhy Caprôô-ti	Large bright red maize	Large bright red kernels the colour of blood or <i>urucum</i> (annatto)
Põhy Tàtà-re*	Small yellow-brown maize	Yellowish-brown kernels
Põhy Tep-re*	Small red maize	Reddish kernels
Põhy Jiproh-ti*	Large grey maize	Grey kernels
Põhy Tatap-re*	Small bright yellow maize	Bright yellow kernels the colour of cotton flowers

*Acquired at government-sponsored seed exchange with other Jê communities in September 2012

Table 2: Varieties of manioc (*Manihot esculenta* Crantz, Euphorbiaceae)

Sweet manioc – Kwỳrỳre (*macaxeira* in Portuguese)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Kwỳr Cahkrit-re	Stranger/outsider sweet manioc	Comes from a strange man from the Apaniekra village of Porquinhos; use to make <i>beribu</i> (Cahkrit-re = stranger/outsider or strange person)
Kwỳr Caprêc-re (Kwỳr Kryi-re Japỳ)	Small red parrot-tail sweet manioc	Leaf resembles parrot's tail; has red skin and white pulp; use to make juice (Japỳ = tail)
Kwỳr Kàntep-re	Red sweet manioc	' <i>Macaxeira cacau</i> '; has grey skin, white pulp, and red membrane or 'cytoplasm'
Kwỳr Xa Jökõn-re	Curved vine sweet manioc	Vine winds around itself (Xa = vine or tree; Jökõn-re = curved)
Kwỳrỳre Hôhpore	Long-leaf sweet manioc	White skin and tasty (Hôhpore = long leaf)
Kwỳr Mĩnêr	<i>Mineira</i> sweet manioc	' <i>Macaxeira mineira</i> ' – comes from Minas Gerais state; has white pulp
Kwỳr Mễhcapôt	Infants sweet manioc	Resembles chubby arms of infants; use to make <i>farinha seca</i> , <i>beiju</i> , and <i>beribu</i> (Mễhcapôt = infants or babies)

Half-sweet/half-bitter manioc

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Waíputre	Hugging vine manioc	Vines wrap around; unique variety that can remain in ground for 5 years and vines can grow 3-5 meters; tapioca has poison but pulp does not
Kwỳr Xenti	Not-bitter manioc	Has a little bit of poison in pulp; use to make <i>beribu</i> (Xen = not bitter)

Bitter manioc - Kwỳr Cahàc (*mandioca* in Portuguese)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Kwỳr Hêhtyi	Strong vine bitter manioc	Takes 3 years to grow and use to make <i>farinha</i> (Hêhtyi = strong wood, tree, or vine)
Kwỳr Tyc-ti (Kwỳr Krã Jimoctyc)	Black hair bitter manioc	Has black hair on its 'head' like the Canela (Krã = head; Jimoctyc = black hair)
Kwỳr Pakran-re (Kwỳr Caprãn Jũkee)	Tortoise arm bitter manioc	' <i>Mandioca babuzinha</i> ;' resembles tortoise arm; has short vine and takes 1 ½ years to grow (Caprãn = tortoise; Jũkee = arm)
Kwỳr Caprêc-ti	Large red-yellow bitter manioc	Makes beautiful reddish-yellow <i>farinha</i> but is not very tasty
Kwỳr Awari	Cobra bitter manioc	' <i>Mandioca naja</i> ;' pulp resembles flesh of cobra (<i>naja</i>); makes beautiful, tasty yellow <i>farinha</i> (Awari = cobra)
Kwỳr Xatyc-re	Small black vine bitter manioc	' <i>Mandioca manipeba</i> ;' red skin and makes beautiful white <i>farinha</i>
Kwỳr Pytêc Jökrekà	Rooster wattle forest tree bitter manioc	Resembles rooster's wattle and the <i>jacú</i> tree; makes yellow-red <i>farinha</i> (Pytêc = native tree; Jökrekà = rooster wattle)
Kwỳr Mãã Tehkà	<i>Ema</i> shinbone bitter manioc	White and resembles shinbone of <i>ema</i> (Mãã; <i>Rhea americana</i> L., species of large bird native to South America)
Kwỳr Cacôhti	'Bitter manioc of the water'	' <i>Mandioca d'água</i> ;' very watery pulp (Cacôhti = very watery)

Table 3a: Varieties of ‘true/original yam’ – Krěrô Pej (species in *Dioscorea* L. genus, Dioscoreaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Krěrô Pej Caxwỳn Jaka-ti	Large white ‘membrane’ true/original yam	Small and round similar to a potato; violet and grey-coloured skin with white pulp and ‘membrane’; consuming it makes ‘cracks’ in heel of foot (Caxwỳn = membrane)
Krěrô Pej Caxwỳn Kukum-ti	Large brown-violet ‘membrane’ true/original yam	Small and round similar to a potato; brown-violet-coloured ‘membrane’; consuming it makes ‘cracks’ in heel of foot
Krěrô Pej Caprăn Cre-re	Tortoise egg true/original yam	Shaped like a tortoise egg; has grey skin and white pulp (Cre = egg)
Krěrô Caràmpa Caxwỳn Tatap-ti	Deer liver bright yellow ‘membrane’ yam	Shaped like a deer liver (Caràmpa); has bright yellow pulp and ‘membrane’; grows vertically on the vine similar to common bean ‘on the vine’ varieties

Table 3b: Varieties of ‘regular yam’ – Krěrô Cahàc (species in *Dioscorea* L. genus, Dioscoreaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Krěrô Pỳp-re	Pỳp fish yam	‘Yam of the water;’ shaped like <i>poraquê</i> fish (Pỳp; <i>Electrophorus electricus</i> – electric fish native to Amazon basin region); white-coloured, long and thin; can grow for 5-6 years; more true/original than others
Krěrô Tekăjkăj / Rorti	Anaconda yam	Circles around itself similar to an anaconda; white-coloured; also a ‘yam of the water’ and more true/original than others

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Krêrô Xa Jĩ-re	Spiny/hairy yam	Vine has spiny/hairy; yam is very large and white with yellow pulp
Krêrô Parpóhti	Long foot yam	Round and has 'toes;' grey-skinned (Parpóhti = long foot)
Krêrô Kàhcaprôti	Reddish-pink skinned yam	Red/pink-coloured skin (Kà = skin, shell, bark)
Krêrô Pytĩxwa	<i>Dente de prego</i> yam	Resembles insect that burrows inside the skin; has grey skin (Pytĩxwa = type of insect)
Krêrô Teamjijapê (Krêrô Tum Pram)	Yam that multiplies / Grouped yam	Many yams grow together in a cluster on the vine; has many 'children' who 'happily' stay together and have 'festivals' (Teamjijapê = group/together)
Krêrô Rõrxô	<i>Babaçu</i> yam	Round and shaped like <i>babaçu</i> fruit (Rõrô = <i>babaçu</i> tree)
Krêrô Kryi-re	Small yam	Small with white pulp and grey skin
Krêrô Crêhô	Pubic hair yam	Has small hairs on it that resemble pubic hair; grey skin and white pulp (Crêhô = testicles)
Krêrô Kàjakẽn	Breast yam	Resembles a human breast in shape (Kàjakẽn); white pulp
Krêrô Kaj-re	Small basket yam	Resembles a small Canela basket (<i>kaj</i>); has white pulp
Krêrô Rop-krã	Jaguar's or dog's head yam	Round and resembles jaguar's or dog's head (Rop)
Krêrô Crô Cre	Pig testicle yam	Round and resembles a pig's testicle (Crô = pig)

Table 4: Varieties of squash (species in *Cucurbita* genus, Cucurbitaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Cuhkõn Cahàc Pej	True/original squash	Tasty with orange pulp
Cuhkõn Cahàc Kàhtyire	Hard/resistant skin squash	Hard skin and orange pulp (Kàhtyire = strong/hard skin)
Cuhkõn Cahàc Kàkàre	Kàkàre bird squash	Resembles Kàkàre bird that is half yellow, half green-coloured; maraca-shaped, pretty and small
Cuhkõn Cahàc Japjêhti	Long squash	Green-coloured skin and orange pulp (Japjêhti = long)
Cuhkõn Cahàc-ti	Large squash	Very large and not tasty; similar to a gourd; yellow skin and orange pulp
Cuhkõn Cahàc Jiproh-ti	Large grey-skinned squash	Very tasty; grey skin and orange pulp
Cuhkõn Cahàc Crààti	Large dry squash	Pumpkin with green skin, yellow pulp and white seeds (Cràà = dry)
Cuhkõn Cahàc Krã*	Head squash	Divided into two parts with a 'head;' green skin

* Identified solely by Liliana in February 2013

Table 5a: Varieties of regular gourd – Cuhkõn (species in *Cucurbita* genus, Cucurbitaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Cuhkõn Catia Ita	Largest gourd	White skin and pulp; inedible but use pulp as fever remedy (rub on skin)
Cuhkõn Pàt-wy	Flute gourd	Pàt-wy = type of flute used by old men and warriors and is also used to store things; Caxêtikwỳj hid in this type of gourd; is long and fine with a 'neck'

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Cuhkõn-re	Smallest gourd	Used to make krân-re ritual adornment for Wuh-tỳ girls (girls with ritual roles in festivals)
Cuhkõn Put-tyt	Neck gourd	Traditionally used to carry water (Put-tyt = neck)
Cuhkõn Jajõ	Round gourd	Rounded in shape (Jajõ = round)
Cuhkõn Xenre	Sweet/not-bitter gourd	Traditionally used as bowl; has a fine skin; not currently cultivated

Table 5b: varieties of another type of gourd – Cuhtõj (species in *Cucurbita* genus, Cucurbitaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Cuhtõj Jajõti	Round, ball-shaped gourd	Very round in shape
Cuhtõj Japjêhti	Long gourd	Long in shape
Cuhtõj Kryi-re	Small gourd	Very small in size

Table 6: Varieties of ‘common bean’ (*feijão* in Portuguese) – Pàt Juhtõi-re (*Phaseolus vulgaris*, Fabaceae and *Cajanus cajan*, Fabaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Pàt Juhtõi-re Jaka-re*	Small white bean	Small and white-coloured
Pàt Juhtõi-re Caprêc-re*	Small red bean	Small and red-coloured
Pàt Juhtõi-re Tàtà-re*	Small yellow-brown bean	Small and yellowish-brown-coloured; is a type of ‘vine bean’ (<i>feijão de corda</i>)
Pàt Juhtõi-re Kroro-re*	Small jaguar bean	Has spots that resemble a jaguar
Pàt Juhtõi-re Jipro-re*	Small grey bean	‘ <i>Feijão manteiga</i> ’ – butter bean
Pàt Juhtõi-re Krô Japjêh-ti Tep-ti*	Long-vined big red bean	Larger and red-coloured with long vine; is a type of ‘ <i>feijão de corda</i> ’ (Krô = another word for vine)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Pàt Juhtõï-re Krô Japjêh-ti Jaka-ti*	Long-vined big white bean	Larger, white-coloured; type of ' <i>feijão de corda</i> '
Pàt Juhtõï-re Pryti Jiwryhhi*	Cow rib bean	Long and white bean that resembles a cow's rib (Pryti = cow; Jiwryhhi = rib)
Pàt Juhtõï-re Tyc-re*	Small black bean	Type of black bean used to make Brazilian <i>feijoada</i> stew; not currently cultivated
Pàt Juhtõï-re Ihkũkũm-re*	Small purplish-brown bean	Long vine; type of ' <i>feijão de corda</i> '
Pàt Juhtõï-re Intep-re*	Small bright red bean	Brilliant red-coloured
Pàt Juhtõï-ti Tyc-ti*	Large black bean	Another type of black bean used to make <i>feijoada</i> ; not currently cultivated
Pàt Juhtõï-re Intep-ti*	Large bright red bean	' <i>Feijão barriguda</i> '/ ' <i>feijão vinagre</i> '/ ' <i>feijão sempre verde</i> '; very important (<i>pej</i>) and tasty
Pàt Juhtõï-re Jaka-ti °	Large white bean	Larger, white-coloured
Pàt Juhtõï-re Amcô*	Pest bean	Resembles pest insect (Amcô); also known as ' <i>feijão carioca</i> '; brown and white striped
Pàt Juhtõï-re Pàràre / Pryjĩ †	Guajajara tree bean	Pryjĩ = Guajajara; acquired bean from them in 1960s; also known as ' <i>feijão anduzinho</i> '; only bean that has 'tree' (Pàràre or Pàr) instead of vine
Pàt Juhtõï-re Hipêj Cre ° •	Hipêj Egg bean	Resembles Pànkryt Hipêj Cre 'fava bean'

* Identified as *Phaseolus vulgaris* species by Dr Stephen Harris, Department of Plant Sciences, University of Oxford, in May 2014

° Species unidentifiable given current data

† Identified as *Cajanus cajan* species by Dr Stephen Harris

• New variety that 'appeared' in Liliana's garden in February 2013

Table 7: Varieties of ‘fava bean’ (*fava* in Portuguese) - Pànkryt (*Vicia faba*, Fabaceae; various species in *Phaseolus* genus, Fabaceae; and various species in *Vigna* genus, Fabaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Pànkryt Jaka-ti ‡	Large white fava bean	Large and white
Pànkryt Jaka-re ‡	Small white fava bean	Small and white
Pànkryt Tyc-ti*	Large black fava bean	Large; black and white striped
Pànkryt Tyc-re*	Small black fava bean	Small; black and red striped
Pànkryt Tàtà-ti ◊	Large yellowish-brown fava bean	Yellowish-brown with white stripes when ripe/dried out; yellowish-white when fresh
Pànkryt Tàtà-re ◊	Small yellowish-brown fava bean	Yellowish-brown when ripe/dried out; yellowish-white when fresh/green
Pànkryt Tic-ti Catia Ita ‡	Large bright red fava bean	Larger; bright red with white stripes
Pànkryt Tic-re Intep-re ‡	Small bright red fava bean	Smaller; bright red with white stripes
Pànkryt Tic-re Tep-re °	Small red fava bean	Smaller and completely red coloured
Pànkryt Xôn ∴	Vulture fava bean	Black and smaller in size (Xôn = vulture)
Pànkryt Xôn-ti*	Large vulture fava bean	Black and larger in size
Pànkryt Hipêj Cre ‡	Hipêj egg fava bean	White with black/brown colouring; resembles Hipêj bird’s egg
Pànkryt Hipêj Cre Catia ‡	Large Hipêj egg fava bean	White and dark brown; larger and resembles Hipêj bird’s egg
Pànkryt Hipêj Cre Tep-re ‡	Red Hipêj egg fava bean	White with red colouring; rounded and resembles Hipêj bird’s egg
Pànkryt Hipêj Cre Jarkwa Tep*	Another type of Hipêj egg fava bean	Red and white colouring; resembles Hipêj bird’s egg and woman wearing lipstick; is ‘old’ and used in the past

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Pànkryt Jōkrāire Cre ‡	Jōkrāire egg fava bean	Red coloured and striped with white; resembles Jōkrāire bird's egg
Pànkryt Jūnren Cre ‡	Hummingbird egg fava bean	White and small; resembles hummingbird's (Jūnren) egg
Pànkryt Kryi-re Jakare °	Very small white fava bean	White coloured and small
Pànkryt Mēhtyi °	'The strong/happy ones' fava bean	White coloured and larger (<i>mē</i> = plural; <i>ihyti</i> = strong, happy, healthy)
Pànkryt Mēcupry Catia (Tỳjtu)*	'Mature strong young girls' fava bean	White with tan marking; resembles woman wearing lipstick (Mēcupry = plural young girls; Tỳjtu = very strong)
Pànkryt Mēcupry-re ‡	<i>Urucum</i> fava bean	Round and red coloured similar to <i>urucum</i> ; related to little young girls (Mēcupry-re = smaller/younger girls)
Pànkryt Mēhaprār*	Warriors fava bean	Red with white markings on the 'cheeks' that resemble those of brave warriors (Mēhaprār = warriors)
Pànkryt Mē Hupkre Tēp*	<i>Translation unclear</i>	Small with white and red colouring; resembles being painted with <i>urucum</i>
Pànkryt Mēhkàa ◊	Old people fava bean	Smaller with brown, shrivelled skin that resembles that of old Canela people (Mēhkàa = old men in the centre and/or all old people)
Pànkryt Carēntohkà Pó ‡	<i>Translation unclear</i>	Pink and resembles larger version of Pànkryt Mēhkàa; prepared with sweet manioc dough (Kà = skin/shell; Pó = broad or wide)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Pànkryt Měhkra Tetet Cucràn*	'Young children painted with <i>urucum</i> ' fava bean	Red with some white; resembles children painted with red <i>urucum</i> (Měhkra = children of Canela/Timbira people; Tetet = light-coloured or 'unripe'; Cucràn = act of painting with <i>urucum</i>)
Pànkryt Měhkra Tetet*	'Young/unripe children' fava bean	White with black stripes; eaten during food and sex prohibitions
Pànkryt Měhkra Tàmtuw*	'Messily painted' fava bean	White with brown markings; resembles 'messy' body paint of woman who has recently had 2-3 children; eat this type for 'sustenance' (Měhkra = children; Tàm = raw – can also signify menstruating woman; tuw = recently fresh)
Pànkryt Tatap-re*	Small bright yellow fava bean	Smaller and brighter yellow coloured
Pànkryt Tohcaiwêu-re ÷	Small mask fava bean	Very small with swirling white and black markings; resembles lively Tohcaiwêu mask figure in mask festival
Pànkryt Tohcaiwêu-ti (Pàn Jahkat) 𐄂	Large mask fava bean (or Macaw's beak fava bean)	Swirled black and white; large and pointed – resembles Tohcaiwêu mask figure and macaw beak (Pàn = macaw; Jahkat = beak)
Pànkryt Tohcaiwêu-re Catia*	Very large mask fava bean	Swirled black and white; largest bean that resembles Tohcaiwêu mask
Pànkryt Kăjkăj-re Jahkat 𐄂	Small 'twisted beak' fava bean	Small with black and white design that twists/swirls around; resembles bird's beak (Kăjkăj = twisted or encircled like anaconda)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Pànkryt Tohcaiwêu Jipro-re ^o	Small grey mask fava bean	Smaller with swirled brown/grey and white design; resembles mask
Pànkryt Tohcaiwêu-re Tep-re*	Small red mask fava bean	Smaller with swirled red and white design; resembles mask
Pànkryt Kwỳrkà ÷	'Manioc skin' fava bean	Violet-black colour that resembles hawk; also similar to bitter manioc
Pànkryt Krēhkrēpti*	'Colour of hawk' fava bean	Large and white with violet-black colour that resembles colour of hawk
Pànkryt Càà Pê-Xuùre*	<i>Translation unclear</i>	White and 'charcoal' coloured (Càà = centre, field, party/celebration)
Pànkryt Ahkrare*	Child fava bean	Small with white and black colouring; associated with a child (Ahkrare) and the umbilical cord
Pànkryt Hàc Jarati*	Ritual headdress fava bean (or Hawk's wing fava bean)	Dark red with some white colouring; resembles Hàc Jarati woven headdress worn by ritual girls (Wuh-tỳ) during the Kétuwajê boys' internment festival (Hàc = hawk; Jarati = large wing)
Pànkryt Krêwre*	Krē-re bird fava bean	Dark red with some white colouring; resembles Krē-re birds that eat rice growing in garden plots
Pànkryt Kror-ti*	Large mixed-colour fava bean	Mixed-colouring of white, purplish-black, and red
Pànkryt Cuhkryt-ti*	King vulture fava bean	White with purplish-black and red colouring; resembles king vulture (Cuhkryt-ti = king vulture)
Pànkryt Pyhti*	Large <i>urucum</i> fava bean	White with red 'lipstick;' resembles women who paint their mouths with red <i>urucum</i> to visit the garden while menstruating

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Pànkryt Pyytà*	Urucum root fava bean	White with brownish markings; resembles weak brownish-red colour of <i>urucum</i> root and common <i>urucum</i>
Pànkryt Po Cahàc ‡	Common Cerrado deer fava bean	Black with white stripes and a bit of red colouring; resembles type of deer native to the Cerrado (Po or <i>veado-galheiro</i> ; <i>Ozotoceros bezoarticus</i>)
Pànkryt Ahkrare Caprêc-re ǻ	Red child fava bean	White with brilliant reddish-pink markings; matures quickly in 5-6 months
Pànkryt Ahkrare Kuctÿi Tyc*	'Strong black face child' fava bean	White with some black colouring; resembles male child whose forehead is painted black (Kuc = face)
Pànkryt Catêc-re Hy*	Catêc-re seed fava bean	Red and white markings; resembles seed (Hy) of native Catêc-re plant
Pànkryt Têhtê Cahàc °	Common Têhtê bird fava bean	Black and white markings; resembles native Têhtê bird that 'advises' people when animals are nearby
Pànkryt Kroro-re*	Jaguar fava bean	Brown with black spots that resembles jaguar's markings
Pànkryt Cupëkwÿj*	White woman fava bean	White with pinkish markings; resembles white woman wearing lipstick

‡ Identified as *Vicia faba* species by Dr Stephen Harris, Department of Plant Sciences, University of Oxford, in May 2014

* Identified as *Phaseolus vulgaris* species by Dr Stephen Harris

◊ Identified as another species in the *Phaseolus* genus by Dr Stephen Harris

° Species unidentifiable given current data

‡ Identified as species in *Vigna* genus by Dr Stephen Harris

ǻ Identified as *Phaseolus lunatus* species by Dr Stephen Harris

Table 8: Varieties of sweet potato (*Ipomoea batatas* L., Convolvulaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Jàt Krājipro	Grey-white sweet potato	Skin is mixture of grey and white colour
Jàt Tyc-ti	Large blackish-purple sweet potato	Large and blackish-purple-coloured skin
Jàt Kàhcaprêc	Red-skinned sweet potato	Red-coloured skin and white pulp; very tasty
Jàt Caxwÿn Tatap-ti	Large yellow 'membrane' sweet potato	Yellow-coloured pulp, 'membrane' and skin; comes from afar and starting to cultivate
Jàt Tyc-re	Small black sweet potato	Black-coloured skin
Jàt Jõtep-ti	'Monkey from Pará' sweet potato	Resembles cupût – monkey from Pará state that has yellow bottom; half orange, half yellow-coloured skin
Jàt Cràà-ti	Large dry sweet potato	Yellow-skinned and dry pulp
Jàt Jikôt-ti	Large curved root sweet potato	Grey-skinned (Jikôt = another word for curved)
Jàt Caprãn Cre	Tortoise egg sweet potato	Round and resembles tortoise egg; grey-skinned
Jàt Jĩtehtu-re	Small 'human-faced' sweet potato	Shape resembles human cheeks (Jĩtehtu); long vine and potatoes grow in a line on the vine
Jàt Jakati	Large white sweet potato	White-coloured skin; sweet-tasting
Jàt Ahkrare Jõntot	Child's umbilical cord sweet potato	Resembles navel of newborn baby; small, white and round; potatoes hang from the vine
Jàt Jakat Jajõh-ti	Large round white sweet potato	Very round and ball-shaped; white-skinned
Jàt Jakat Jajõh-re	Small round white sweet potato	Smaller, rounded and white-skinned
Jàt Jarxê	<i>Translation unclear</i>	White-skinned and longer in shape

Table 9a: Varieties of fast-growing rice – Kênpei (*Oryza sativa* [Asian rice] or *Oryza glaberrima* [African rice], Poaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Ar`yihy Caprêc-re Kênpei	Small red fast-growing rice	'Most original' (<i>impeaj</i>) rice – eaten during new parents' food and sex prohibition period
Ar`yihy Jaka-ti Japjêhti Kênpei	Large long white fast-growing rice	Large, white-coloured, and long
Ar`yihy Krânre Caprêc-re Kênpei	Small short red fast-growing rice	Short (Krânre) and rounded; red-coloured with some white; tasty
Ar`yihy Caprêc-ti Jarati Kênpei	'Large-winged' red fast-growing rice	'Arroz de asa' – has 'wings' or arms
Ar`yihy Jôhkênture Caprêc-re Kênpei	Red rooster wattle fast-growing rice	Small, rounded, and red-coloured; resembles Jôhkênture (another term for rooster's wattle)
Ar`yihy Kror-ti Kênpei	Large mixed-colour fast-growing rice	Purple-coloured and painted/striped
Ar`yihy Caprêc-ti Kênpei	Large red fast-growing rice	Large, long and red-coloured
Ar`yihy Jarare Caprêc-re Kênpei	'Small-winged' red fast-growing rice	Small and red; has 'wings' or arms
Ar`yihy Jarati Kror-ti Kênpei	'Large-winged' mixed-colour fast-growing rice	Large and purple painted/striped; has 'wings' or arms
Ar`yihy Jaka-re Kênpei	Small white fast-growing rice	'True/original' and 'beautiful' (<i>impej</i>) rice
Ar`yihy Kroro-re Kênpei	Small mixed-colour fast-growing rice (or Small jaguar fast-growing rice)	Striped black and white-coloured (Koro = mixed colours or spotted like jaguar)
Ar`yihy Jarare Jaka-re Kênpei	'Small-winged' white fast-growing rice	Small and white; has 'wings' or arms
Ar`yihy Tyc-re Kênpei	Small black fast-growing rice	Made into hot beverage and used as remedy for various ailments: diarrhoea, fever, menstrual and other pains, gonorrhoea
Ar`yihy Capêê Kênpei	Striped fast-growing rice	Striped (Capêê) black and white-coloured

Table 9b: Varieties of slow-growing rice – Kênpôc (*Oryza sativa* [Asian rice] or *Oryza glaberrima* [African rice], Poaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Arÿihy Krânre Jaka-re Kênpôc	Small short white slow-growing rice	Is the “friend” of Arÿihy Jakare Kênpei
Arÿihy Jôhkênture Jaka-re Kênpôc	White rooster-wattle slow-growing rice	Small and white; resembles rooster’s wattle; hard husk and produces large harvest
Arÿihy Jôhkênture Kroro-re Kênpôc	Rooster-wattle striped slow-growing rice (or Rooster-wattle jaguar slow-growing rice)	Small and striped black and white; resembles rooster’s wattle (and/or possibly resembles jaguar’s spots)
Arÿihy Jôhôtî Kênpôc	‘Hair-on-the-bottom’ slow-growing rice	‘ <i>Arroz peba</i> ,’ has one hair growing off the end (Jôhôtî); birds do not eat while growing
Arÿihy Capêê Kênpôc	Striped slow-growing rice	Striped black and white-coloured
Arÿihy Tyc-re Kênpôc	Small black slow-growing rice	Burn, grind, and make hot beverage as remedy for aches and pains
Arÿihy Caprêc-re Japjêre Kênpôc	Small fine, long and red slow-growing rice	Longer growing period; very tasty – taste resembles <i>Ema</i> meat (Japjêre = fine and long)
Arÿihy Jaka-ti Japjêhti Kênpôc	Large long white slow-growing rice	White-coloured and long
Arÿihy Xoti Japÿ Kênpôc	Fox-tail slow-growing rice	Large, short, white, and hairy; resembles fox tail (Xoti = fox)
Arÿihy Jarati Catia Kênpôc	‘Largest-winged’ white slow-growing rice	‘ <i>Arroz de asa branca</i> ,’ large and has ‘wings’ or arms
Arÿihy Hônxôtî Kênpôc	Hônxôtî-leaf slow-growing rice	Resembles native forest plant that appears dried out when it ripens; long and white; ‘ <i>arroz pai moça</i> ’; has six-month-long growing period

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Arÿihy Caprêc-re Kênpôc	Tiny red slow-growing rice	'Most original' (<i>impeaj</i>); very small and red; new parents use to make <i>mingau</i> during food and sex prohibition period
Arÿihy Kror-ti Kênpôc	Large mixed-colour slow-growing rice	Large and 'painted' mixed colours; lumpy in shape
Arÿihy Caprêc-re Jôhkênture Kênpôc	Red rooster-wattle slow-growing rice	Small and red; resembles rooster's wattle

Table 10: Varieties of peanut (*Arachis hypogaea* L., Fabaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Caahy Catia Ita	Largest peanut	Yellow skin, white pulp, and red 'cytoplasm'; 'true' peanut
Caahy Kryi-re	Small peanut	Yellow skin, white pulp, and red 'cytoplasm'
Caahy Capa-re	Capa-re-plant peanut	Resembles plant that grows near riverbeds; grey skin, white pulp, and sweet; used as remedy for fevers
Caahy Kror-ti	Mixed-colour peanut	Mixed colours – grey skin, white pulp, and pink/painted 'cytoplasm'; exchanged from Krĩkatí village

Table 11: Varieties of sugarcane (species in *Saccharum* genus, Poaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Cãn Peaj-re	True/original sugarcane	' <i>Cana canhana</i> '; soft, yellow, and pretty; used to chew on
Cãn Tyc-ti	Large black sugarcane	' <i>Cana de São Paulo</i> '; comes from São Paulo state
Cãn Capêê	Striped sugarcane	Striped black and white; tougher/durable

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Cãn Ahtu / Cãn Jipore	Grey Ahtu grass sugarcane	Resembles Ahtu type of grass that grows in the chapada; ' <i>cana capim-da-chapada</i> '; grows abundantly and produces large harvest
Cãn Tetet-ti	White/translucent-skinned sugarcane	Bright white, almost translucent; ' <i>Cana piojota</i> '
Cãn Põhy-re	Small maize sugarcane	Resembles small maize plant; ' <i>cana do milho</i> ;' children like to chew

Table 12: Varieties of *urucum* (annatto; *Bixa orellana* L., Bixaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Pym Peaj	True/original <i>urucum</i>	Bright red and very pretty; tree lives for nine years
Po Jixwa	Cerrado deer toenail <i>urucum</i>	Pointed shell that resembles the toenail of a Cerrado deer (<i>veado-galheiro</i>)
Pyytà	Common <i>urucum</i>	Weak reddish/yellow colour; not desirable or used for body paint
Pym Krã Caprêc	Red shell <i>urucum</i>	Bright red and very pretty; also called 'red head' <i>urucum</i>

Table 13: Varieties of sesame (*Sesamum indicum* L., Pedaliaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Hyhcuxwa-re Jaka-re	Small white sesame	Small and white-coloured
Hyhcuxwa-re Tyc-re	Small black sesame	Small and black-coloured

Table 14: Varieties of cotton (most likely *Gossypium barbadense* L., Malvaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Caxàt Catia Ita	Large cotton	Largest in size
Caxàt Kryi-re	Small cotton	Smaller in size

Table 15: Varieties of banana (species in *Musa* genus, Musaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Pypyp-re Jakàhtetet-re	Sprawling tree banana	' <i>Banana prata</i> '; white peel and pulp (Jakàhtetet-re = sprawling tree); comes from the <i>cupên</i>
Pypyp-re Pàrkrãnti (Pypyp-re Kãncot)	Short tree banana (or Green peel banana)	' <i>Banana anão/anais</i> ;' small tree with many bananas; peel is always green (Pàrkrãnti = short tree; Kãncot = green skin, peel, shell)
Pypyp-re Rõrxô	<i>Babaçu</i> banana	More rounded and resembles <i>babaçu</i> fruit
Pypyp-re Tyc-ti	Large black banana	' <i>Banana canhana</i> ;' black peel
Pypyp-re Awarxô	Cobra bitter manioc (Kwÿr Awari) banana	' <i>Banana maçã</i> ;' fruit resembles cobra bitter manioc; small, full, and tasty (Xô = fruit)
Pypyp-re Pryti Jiwrÿhhi	Cow's rib banana	Long, white, and resembles cow's rib; ' <i>banana costela de vaca</i> '
Pypyp-re Xô Pohti	Long fruit banana	' <i>Banana murici</i> ;' banana itself is long
Pypyp-re Pàrkrãnti Catia Ita	Large short-tree banana	' <i>Banana aná verdadeira</i> ;' larger than Pypyp-re Pàrkrãnti but still short
Pypyp-re Intep-ti	Large red banana	Large and red peel

Table 16: Varieties of cashew (*Anacardium occidentale* L., Anacardiaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Ahkrýt Jaka-ti	Large white cashew	Large and white-coloured skin and pulp
Ahkrýt Tep-ti	Large red cashew	Large and red-coloured skin
Ahkrýt Tàtà-ti (Ahkrýt Jajó-ti)	Large round yellowish-brown cashew	Yellowish-brown and green in colour; rounded
Ahkrýt Rerecti	Soft cashew	' <i>Caju manteiga</i> ;' long and soft pulp (Rrec = soft)
Ahkrýt Japjêhti	Long cashew	Longer in shape
Ahkrýt-ti (Ahkrýt Catia Ita)	Largest cashew	Largest of the cashews
Ahkrýt Tatap-ti	Large bright yellow cashew	Bright yellow - similar to colour of cotton flower

Table 17: Varieties of watermelon (*Citrullus lanatus* var. *lanatus*, Cucurbitaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Praxĩ Capê-ti	Large striped watermelon	Striped colours and large
Praxĩ Tyc-ti	Large black watermelon	Black-coloured and large
Praxĩ Jaka-ti	Large white watermelon	White-coloured and large
Praxĩ Tàtà-ti	Large yellow watermelon	Yellow-coloured; not currently cultivated
Praxĩ Cahàc	Common watermelon	Not currently cultivated

Table 18: Varieties of papaya (*Carica papaya* L., Caricaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Mamão Japjêhti	Long papaya	Longer in shape
Mamão Jajóti	Round papaya	Round in shape
Mamão Kryi-re	Small papaya	' <i>Mamãozinho</i> ;' smaller than others

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Mamão Jêrmũ (Cakjêrti)	'Cut-in-the-middle' papaya	Rounded and appears to be cut in the middle (Cakjêrti); resembles a pumpkin (<i>jerimum</i> in Portuguese)

Table 19: Varieties of mango (*Mangifera indica* L., Anacardiaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Mac Tep-ti	Large red mango	' <i>Manga de rosa</i> ;' red-coloured skin
Mac Kukum-ti	Large violet-greenish mango	' <i>Manga de mesa</i> ;' violet-green-coloured skin
Mac Jicacure	Soft mango	' <i>Manga espada</i> ;' soft pulp (Jicacure = another term for soft)
Mac Prĩn-re	Prĩn-re (small <i>piqui</i>) mango	Resembles native <i>piqui</i> fruit (<i>Caryocar coriaceum</i> Wittm.) in shape and smell
Mac Peaj-re	True/original mango	' <i>Manga fiaba/manga comum</i> ;' true/original mango for Canela, 'common' for <i>cupẽn</i>
Mac Rõhkrýt	Brush-cutter mango	' <i>Manga de fois</i> ;' resembles brush-cutter tool or large knife (Rõhkrýt); also resembles toucan beak
Mac Cuhtõj	Maraca-gourd mango	' <i>Manga kujubu</i> ;' resembles Cuhtõj gourd that is used to make maracas
Mac Cuxyhti	Different/distinct-smell mango	' <i>Manga de cheira</i> ;' has a unique smell (Cuxyhti)
Mac Tyc-re	Small black mango	Small and lightweight; grey/black-skinned

Table 20: Varieties of coconut (*Cocos nucifera* L., Arecaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Rõrti Kà Tatap-ti	Large yellow-shelled coconut	Yellow shell and large; typical to Northeast Brazil
Rõrti Te Krãnti	Green-shelled coconut	'Coco da praia aná;' has green shell
Rõrti Pàr Japjêhti	Tall tree coconut	Tree is very tall

Table 21: Varieties of pineapple (*Ananas comosus* L., Bromeliaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Prôprô Tyc-ti	Large black pineapple	Large and black-coloured
Prôprô Kà Tatap-re	Small yellow-skinned pineapple	Small with yellow skin

Table 22: Varieties of acerola (*Malpighia emarginata* or *Malpighia glabra* L., Malpighiaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Têc-rà Cahàc Xô Jêrmũ	Pumpkin acerola	Resembles pumpkin and Têc-rà Cahàc, type of native Cerrado fruit (species in <i>Psidium</i> L. genus, Myrtaceae)
Têc-rà Cahàc Xô	Common acerola	Resembles Têc-rà Cahàc; is the 'normal' type of acerola

Table 23: Varieties of lime (*limão* in Portuguese; species in *Citrus* genus, Rutaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Rĩmcahhàc-re	Common lime	'Normal lime;' green skin and white pulp
Rĩmcahpopoc-re	Tangerine lime	Resembles tangerine (Popoc-re)
Rĩm Catia Ita Hĩ Tep-ti	Largest reddish/orange pulp lime	Green skin with reddish/orange pulp (Hĩ); resembles an orange

Table 24: Varieties of orange (species in *Citrus* genus, Rutaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Ràràj	'Normal' orange	Regular or 'normal' orange
Ràràj Cahàc	Cahàc = comum	'Laranja da terra'

Table 25: Varieties of avocado (*Persea americana* L., Lauraceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Bacat Catia Ita	Large avocado	Largest in size
Bacat Kryi-re	Small avocado	Smaller in size

Table 26: Varieties of jackfruit (*Artocarpus heterophyllus*, Moraceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Potukà Catia Ita	Large jackfruit	Largest in size
Potukà Kryi-re	Small jackfruit	Smaller in size

Table 27: Varieties of passion fruit (*Passiflora edulis* Sims, Passifloraceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Ahkrôhti-xô Catia Ita	Large passion fruit	Largest in size
Ahkrôhti-xô Kryi-re	Small passion fruit	Smaller in size

Table 28: Varieties of guava (*Psidium guajava* L., Myrtaceae)

<i>Canela name</i>	<i>Translation</i>	<i>Description</i>
Cwaj-jap Catia Ita	Large guava	Largest in size
Cwaj-jap Catia Ita	Small guava	Smaller in size

Table 29: Cultivated fruits with only one variety

<i>Canela name</i>	<i>Translation in English or Portuguese</i>	<i>Species and/or Genus and Family</i>
Rimi	Another type of lime	Species in <i>Citrus</i> genus, Rutaceae
Rãrãj Kà Popoc-re	Tangerine	Species in <i>Citrus</i> genus, Rutaceae
Cupuaxu	<i>Cupuaçu</i>	<i>Theobroma grandiflorum</i> , Malvaceae
Catẽẽre-xô	<i>Ata</i> or <i>pinha</i>	<i>Annona squamosa</i> , Annonaceae
Critĩn-re Cahàc*	<i>Guabiroba</i> or <i>gabiroba</i>	<i>Campomanesia pubescens</i> (DC.) O. Berg or other species in <i>Campomanesia</i> genus, Myrtaceae
Hyjorore	<i>Pitomba</i>	<i>Talisia esculenta</i> , Sapindaceae
Curuware	<i>Coquinho</i> (could refer to <i>alho-do-mato</i> or <i>jerivá</i>)	Could refer to either <i>Cipura paludosa</i> , Iridaceae or to <i>Syagrus romanzoffiana</i> , Arecaceae
Awar Cahàc	<i>Pupunha</i>	<i>Bactris gasipaes</i> , Arecaceae
Pôj Kõc-jõjre Cahàc	Tamarind	<i>Tamarindus indica</i> L., Fabaceae
<i>No translation</i>	<i>Graviola</i>	<i>Annona muricata</i> , Annonaceae
Tomat	Tomato	<i>Solanum lycopersicum</i> L., Solanaceae

* Classified as both a 'cultivated fruit' species and a 'native Cerrado tree' species – see Appendix B (p. 374)

Appendix B

Ethnobotanical ‘living lists’ of native tree and plant species in Canela territory⁵⁸

Table 1: Trees and plants native to the Cerrado (Irom)⁵⁹

<i>Canela name</i>	<i>Translation in English or Portuguese</i>	<i>Species and/or Genus and Family (and Description)</i>
Crowa / Hõrcuràhti	<i>Buriti</i>	<i>Mauritia flexuosa</i> Mart., Arecaceae; Crowa = fruit and Hõrcuràhti = tree
Crowarà	<i>Buritirana</i>	<i>Mauritiella armata</i> Mart. or <i>Mauritiella aculeata</i> Mart., both <i>Mauritiella</i> genus, Arecaceae
Capêr	<i>Bacaba</i>	<i>Oenocarpus bacaba</i> Mart., Arecaceae
Têrêre	<i>Juçara</i> or <i>açaí</i>	<i>Euterpe edulis</i> Mart. or <i>Euterpe oleracea</i> Mart., both <i>Euterpe</i> genus, Arecaceae
Awar	<i>Najá</i> or <i>inajá</i>	<i>Attalea maripa</i> (Aubl.) Mart. or other species in <i>Attalea</i> genus, Arecaceae
Tehti	<i>Jatobá de socalho</i>	Species in <i>Hymenaea</i> L. genus, Fabaceae
Ahkrôhti	‘Type of passion fruit’	Species in <i>Passiflora</i> L. genus, Passifloraceae
Xut-re	Jacaranda	<i>Jacaranda brasiliana</i> Pers. or other species in <i>Jacaranda</i> genus, Bignoniaceae
Rõrõ	<i>Babaçu</i> or <i>babassu</i>	<i>Attalea speciosa</i> Mart., Arecaceae
Rõrõ Pejre	‘Type of <i>babaçu</i> ’	Species in <i>Attalea</i> genus, Arecaceae

⁵⁸ Not an exhaustive list – includes species easily identifiable by my research assistants and of which I was able to visit and photograph. I intend to conduct further research on the ‘wild’ or ‘semi-domesticated’ native tree and plant species in the Canela territory.

⁵⁹ The separation of Cerrado and *chapada* species and varieties reflects the categories created by my research assistants.

<i>Canela name</i>	<i>Translation in English or Portuguese</i>	<i>Species and/or Genus and Family (and Description)</i>
Pjêrêre	'Small <i>babaçu</i> ' (<i>babaçuzinho</i>)	Species in <i>Attalea</i> genus, Arecaceae
Ronhàc	<i>Macaúba</i>	<i>Acrocomia aculeata</i> (Jacq.) Lodd. ex Mart., Arecaceae
Rônti	'Tucum of the forest'	<i>Bactris setosa</i> , Arecaceae
Capôcre	<i>Tuturubá, taturuba, or cutite</i>	<i>Pouteria macrophylla</i> (Lam.) Eyma, Sapotaceae
Pyyrija	<i>Cajá</i>	<i>Spondias mombin</i> L., Anacardiaceae
Têc-rà Cahàc	'Guava of the forest'	Species in <i>Psidium</i> L. genus, Myrtaceae
Cutêre	<i>Murici</i>	<i>Byrsonima crassifolia</i> (L.) Kunth, Malpighiaceae
Pôikõre	<i>Jatobá de mateira</i>	Species in <i>Hymenaea</i> L. genus, Fabaceae
Prycatàt-re	'Small <i>jatobá</i> ' (<i>jatobázinho</i>)	Species in <i>Hymenaea</i> L. genus, Fabaceae
Papôrôre	<i>No translation</i>	<i>Information unavailable</i>
Kõc-jõiti	<i>Ingá</i>	Species in <i>Inga</i> genus, Fabaceae
Mrîti	'Potato of the riverbank'	Possibly species in <i>Ipomoea</i> L. genus, Convolvulaceae
Wajõtót-xô Cahhàc-re	<i>No translation</i>	<i>Information unavailable</i>
Wôôre	<i>Pati</i>	<i>Syagrus botryophora</i> (Martius) Martius, Arecaceae
Cũmxêre	<i>No translation</i>	Medicinal remedy for various illnesses
Hôhcatõtõc-re	<i>No translation</i>	<i>Information unavailable</i>
Critĩn-re Cahàc*	<i>Guabiroba or gabirola</i>	<i>Campomanesia pubescens</i> (DC.) O. Berg or other species in <i>Campomanesia</i> genus, Myrtaceae; in the forest and/or in the <i>caatinga</i>
Caprã Jõõxô	<i>No translation</i>	'Tortoise fruit;' hunters eat this while hunting

* Classified as both a 'cultivated fruit' species and a 'native Cerrado tree' species – see Appendix A (p. 372)

Table 2: Trees and plants native to the *chapada* (Põ)

<i>Canela name</i>	<i>Translation in English or Portuguese</i>	<i>Species and/or Genus and Family</i>
Prĩn	<i>Piqui</i>	<i>Caryocar coriaceum</i> Wittm., Caryocaraceae
Cũmxê	<i>Bacuri</i>	<i>Platonia insignis</i> Mart., Clusiaceae
Crĩtĩn-re	'Soft' <i>puçá</i>	<i>Mouriri pusa</i> Gard. or other species in <i>Mouriri</i> genus, Melastomataceae
Crotot-re	'Hard' <i>puçá</i>	<i>Mouriri pusa</i> Gard. or other species in <i>Mouriri</i> genus, Melastomataceae
Pênxôô	<i>Mangaba</i>	<i>Hancornia speciosa</i> Gomes, Apocynaceae
Ronre	' <i>Tucum</i> of the <i>chapada</i> '	<i>Bactris setosa</i> or other species in the <i>Bactris</i> genus, Arecaceae
Pôj	<i>Jatobá da chapada</i>	Species in <i>Hymenaea</i> L. genus, Fabaceae
Tecrêj (Põjõhpôj)	<i>Jatobá vaqueiro</i>	Species in <i>Hymenaea</i> L. genus, Fabaceae
Catêti Jakati	White <i>bruta</i>	<i>Information unavailable</i>
Catêti Intep-re	Red <i>bruta</i>	<i>Information unavailable</i>
Têc-ràire	<i>Araçá</i>	<i>Psidium guineense</i> Sw. or other species in <i>Psidium</i> genus, Myrtaceae
Tuhhõhõre	Type of wild manioc	<i>Manihot grahamii</i> Hook. or other species in <i>Manihot</i> Mill. genus, Euphorbiaceae
Cutêre Põ Tekjê	<i>Murici</i> of the <i>chapada</i>	Species in <i>Byrsonima</i> H.B.K. genus, Malpighiaceae
Ahkrýt-re 2 <i>Varieties</i> :	'Cashew of the <i>chapada</i> '	Varietals and/or species in <i>Anacardium</i> L. genus, Anacardiaceae
a) Ahkrýt-re Intep-re	a) 'Small red <i>chapada</i> cashew'	
b) Ahkrýt-re Jakare	b) 'Small white <i>chapada</i> cashew'	
Ahtu	Type of <i>chapada</i> grass	<i>Information unavailable</i>
Woporore	Another type of <i>chapada</i> grass	<i>Information unavailable</i>

<i>Canela name</i>	<i>Translation in English or Portuguese</i>	<i>Species and/or Genus and Family</i>
Aràmhòc Pàr	<i>Pau-de-leite</i>	<i>Sapium gladulatum</i> (Vell.) Pax, Euphorbiaceae; fruits used to make black body paint
Pôl-ti	<i>Jenipapo</i>	<i>Genipa americana</i> , Rubiaceae
Pjêrêti Catia	<i>No translation</i>	<i>Information unavailable</i>
Cucrànre	<i>No translation</i>	Medicinal remedy for wounds
Tepjare	<i>Tingui</i>	Fish poison vine that shocks/immobilizes fish
Hôckà	<i>'Tingui of the chapada'</i>	Another type of fish poison vine used by 'another tribe'
Ahkru	<i>Timbó (or cipó-timbó)</i>	Fish poison vine that causes fish to rot while still alive
<i>No translation</i>	<i>Carampá</i>	<i>Information unavailable</i>

Appendix C

Ethnobiological ‘living lists’ of fauna in Canela territory⁶⁰

Table 1: Avifauna

<i>Canela name</i>	<i>Translation in English or Portuguese</i>	<i>Species and/or Genus and Family (and Description)</i>
Krẽ-re	<i>Perequintinha</i>	Visits garden plots in May to eat crops, including rice; transformed from Canela people according to myth (Appendix D [pp. 415-420])
Krẽiure	<i>No translation</i>	Eats garden crops; gardeners kill with shotgun
Kẽtre	<i>No translation</i>	Eats garden crops, especially rice
Kêt-Catohtõire	<i>No translation</i>	Eats garden crops, especially rice
Krýt-jature	<i>No translation</i>	Eats garden crops, especially maize
Cuurèu Tyc-ti	<i>No translation</i>	<i>Information unavailable</i>
Hũire	<i>No translation</i>	<i>Information unavailable</i>
Têhtê	<i>No translation</i>	Bird that ‘advises’ people when animals are nearby
Kàkàre	<i>No translation</i>	<i>Information unavailable</i>
Pàn	Macaw	Species in Psittacidae family
Hàc	Hawk	Species in Accipitridae and/or Falconidae families
Jõkrãire	<i>No translation</i>	<i>Information unavailable</i>
Hipêj	<i>No translation</i>	<i>Information unavailable</i>
Jũnren	Hummingbird	Species in Trochilidae family
Pãã	Owl	Species in <i>Bubo</i> genus, Strigidae
Pàh-ti	‘Great owl’	Species in <i>Bubo</i> genus, Strigidae

⁶⁰ Not an exhaustive list – includes species commonly referenced in myth, ritual, and everyday life throughout the fieldwork. I intend to conduct further research on fauna native to and/or present in the Canela territory.

Table 2: Game and other animals

<i>Canela name</i>	<i>Translation in English or Portuguese</i>	<i>Species and/or Genus and Family (and Description)</i>
Mãã	<i>Emu</i>	<i>Rhea americana</i> L., Rheidae
Po (masculine) Po Cahãj (feminine)	<i>Veado-galheiro or veado-campeiro</i>	<i>Ozotoceros bezoarticus</i> L., Cervidae
Carà	Another type of deer; possibly <i>veado-mateiro</i>	Possibly <i>Mazama americana</i> or other species in Cervidae family
Crôre	Peccary	<i>Pecari tajacu</i> L., Tayassuidae
Ropo	Puma (<i>suçuarana</i>)	<i>Puma concolor</i> L., Felidae
Rop	Jaguar (<i>onça-pintada</i>)	<i>Panthera onca</i> L., Felidae
Awxêt	Armadillo	<i>Euphractus sexcinctus</i> L., Dasypodidae
Cupût	Type of monkey from Pará state	<i>Information unavailable</i>
Xôn	Vulture	Species in Cathartidae family
Cuhkryt-ti	King vulture	<i>Sarcoramphus papa</i> L., Cathartidae
Caprãn	Tortoise (<i>jabuti</i>)	<i>Chelonoidis carbonaria</i> Spix or <i>Chelonoidis denticulata</i> L., Testudinidae
Awari	Type of cobra/snake	<i>Information unavailable</i>
Tekãjkãj / Rorti	Anaconda	Species in <i>Eunectes</i> genus, Boidae
Crô	Pig	Species in Suidae family
Pryti	Cow or bull	<i>Bos Taurus</i> L., Bovidae
Xoti	Fox	Species in <i>Pseudalopex</i> genus, Canidae
Xêp	Bat	<i>Information unavailable</i>
Hô-ti	Toad	<i>Information unavailable</i>

Appendix D

Myths

Sun (Pùt) and Moon (Putwrè) myth

Version 1 – told by Leandro

Sun is Moon's *compadre*, and Moon is Sun's *compadre* as well. *Compadre* is *hapĩn* in our language. 'Hapĩn! Let us go down to where our community is [on the earth] to spend time there,' said Sun, and the two of them went down to the earth. Sun built a house, and Moon built a house near him. They lived there and discovered things. Sun ordered Machete and Axe to work in the garden. Moon was waiting around for Sun. 'Compadre, where are you going? I am going with you,' said Moon, and he arrived where Machete was clearing [the brush] and working, and where the axe was working too. 'Look at how Machete works! It will cut down the entire forest,' said Moon. Then, Machete stopped and fell to the ground, and Axe stopped and fell to the ground as well. 'Now our community is going to work with their arms, using the axe and machete like this,' said Moon. 'The tools are never going to work by themselves anymore; people will work directly,' Moon told Sun.

At another time, Sun was eating the soft fruit from the *buriti* tree that was very short. Moon did not know about this *buriti* fruit, only Sun was eating it. Nevertheless, Moon was always observing. 'Where do you go in the morning?' Moon asked Sun. Another morning, Moon followed Sun, and saw him eating the *buriti* fruit. 'Compadre, you are following me!' said Sun. Moon asked, 'what is it that you are eating?' 'I am eating the flower from a tree,'

Sun said. Moon ate the flower, but his faeces was the same as before [and he wanted yellow-coloured faeces like those that Sun had]. 'Oh, my *compadre* deceived me!' Moon said to himself. In the morning, he went to the *buriti* grove. 'Oh, this is what you are eating!' Moon said to Sun. Sun responded, 'you eat the fruit from this tree, and I will eat the fruit from the other tree over there.' The fruit that Moon began to eat was not as soft; some of the fruit had not ripened. 'Let us trade!' Moon told Sun. 'My fruit is not very soft. I am going to hit this *buriti* tree because the fruit is not soft.' 'No, do not do that, it will grow very tall!' Sun responded. Nevertheless, Moon hit the tree, and the palm grew and grew. 'My *compadre* is worthless,' Sun said. 'Come; let us go to another place.'

Moon slept, and Sun placed him near the foot of a tree, and put leaves over him. '*Compadre*, why did you put me over here?' Moon asked. Sun responded, 'when our community dies, they will place the body near the foot of a tree, and the body will wake up; they will not die.' When Sun was sleeping, Moon dug a hole in the earth and placed Sun inside it, and put sticks on top of the hole. Sun woke up and said, '*Compadre*! Do not do this to me!' Moon responded, 'our community will do this [to the bodies] when they die.' Moon was always changing things.

[Another time], there was a red hat. Woodpecker gave the hat to Sun. Sun asked for it, saying, 'give me that red hat; I like it; I want it!' Woodpecker said, 'I will give it to you, but do not drop it in the grass [*capim da chapada*; Ahtu], for it will set the world on fire,' and he threw the hat to Sun. Sun grabbed it and juggled it in between his hands until it cooled off. Then, he went home with the hat and fell asleep. When Moon entered, he saw the beautiful red hat and said, '*compadre*, give me that hat! Where did you find such a beautiful hat?' 'Woodpecker gave it to me,' Sun answered. 'Tomorrow we will go there to

get another one for you.' 'I will not let you get one for me, I will get it myself,' Moon responded. 'No, you will not be able to handle it; it is hot,' said Sun. 'I will handle it,' Moon answered. In the morning, Sun took Moon to the place [where Woodpecker lived]. Woodpecker has a little red hat, and it is hot. In the past, everything was different. Sun and Moon arrived there. 'Woodpecker, give me another hat!' Moon said. 'You must handle it; do not let it fall in the grass,' Woodpecker told him. Moon received the hat from Woodpecker, but it was so hot and he let it fall! The hat fell and set fire to the grasses. Sun was angry at Moon, and said, 'go, run!' The fire followed Moon; it was a huge fire! Moon entered Armadillo's hole, and the fire passed by on top of him. Sun was sad, thinking that the fire had killed Moon. Sun followed Moon, but he found Moon alive. 'I went into Armadillo's hole; I am alive!' Moon said.

There they went; Moon and Sun. They found two capybaras. Sun caught the female one, and Moon caught the male one. 'Let us eat the meat!' However, Moon's capybara was very skinny. 'Let us trade,' Moon told Sun, so they traded. When they traded, Sun's capybara also became skinny and the capybara that Moon gave Sun became fatter and bigger. They cooked the meat in an earthen oven. When they opened the oven and removed the meat, the hot fat fell on Moon's stomach. Sun told him, 'go into the water!' Moon fell into the water, and stayed there. He dove in near Tortoise. Sun told him, 'do not disturb Tortoise, because it is he who creates the water, and the water will take you away, and you will die.' Moon responded, 'yes I will not disturb him.' They left the capybara in the oven, and Sun waited for Moon. However, Moon was disturbing the water, and it began to rise and bear him away. '*Compadre*, leave Tortoise alone; the water will take you,' said Sun. The river rose; it was a big river, and it took Moon away. Sun broke off a dry *buriti* stick and handed it to Moon. 'Take it; grab the end of the dry *buriti*!' Sun

told Moon. Unfortunately, the stick kept breaking and breaking. 'Let him die, he is always doing the wrong thing,' Sun finally said, and he returned to his place. Moon grabbed a leaf and the water fell, and he followed Sun. 'I do not know if he died,' Sun thought. 'Oh, my *compadre* is alive!' he said when he saw Moon. 'I grabbed the leaf of a tree and it saved me,' Moon said.

Then, they went to the stream. Sun said, 'we are going to make our children. Let us go to the stream.' Sun jumped into the stream, and two children came out. Their hair was beautiful; it was smooth and very white! Moon also jumped into the stream, and two children came out – with ugly, unruly hair! Moon said, 'let us trade our children, *compadre*!' Sun responded, 'no, these are my children! You keep your children, and I keep mine.' 'Okay, let us go into the sky.' Then, they went into the sky, and Sun said, 'are you going to watch over the day or the night, for you to walk in?' '[I will walk] by day, and you will pass through the night,' Moon said. Moon did not let Sun take the day. 'No,' Sun said. 'This [time] you are not going to pass over me. I am going to watch over the day, because you are worthless [and you will] change overnight. If not, you are going to end our brothers, our people! When they walk at night, in the full moon, the people will say, "let us go at night time, the full moon is coming!" You will be on the other side of the world, and the people will be happy. Not from me, I do not have the happiness of life. You will make the people happy. During the new moon, the people will yell and live with you; they will be yelling and living with you, and tell you they are alive.' Moon watched over the night, and Sun did not let Moon watch over the day. Moon creates the night and makes it dark, but he does not give much.

Version 2 – told by Fernando

Fernando: They say that Moon's children do not have smooth, shiny hair, but Sun's children have shiny hair. Sun invited Moon to the stream. They arrived there, and Sun took a *buriti* stick. Then, first, Sun said, '*compadre* let us create our children!' 'Yes, it is good!' said Moon. 'Look, look over there,' Sun said. He dove into the stream, came out, and his child came out with him, accompanying him. Sun did this a second time, and again; four times he did this, and he created four children. Sun told Moon, '*compadre*, do it too!' Moon dove into the stream, and his child came out with him, but with ugly/untidy hair. Moon dove, created another one, and they all had the same hair. 'All is well; we both created four children,' Sun said. 'Now, *compadre*,' Sun told Moon, 'another teaching – I will do it this way. Look, when our children grow up and die, they will be like this, as I am showing you.' He grabbed the *buriti* stick, threw it in the water, and it returned and came back out. '*Compadre*, look – when our children die, people will take the dead body and place it near the foot of a palm tree.' Afterward, Moon said to Sun, 'no, it is not this way. You will see; I will do it.' He picked up a stone, threw it in the water, and it disappeared. 'This is my teaching; the signal [of death] stays like this.' Sun responded, 'why *compadre*?' However, it was Moon's signal, and it stayed this way. They say that Moon's children have ugly/unruly hair, and Sun's children are much prettier!

Me: Are there parts of the village that belong to Sun and Moon?

Fernando: Sun on this side, the western side, and the eastern side belongs to Moon. Sun killed Moon and placed him near the foot of a palm tree, and placed leaves from a tree on top. Moon stayed there, and stayed there, until afterward he became alive. When Moon came back, he said, '*compadre*! Why did you do that? Why did you kill me?' Moon

also killed Sun, and took him and began digging. He put Sun inside the hole, placed earth on top, and left. Sun arrived where Moon was and said, 'why did you do that?' 'Because our children have to do the same.' He made the signal...at another time, they had *buriti*, and Moon saw Sun's faeces and wanted to make the same type of faeces, the same colour [yellowish]...so he ate a flower [that Sun told him to eat], but Sun had deceived him. Sun took Moon to the *buriti* palm – it was short; it was not big. Sun said, 'choose a tree, and I will choose another one.' 'My *buriti* is not good, trade with me!' Moon said, and Sun traded with him. Moon said, 'this *buriti* is not giving [any fruit]!' He hit the *buriti* palm, and at the same time the palm grew and Moon was trapped at the top. '*Compadre*, why did you do that?' Sun asked. Moon said, 'so that our children do not eat all the *buriti* fruits!'

Me: are the children of Sun and Moon similar to them?

Fernando: A little bit. It is only Sun's children that are [similar]...well, and those of Moon as well, of a type. However, they are less [similar] to Moon [than Sun's children are to Sun].

Star-Woman (Caxêtikwỳj) origin of horticulture myth

Told by Leandro

Tyc-ti is Caxêtikwỳj's husband. Caxêtikwỳj chose Tyc-ti to be with him, teach him, and show him the food of the forest, because the 'ancient' Indians [ancestors] did not know about this food. Caxêtikwỳj came down from the sky and turned into a small frog, and sat on top of Tyc-ti's stomach. He threw the frog off his stomach, and Caxêtikwỳj, as a frog, fell to the ground. When Tyc-ti was sleeping, she sat on top of his stomach once again, and he threw her off him – this happened two times. Caxêtikwỳj then said to him, 'why do you not like me?' Tyc-ti responded, 'I did not know; you are a person!' Caxêtikwỳj told him, 'Yes I am; I came down from the sky. My name is Caxêtikwỳj [*Estrela Dalva*, Star-Woman]. You can call me this, and now let us get together!' The two of them got together [slept together], and they talked about many things; they were talking and talking. Afterward, Caxêtikwỳj advised Tyc-ti: 'you should hide me again, wherever you want, in secret, so that no one sees me.' Tyc-ti responded, 'I have my sheath for storing arrows, I will clean it out so that you can hide in there.' He removed the bow and arrows, and put Caxêtikwỳj inside. It was becoming light outside; the day was almost dawning. Tyc-ti took Caxêtikwỳj with him, and she was hidden inside the Cuhkõn-ti [or Cuhkõn Pàt-wỳ] gourd. He hid her, and carried the gourd around with him.

All morning, Tyc-ti opened the lid of the gourd, saw Caxêtikwỳj, and laughed. He laughed for her, and she laughed for him. She liked him, and he liked her too – they both liked each other. Tyc-ti's youngest sister saw him laughing into the gourd, and thought, 'my brother is opening the lid of this gourd and laughing all the time; I do not know why.' When the day dawned, everyone began eating rotten wood, which was the people's food. The

Indians ate this rotten wood; it was soft enough to eat. They did not know about 'good' food. Afterward, Tyc-ti went to his house, which was large and long. He advised his sisters, 'do not tamper with this gourd, it is beautiful! I am going along with my group to search for a log.' Tyc-ti and his 'brothers' [from the same male age-group] went hunting for rotten wood to eat. They sat, they thought.

Meanwhile, everyone [in the house] saw this gourd. Tyc-ti's sister opened the lid and looked inside, but when Caxêtikwỳj saw a different face than Tyc-ti's, she hung her head in shame. She hid in the gourd once again. When Tyc-ti arrived, he opened the lid and saw that Caxêtikwỳj was still hanging her head. Tyc-ti said, 'who tampered with my gourd?' His sister replied, 'it was me.' 'Did you see the nice thing there?' Tyc-ti asked. 'Yes, I saw, her face is pretty,' responded his sister. Tyc-ti told Caxêtikwỳj, 'do not be angry, do not be upset with your youngest sister.' Caxêtikwỳj responded, 'now, with the afternoon arriving, I will come out, for everyone to see me.' Tyc-ti asked his sister to bring a mat for him and his wife to sleep on. 'I will remain lying on the ground itself, next to the fire,' he said. Later in the afternoon, Caxêtikwỳj came out of the gourd and sat on a log in the doorway of the house. She was beautiful, with white, almost clear-coloured skin and very long hair that was very pretty. There she was, in the house. The 'brothers' said, 'we do not know where her tribe comes from; she is so white!' Tyc-ti's sister said, 'no one knows. Only they know [Tyc-ti and Caxêtikwỳj].'

The next morning, at seven in the morning, Caxêtikwỳj said to her husband, 'let us go bathing. Bring the large basket [*kaj*].' They came to the stream and saw a large amount of *tucum* [*Bactris setosa*; Rônti or Ronre in Canela; a type of native palm] fruit. 'Pick this *tucum*,' Caxêtikwỳj told Tyc-ti, and he did so. She began chewing it, and asked him, 'are

you going to eat it?' 'No, if I eat that, I will die,' Tyc-ti answered. He did not want to eat it; he became angry. 'No, you will not die. This is what feeds you; it is your food. I am going to find everything for you to know about,' Caxêtikwỳj told him. She gave him the *tucum* fruit, and he chewed it, swallowed it, and found it tasty. Once they were in the water, there were many *buriti* [Crows; *Mauritia flexuosa*] palms next to the stream. Caxêtikwỳj gave the *buriti* fruit to Tyc-ti for him to taste it as well. Again, Tyc-ti said, 'I am not going to eat this because it is raw, and very red.' Caxêtikwỳj told him, 'no, it is not raw; it is fruit, *buriti* fruit! People are not accustomed to eating it; you do not know. I am still going to find other fruit in the *chapada*, and in the forest.' Caxêtikwỳj gave Tyc-ti the fruit for him to swallow, and he liked it. She made juice, and showed him how to drink it.

Another day, Caxêtikwỳj took Tyc-ti to a different stream. They went into the stream, and there were many ears of corn falling into the water. Tyc-ti asked her, 'what is in here, these tall stalks and big ears?' 'It is maize!' Caxêtikwỳj told him. 'This is what I am finding/discovering for you all to know about. Let us go to the village, to show people.' They had to roast it, because it was still raw. There were so many ears of corn, and they arrived to the house with all the ears. Caxêtikwỳj's sisters-in-law were seated, and she told one of them, 'my sister-in-law, this is food; it is an ear of corn. I am going to roast it for you to see.' Caxêtikwỳj said this; she had this knowledge. Together, they made a grater to grate the ears of corn. Then, they made a fire, roasted the ears, and ate them. All the sisters-in-law were chewing the food. 'Are you seeing it; is it tasty?' Caxêtikwỳj asked. It was so tasty! 'You have never seen this; it was I who discovered it, and I still have other things to discover,' Caxêtikwỳj told them. 'The fruits of the riverbank, and there are other plants too.'

Caxêtikwỳj grated the ears of corn, made an earthen oven, and brought the maize husks with her as well. She wrapped the grated maize meal in the husks, covered them, and baked them in the oven. When it started smoking, she opened the oven. Everyone smelled the nice smell of the maize *beribu* pie, and thought it was beautiful. She distributed the pie to the children and to the adults, in the same house. In the afternoon, the men's groups put the pies in the village street and performed the log racing. Everyone was together. One grandson, a little boy, took a piece of the maize pie and began eating it. 'What are you eating?' people asked him. The little boy ran away and sat [near Caxêtikwỳj]. In this way, everyone found out about Caxêtikwỳj. People said, 'Caxêtikwỳj is finding this food for us to know about! We are going to cut down the maize tree; it is very tall and is heavy with ears of corn.' The next morning...the Indian, he never learned to be intelligent, he did not know, and he asked the 'Christians' [non-indigenous 'white' people] to cut down the maize tree. The 'Christians' took the largest ears of corn, and left the smaller ones for us. That is why the whites plant maize with large ears, and the Indians plant maize with smaller ears, because the 'Christians' stole the large ears and left the smaller ones.

Another day, Caxêtikwỳj said, 'let us go to the forest so I can show another fruit to you.' It was *mangaba* [Pênxôô; *Hancornia speciosa*]; it was a large, tall tree with fruit this size [about the size of a fist]. Caxêtikwỳj was in the forest and presented the *mangaba* tree to the people, saying, 'this is for you all to know about and to eat. Stop eating rotten wood; that is not food! This is the food that I came here for everyone to know about.' An Indian climbed up the tree to cut down the fruit, and it fell to the ground. They collected all of it. Caxêtikwỳj herself showed them how to do everything – how to make the earthen oven. They dug a hole and arrived with the *mangaba* fruit. 'Light this earthen oven,' Caxêtikwỳj

told them, and when they heated up the stones, Caxêtikwỳj took off the stones and put water in the hole. She heated it up, and put in the fruit, which turned soft that very moment. When she was done teaching them, Caxêtikwỳj took away the cooked fruit and returned to the village. They made the food, ate it, and enjoyed it. '[Look at] all of my discoveries of these fruits of the forest! Stop eating rotten wood now; do not remember it anymore,' Caxêtikwỳj told the people.

On another day, she said, 'let us go again to the forest, so that I can show you another fruit.' She took only women with her, and there were many of them. They arrived in the forest, and there were many sweet potato vines, right there in the forest. She started digging up the potatoes, and the women took them back to the village. They made another earthen oven and baked the sweet potatoes, and after cooking them, they were soft as well. All the teachings of Caxêtikwỳj, everything that she taught them, the 'ancestors' learned as well.

Another day, Caxêtikwỳj showed them sweet manioc in the forest. There was so much of it! They harvested the sweet manioc, and they ate it – it was tasty. Caxêtikwỳj showed them bitter manioc too, and told them, 'this bitter manioc is not for making *beribu* pies. The sweet manioc is feminine, and the bitter manioc is masculine. You cannot make pies with the bitter manioc, only with the sweet manioc – [because] it is a woman. Bitter manioc is a man; it is bitter, and if you make pies with this, it will kill you and you will die. You have to grate it, squeeze it in the *tipití*, and make *beiju* [a type of pancake] or *farinha* [toasted manioc flour] with it and you can eat it this way.' She showed all of these crops for the Indian to know about. Slowly, they became accustomed to this new food; they began to know about it until they knew everything well. Caxêtikwỳj told her husband, 'I

am going now. I only came to show this food to you all for you to learn about it. Now I already showed you everything. I am going to return to the sky.' Tyc-ti did not want to let her leave. 'I am going with you,' he said. 'No, you are not,' she told him. Nevertheless, he convinced her, and Caxêtikwỳj took Tyc-ti with her to the sky. She told him, 'let us go together. They already found the fruits in the forest, and the food from the crops as well. They will make gardens and harvest the crops – the *maniva* [roots] of sweet manioc. They will plant sweet potatoes, and *buriti*, and watermelon, and all the seeds.' Caxêtikwỳj went into the sky with her husband. I heard this story from my very old grandfather, Lauriano.

Origin of urucum (Pym; annatto) from Macaw (Pàn) myth

Told by Leandro

One day, an Indian was hunting and became lost in the forest; he did not know in which direction lay the village. He climbed up a tree and slept there. In the morning, Macaw sung a song. The Indian who was in the nest in the top of the tree saw him and said, 'oh, how good that you talked to me! I am close to the village; I will come down and go there now.' Then Macaw growled, 'rrrrr!' and came close to the man. 'You are lost. I will yell; you will accompany me, and I will show you the road leading to the village, and you will arrive there. Do you want this?' The man responded, 'yes, you can yell, I do not know where the village is; I really did get lost.' It was there, far away. Macaw yelled, 'Ah! Ah! Ah!' and came down from the tree, with the man following. They came close, and arrived at the grove of *urucum* [annatto; *Bixa orellana*] trees. There were many trees, large *urucum* trees. They were very large in the forest. Macaw said to the man, 'this *urucum* that you all do not yet know about, this is mine. We paint it on our bodies; it is very red.' Then he showed the

man how to use it. 'Break some off, for when you arrive in the village, and show [the fruit] to the women. Bring the women here to take some and paint it on their bodies.'

In the beginning, the 'ancestors' did not know about this *urucum*; they only knew how to use that rock as paint – it is also red, and you can paint with it like *urucum*, but it is not very red. Macaw discovered the real *urucum* for the man, and the man took two branches of the tree with him. He came to the road and walked to the village. Everyone came together, asking, 'where have you been? Where did you spend the night?' 'I lost my way back to the village, but I have arrived now. Macaw showed me where the village was and the road to it, and I came back,' the man said. 'Look, this is called *urucum* [Pym in Canela]! This is the real macaw's *urucum* that Macaw showed me. There is a grove of trees in the middle of the forest. Tomorrow, I am taking all the women there to break off the branches and use [the fruit] to paint our bodies.' This is how Macaw showed the Indians *urucum* for them to use.

The brave warrior Pàrpajõi-te myth

Version 1 – told by Leandro

A different tribe came to the village of the *mẽhĩn* [Canela], and they killed Pàrpajõi-te's mother and father. Dekutah is the wife of Pàrpajõi-te's brother, but the other tribe killed him as well, and she became a widow. The tribe killed many people and then left. Dekutah came to where Pàrpajõi-te's mother was lying on the ground dead. He was still a little boy at this time; he was still 'soft,' and he was suckling the breast of his dead mother. Dekutah came to him and said, 'Pàrpajõi-te, that tribe killed your brother, and I am now a widow. But I will take care of you; I will treat you very well for you to grow up, and afterward, you will take care of me.' From then on, she took care of Pàrpajõi-te, giving him *tucum* milk for him to drink, until he grew up and became a boy. Pàrpajõi-te's uncle then took him hunting with a bow and arrow. When it became morning, he went to kill many birds. Dekutah took very good care of Pàrpajõi-te. After he grew up, Pàrpajõi-te thought one day, 'I am going to sleep in the centre of the patio [ceremonial centre] tonight. I am not going to sleep in the house with my mother anymore.' Dekutah had never told Pàrpajõi-te that she was not his mother, but rather his brother's wife.

In the afternoon into the evening, Pàrpajõi-te asked for a mat to take to the centre where he wanted to sleep. 'Mom, get me a mat for me to sleep in the centre, because I am already ashamed to sleep with you [in the house] any longer. You are my mother, and I am not going to sleep with you anymore.' Then, Dekutah told him, 'come sit near me; I am going to tell you a story for you to know, a certain story.' Pàrpajõi-te came to sit near her, and he found out the truth. 'Pàrpajõi-te, you are not my son. You are your brother's brother. Another tribe came and killed my husband, and your mother and father, and you

were left all alone. Who was going to take care of you? I saw you there; you were dirty with the blood of your mother, and I took care of you. I am your brother's wife; I am not your mother.' Pàrpajõite was happy. 'Oh, you are not my mother?' 'No. Your mother is long dead.' 'Then, let us sleep together [have sexual intercourse],' Pàrpajõite said, and he slept with her. He stopped calling her 'mother' [*inxê*] and began calling her Dekutah. 'Now I know; I am not going to call you mother, for you are my wife now! My brother's widow. Let us embrace each other!' Then, he slept with her again.

Pàrpajõite was a warrior, and he was valiant. Everyone went hunting away from the village, and he was left all alone. Once again, another tribe came to attack the village. They came very close, and the smoke, the burning grass [*capim da chapada*; Ahtu] close to the village. Pàrpajõite said to Dekutah, 'I am going to wait there in the passage. This tribe is coming to attack us.' He went to wait in the passage near the village. At night-time, the tribe never saw Pàrpajõite, and they did not think that anyone was waiting for them in the passage. Each one of them said, 'let us pass through until everyone makes it. In the morning we will all be through [the passage], and we can attack this village.' Pàrpajõite was hidden there, and although everyone from the other tribe tried to pass, he did not let them do so. When someone tried to cross the passage, Pàrpajõite grabbed his throat so that he would not scream and threw him in the river, killing him. He killed almost all of them. By morning, the rest of the tribe saw Pàrpajõite killing everyone. 'Look, there is that large man that is killing us! He already killed us. I am not going; I am going to leave!' one of them said. 'I am going to leave too,' another said. Then they turned around and ran away.

The men who were hunting away from the village had a women run after them and advise the men. 'I come to advise you,' she said. 'I know why you were called, because everyone is dead,' one man said. 'Yes, there is another tribe in the village, and the smoke came to the passage.' Then, everyone went back to the village, but no one had been killed, because Pàrpajõi-te aided the village. After Pàrpajõi-te arrived in the village, he called for the women to come together and go into the forest to hide themselves there, so that none of them would die. Their husbands arrived from hunting and saw the women. 'Do you see Pàrpajõi-te? He really is a warrior! He aided all of our women! If it had been another, he would have left them, and the other tribe would have killed our women! Therefore, we are going to respect him. Respect him – he is a strong man; he is a warrior,' they said.

In the beginning, long ago, it was the warrior who was the village chief. They could not leave it to be passed on to another, because Pàrpajõi-te was the one who saved the village. Afterward, on another day, Pàrpajõi-te told his wife, 'Dekutah, I am going hunting. I want to see this world here.' 'You can go, you know best, if you want to go, you can go,' Dekutah responded. Pàrpajõi-te travelled, and he arrived in Owl's house – Pàh-ti in our language, or Great Owl. Pàrpajõi-te was cutting arrows. He arrived to Great Owl's house, sat down, and said to himself, 'which tribe is in this house? I am going to kill one.' He shot an arrow, and one owl fell, and another opened his eyes and saw Pàrpajõi-te. 'No, I am not going to kill the other one, he is little. I am going now,' Pàrpajõi-te said to himself, and he left.

He arrived in the rural area. There was some forest, some *chapada*, and Pàrpajõi-te went near the forest. Monkey was there, and Pàrpajõi-te saw him. 'Who is there? What tribe is there? I am going to kill one,' he said. Then, he shot a monkey with an arrow. It fell to the

ground, and the other monkeys came near him, chasing after him. He ran out of the forest and into the *chapada*, and the monkeys could not run after him on the ground, for they only know how to run in the leaves of the trees. Therefore, they left him and returned to the forest. Pàrpajõi-te said, 'that tribe is valiant! If I had lingered, they would have cut off my foot, my shin, and eaten all of me! I am going; I am getting out of here.'

That afternoon, he made a house of sticks that was durable. He sat down, and said, 'I am going to sleep here by myself, in this house of sticks.' Later in the afternoon, Black Jaguar came and spied on him. Pàrpajõi-te sat up and said to him, 'go and pass by over there; I am not going to bother you. Black Jaguar, go by over there; I am not going to bother you.' Spotted Jaguar also came by. 'Go by over there, Spotted Jaguar, I am not going to bother you,' Pàrpajõi-te said. However, they were still spying on him. At night-time, they came to touch him with their paws and tried to grab him. Pàrpajõi-te grabbed the jaguar's paw, secured it, and punctured it with the point of his arrow. The jaguar screamed, 'Ahh! Ahh!' Pàrpajõi-te said to him, 'I told you that you all could pass by, and that I would not bother you. Now here you are, bothering me, so this is the punishment. I am punishing you; I am puncturing your paw. This paw of yours is trying to catch prey, but I am not prey, I am a person!' Pàrpajõi-te released the jaguar's paw, and it went away. No one of them came back to look for him, and then dawn broke.

Pàrpajõi-te travelled once again, and in the afternoon, he climbed up a tree and sat there. Again, the jaguars came near him, all grouped together: Black Jaguar, Spotted Jaguar, and Red Jaguar. Pàrpajõi-te said, 'go by me, jaguars, I am not going to bother you.' However, at night-time, they came bounding at him and Pàrpajõi-te shot them in the arms with his

arrows. 'Go away!' he said. The jaguars listened, and did not come after him again; they sat far away, breathing, until dawn broke.

Pàrpajõi-te travelled again. Afternoon arrived, and he came to Giant Armadillo's [Awxêti]'s garden. Pàrpajõi-te entered his house and sat down. Giant Armadillo arrived and was afraid of Pàrpajõi-te, and Pàrpajõi-te was afraid as well, because Giant Armadillo is huge. They both were afraid of each other. Giant Armadillo said, 'let us sleep here together. You will lay next to the fire on one side, and I will lay on the other side. We will talk until dawn. I am going to tell you about a place that you should know about. There is a place that is very valiant; it is masculine, and they do not let people pass by.' 'I am going to sleep now,' Pàrpajõi-te said, 'but I will not bother you.' 'Neither will I bother you,' Giant Armadillo responded. 'We are going to be real friends, *kêt-ti* [grandfather/uncle] and *tàmtswè* [named grandchild/nephew].' Giant Armadillo put sweet potatoes in the ashes of the fire, and when they were cooked, he took them out and gave one to Pàrpajõi-te for him to eat. Pàrpajõi-te ate it, and found it tasty. 'Tomorrow I will give you seeds [and cuttings] to take with you and plant in your garden. This here is good food. Feed yourself with seeds,' Giant Armadillo said. In the morning, Giant Armadillo and Pàrpajõi-te entered into an agreement with each other. They did not fight. Giant Armadillo packed up some seeds [and cuttings] for Pàrpajõi-te, giving him sweet potato, peanut, pink maize, white maize, and red maize. Giant Armadillo packed up all of these seeds for him, and said, 'look, you are going to spend the night in Giant Bat-Beast [Xêp Catia or Cupěn Xêp]'s garden.'

Pàrpajõi-te travelled, and arrived at Giant Bat-Beast's garden in the afternoon. The beasts began to sing. They were going to work in their gardens, and they worked at night. Pàrpajõi-te was passing by, and the giant beasts came near him singing. He saw another

one in their garden. They kept singing and came to the tree branch [where Pàrpajõi-te was sitting], and he saw them. ‘Am I going to kill this here?’ Pàrpajõi-te asked himself. He shot an arrow at one of the animals, and as it fell to the ground, the others were already coming to kill Pàrpajõi-te. He ran away out of fear of this Xêp Catia. He fell in the water, and entered it completely, so that only a little part of his face was above the water for him to breathe, slowly. ‘Oh, they are Cupẽn Xêp!’ he realized. They are called Cupẽn Xêp in our language. A swarm of them arrived, hunting, hunting, and hunting to kill him. However, they never found him, until dawn. In the morning, they sang, and as they were singing, they left the area until everything was calm. Pàrpajõi-te came out of the stream, lay down in the sand on the riverbank, and slept. Without knowing more about this Cupẽn Xêp. A honeybee buzzed near him and stung his mouth, and he woke up. Pàrpajõi-te said, ‘this Cupẽn Xêp is going to return and kill me! I am not going back; I am leaving here now. Not during the day, I do not work in the daytime, only at night. At night-time I will leave here.’ Then, he left. He slept near the village, and arrived to his house very early the next morning. Pàrpajõi-te told his wife, ‘Cupẽn Xêp almost killed me, but I have arrived!’ Dekutah cried, and everyone gathered around Pàrpajõi-te. ‘Cupẽn Xêp almost killed Pàrpajõi-te, but he came back alive!’ they said.

Another day, a different tribe arrived, including Dekutah’s brothers. People said, ‘Dekutah’s two brothers arrived!’ Pàrpajõi-te found out about his wife’s two brothers, and told Dekutah, ‘I am going hunting to kill game for you to make *beribu* pie for your brothers to eat. I am happy.’ He went hunting and killed many *guariba* [a type of monkey], and Dekutah made many pies with the meat. In the afternoon, she opened the earthen oven and put the pie near the doorway, while Pàrpajõi-te sat on a log next to the food. ‘Find your brothers to eat with me; to see this and be happy and content.’ Dekutah went asking

for them in the centre. The community said, 'there the two are seated.' Dekutah told them, 'let us go eat, hurry!' One of them said, 'yes, in a while I will eat,' but the other said, 'I am not going. Pàrpajõi-te is sitting over there next to the food, and he will kill us both. He is valiant; he is a warrior.' 'I know him; he will not do that,' Dekutah told them.

The brothers went to the house, and when they were lying down, Pàrpajõi-te deceived them. 'Put the pie there, for me to eat! Your two brothers are annoying me; they are not taking my orders! And they will not eat; instead, fetch a pestle, the heaviest one, and place it by my side,' Pàrpajõi-te told Dekutah. He was going to kill both the brothers. Dekutah searched for the heaviest of all the pestles and placed it by his side. Pàrpajõi-te ate the *beribu* pie and slept. At midnight, he woke up, and while everyone was sleeping in the patio, Pàrpajõi-te went there and asked, 'where are my wife's brothers?' 'There they are.' He came at them and killed them both! Pàrpajõi-te hit them over the head with the pestle and left. At dawn, someone told someone else, 'wake up those two brothers to go bathing; they are sleeping too late!' They went to wake up the brothers, but their sleeping mats were covered in blood. 'Someone killed them! Pàrpajõi-te really tricked them; he really did!' However, Pàrpajõi-te only listened and did not say anything. Dekutah said to him, 'everyone is angry with you, and you do not speak?' 'No, I am not going to speak; he is a kid, and I am not going to waste my energy. Leave it be.'

Version 2 – told by Fernando

Back then...one person was a great warrior [Pàrpajõï-te]. ‘Wife, I am going hunting!’ [He said]. ‘Okay, you can go,’ responded his wife. Pàrpajõï-te walked, and walked, and walked, and the afternoon came. In that time, there were no white people; there was not anything; only animals and *mẽhĩn*. Pàrpajõï-te encountered Giant Armadillo. He had a house, a little shelter, and a garden. He said, ‘*Kêt-ti!*’ and Pàrpajõï-te responded, ‘nephew! I come from hunting, and now it is late afternoon. Could I sleep here?’ ‘Yes, you can sleep here,’ Giant Armadillo said. ‘Make yourself at home. I am here by myself; you can sleep here.’ He lit the fire, and Giant Armadillo stayed on one side of it, and Pàrpajõï-te on the other. Giant Armadillo told him a story. ‘Look, nephew, I am going to tell you a story.’ ‘Are there other people over there?’ Pàrpajõï-te asked. ‘There are; there is Owl’s village, *Cupẽn Pãã*. But those people are...when you arrive there, you will see; they sleep in the trees too much.’ ‘Yes, nephew.’ ‘And there is another ethnic group that you will encounter; they are called *Cupẽn Xêp* – bat-person, and they are brave, valiant, and they will kill you!’ ‘I will not disturb them,’ Pàrpajõï-te said. He understood this information. ‘Nephew, I am going to collect peanut seeds for you to plant and cultivate too,’ said Giant Armadillo. He collected sweet potato and peanut, and another seed. Pàrpajõï-te travelled to another village. He had gotten sweet potato, peanut, and another seed from Giant Armadillo. He told his wife that he brought these things from Giant Armadillo.

Another day, he told his wife, Dekutah: ‘I am going hunting again!’ and he left. He spent the night in the forest. There were not any white people, only animals – black jaguar, spotted jaguar, *suçuarana*, and a type of bat as well. Pàrpajõï-te stayed there, and at six o’clock, the jaguars gathered together. They passed around him, and he said, ‘jaguar, do not bother me! I will not bother you!’ Nevertheless, Jaguar grabbed his hand, bothering

him. Therefore, Pàrpajõi-te shot the jaguar's paw with an arrow and the beast left. Another came, and Pàrpajõi-te broke his paw by shooting it with an arrow...and he stayed there all night without sleeping. Another day, he continued walking, and arrived at the *Cupẽn Pãã* village, where everyone was sleeping. He looked around and entered their house, but everyone was sleeping and sleeping. 'Well, I am going to take one of their bows,' Pàrpajõi-te said, and he took one without disturbing anyone. He left, and spent the night in the house of the bow's owner.

Another day, in the late afternoon, Pàrpajõi-te saw the *Cupẽn Xêp* – they perched on a tree branch above him and were cutting and cutting [the wood]. 'What animals cut wood up there?' Pàrpajõi-te asked himself. He heard their song, the song of the bat-people. They were flying above him. A bit later, another group of them passed – there were so many of them! When another group passed by singing, then they sat in the trees above him. They say it is a giant beast, with huge teeth, and a huge wingspan! Pàrpajõi-te looked at them. 'I am going to shoot one of them,' he said. He shot one and the beast fell to the ground. He had just killed one, and he decided to dive into the stream. He walked there, got into the water, and went underwater, looking for a place to hide. He saw some of the beasts, but he had hidden himself in a hole. Other *Cupẽn Xêp* saw the blood of the other bat. 'Someone killed our friend!' they said, and they invited the others. They grouped together – there were so many bat-beasts! They looked for him, flying around and cutting down the forest with their teeth like knives. They cleaned the water, throwing it and looking for him. 'Here is his smell!' 'No, it's over here!' There were so many of them! Pàrpajõi-te stayed under the water until the afternoon, and he was so cold! He thought, 'these things are going to kill me now, because there are so many of them!'

They never found him, however, because he was underwater. In the morning, they started singing again, and then each group left. Pàrpajõi-te could not walk, and he remained laying on the sand under the sun until he felt better. He arrived at the place where he killed the Bat-Indian, took the body, and left. He arrived back home and told his wife, 'Dekutah! I do not know, but the *Cupẽn Xêp* nearly killed me! I killed one and the others followed me! I hid in the stream and spent the night there, without sleeping, it was so cold, and they nearly killed me.' Dekutah said, 'but I did not tell you to kill those things; you yourself wanted to do that, and you're not going to do it again!' Pàrpajõi-te was a warrior, however, and he was so big! He received those seeds from Giant Armadillo, Awxêti.

Version 3 – told by Fernando

The warrior, Pàrpajõi-te, walked around in the forest to fight/do battle. He killed some animals, and walked around. It became late afternoon and he could not return [to the village]. He found Awxêti. They say that he arrived there and Giant Armadillo was weeding his garden. Pàrpajõi-te said, '*Hopââ* [Hello]!' and Giant Armadillo responded, '*Hopââ*!' Pàrpajõi-te said, 'I have been hunting, and it is already getting dark. I am looking for a place to sleep.' Giant Armadillo responded, 'my nephew, I am here working, and I have a house. You can sleep with me, in my house. Let's go home.' He took Pàrpajõi-te to his house. Giant Armadillo cultivated peanut, and he showed it to Pàrpajõi-te. He was weeding the area where he planted peanut, and he showed Pàrpajõi-te. At home, he lay down and made the fire, and Giant Armadillo lay on one side and Pàrpajõi-te lay on the other. They talked as we talk to each other. In the morning, Giant Armadillo said, 'nephew, I am going to get those seeds for you to cultivate.' They say that Pàrpajõi-te received

peanut seeds in this way. They say that Giant Armadillo grew them. I do not know if it is the truth, but the story exists. We got peanut from Giant Armadillo.

Origin of fire from Jaguar myth

Told by Leandro

In the beginning...Indians did not eat cooked food; they ate raw food, and only Jaguar ate cooked meat [cooked in an earthen oven]. Indians were used to eating raw meat, and they did not know about this fire. A man's brother-in-law, who was the brother-in-law's brother, said, 'my brother-in-law, let us go catch the macaw in its nest!' and he took him with him. They placed a ladder [near the tree] to climb up and take the macaw. The brother-in-law climbed up to take the macaw. The brother-in-law received it, but the other man threw the ladder onto the ground, so that the brother-in-law did not have a way to descend; and there he was, stuck up there. Macaw came and sat on top of him, on top of his head. Now the man had an animal on his head, and he was dying of hunger, when Jaguar appeared. 'Oh, my little friend [*compadrinho*],' Jaguar said, 'jump on top of me; I will catch you.' 'No, you will eat me,' the Indian said. 'No, I won't, I want to cure you,' Jaguar responded. 'I will jump, because this animal has almost ended my life,' the Indian said. Then, he jumped on top of Jaguar, and Jaguar caught him. Slowly, he put the man on the ground, and from there he extracted Macaw from the man's head. 'Are you thirsty?' Jaguar asked. 'Yes I am thirsty,' the Indian told him. 'Are you hungry?' 'Yes, I am hungry,' the Indian said. 'So, let us go to your *comadre's* house, and you will eat,' Jaguar said.

A little while later, they arrived at Spotted Jaguar's house. There was a lot of dried meat – peccary, deer, and other animals too. They gave the man *farinha* [toasted manioc flour] and meat, he ate it, and he drank water. Afterward, he raised his head and look around. Jaguar went hunting during the night, and in the morning, he arrived with more game. They cooked it, and gathered together. Another day, the jaguars went hunting again. The boy was hungry, and his *compadre* Jaguar told him, 'my *compadre*, when you are hungry, you can tell your *comadre* to give you meat.' When the boy was hungry, he said to the female jaguar, 'mother, *comadre*, I want to eat.' The female jaguar stood in front of him, in his way, and said, 'no, I do not like you eating now! If you eat, I will get you!' She growled at him, '*grrrrr!*' The boy cried. When his father Jaguar arrived, he called to the boy: 'my son, why are you crying?' The boy told him. Jaguar sent him to eat, and he made a bow and arrows and gave them to the boy. 'If you are hungry, and if this jaguar wants to get you, you can wound her paw with this bow and arrow,' he said, and he left. When it was time to eat, the boy said, '*comadre*, I want to eat!' 'I will get you, you know that!' the female jaguar responded. Next, the boy shot an arrow at her paw. Her husband arrived and asked, 'what happened to you?' 'He shot me with an arrow!' she said. 'Well, you didn't give him anything to eat, did you?' Jaguar responded.

At night, Jaguar told his grandson [the Indian boy/man], 'I will leave you in your village. Let us go tonight.' He took the boy, put him on the road, and he arrived in his village and told the community what happened. In the meeting in the patio, they decided to take the fire. 'Well, let us go take the fire from the jaguar,' they said. They advised Toad, Hô-ti, to accompany the community. They arrived at Jaguar's house, and they stole the flame of fire. Toad, meanwhile, was spitting in the fire pit, and while the jaguars' arms were falling [on him], Toad continued spitting and putting out the fire, until the Indians arrived in the

village. Afterward, Jaguar began eating raw things, and the Indians had the fire, hidden. They [the Indians] had stones and they lit that fire. They knew how to make fire. They took rotten, dry, soft wood and they blew on it until it caught fire. The Indian knew how to make fire.

Awkhêê myth

Version 1 – told by Leandro

Awkhêê's mother is called Ror-kwỳj. Ror-kwỳj was a 'whole' single girl; she had not done anything yet [she was a virgin]. Awkhêê entered her belly and began talking with her. He said, '*inxê* [mother]! Mom, let us walk, you will walk with me, and when I am born [I birth myself], you will [be rich].' Awkhêê spoke to his mother, '*inxê!* Let us go bathing!' For a long time, he spoke in secret to his mother. Ror-kwỳj took him to the river, and Awkhêê left her belly and turned into a small *piabinha* fish. No one saw him, no one knew, not even his uncle. Only his mother knew. After he grew [in her belly], he was born without any pain, and put his arms around his mother. She did not feel any pain, you see? She received the birth well. After he grew up, Awkhêê walked around. 'Mom, let us go bathing!' Ror-kwỳj took him to bathe. Other boys, other children entered the stream – there were many of them.

Awkhêê came to the riverbank, he dove in the middle of all the boys, and he turned into an anaconda, a huge snake [*sucuri; Boidae*]! The boys saw him, and everyone went running! They got out of the river, and were on the riverbank hunting for the snake. Awkhêê also left the river, asking 'where is that cobra?' 'I do not know; I saw it right in the

middle of us!' [Another boy said]. Therefore, his mother took him home. After he grew up some more, Awkhêê was walking around, and he told his grandfather, Tõicaipuwre, 'grandfather, let us go bathing!' His grandfather took him to bathe. Other boys, other children, were playing in the stream. Awkhêê turned into the anaconda once again, and everyone was afraid of him! He got out of the stream asking, 'where is that cobra? It was in the middle of the stream. I do not know; it must have hidden.' His grandfather took him back to the village. Everyone was talking about the news of Awkhêê, for everyone to know about – he was turning into a beast, a cobra! The community asked Awkhêê's uncle to kill him; if not, they said, after he grew up Awkhêê would end the entire village; he would eat all the Indians. They did not want to let him live. Nevertheless, his uncle would not let them kill Awkhêê; he refused. 'No, if you do this, I will move with him to another place.'

On another day, his [grandfather/uncle] took Awkhêê to bathe again. After bathing, Awkhêê told everyone – the boys, the children, 'I will go ahead and hide myself in the forest. Whoever is fastest at running will reach me first. I want to see who can run the fastest.' Then, he walked away and stood in the middle of the road. Everyone ran, and the boy who reached him first saw Awkhêê as a spotted jaguar! He saw Awkhêê and ran to the village; everyone was running to the village, crying with fear of Awkhêê. A few hours later, everyone heard the news and had a meeting in the patio in the afternoon. They asked his uncle to allow them to kill Awkhêê. 'If not, he will eat us all.' Everyone was afraid of him. His uncle said, 'let us go to the top of Sugarloaf Mountain [Pão de Açúcar], by the river in Rio de Janeiro.' Sugarloaf Mountain is there, that tall hill. Long ago, it was an Indian village over there. They took him; his uncle took Awkhêê. Ror-kwỳj painted Awkhêê's body with red *urucum* while she cried and cried. He told his mother, 'mom, do not be worried; I will come back in one piece here.' His uncle took him, and they climbed to the top of

Sugarloaf Mountain, that tall hill. On top, they [his uncle and the rest of the community] deceived him. 'Awkhêê, go down to the river underneath the hill!' they said. 'The river is beautiful!' Then, the community grabbed Awkhêê and he cried. They threw him off the cliff to kill him by falling on the riverbank. However, when Awkhêê was near the ground, he turned into a dry leaf, *crààti hô*. He fell slowly to the ground, picked himself up, and went back to the village.

His uncle and the community did not matter to him anymore; they had deceived him and tried to kill him. Awkhêê closed the fence – underneath Sugarloaf Mountain there is a fence, and he left. The men ran down and tried to leave, but there was no way out. They hunted and hunted for a way to leave. Awkhêê arrived first in the village, and his mother asked, 'where is your uncle?' 'He's over there, hunting game; I saw him, but I was thirsty and hungry so I left. Give me some food; I am hungry.' When the sun fell after lunch, everyone on the mountain was thirsty and hungry, and very angry with Awkhêê. Then, Awkhêê said, 'I will make a big door for the community to leave through; they are all hungry and thirsty.' They were hunting and they found the door, and everyone left. Afterward, they had a meeting in the *chapada*, and decided once again, 'let us get together and gather firewood to make a *queimada* [burn]. We will do the *coivara* [cutting of brush] and tomorrow we will light it on fire, and put Awkhêê in the fire.' They had decided. They arrived in the village, and everyone was angry with Awkhêê.

The next morning, Awkhêê's uncle took him. His mother painted him with red *urucum* and cried again. Awkhêê said, 'mother, now I cannot escape. They already did the *coivara*, and I know how it is. My uncle and the community will throw me in the [cut brush] and burn me. Only ashes will remain after the burn. Prepare a cotton thread, make a spool, and

gather up my ashes. Cover them, tie them together with the cotton thread, and bury them in a hole to bury my ashes.’ ‘Yes,’ his mother responded. The community took him and threw him in the fire, and then ran away in fear of Awkhêê. They uprooted themselves and made another village near a different riverbank. Three, four days passed, and nothing happened. ‘Awkhêê is not following us; I think the fire killed him,’ the community said. ‘Let’s send two messengers to go there and see his ashes in the fire.’ They gathered up two boys and ordered them to gather Awkhêê’s ashes from the fire. Awkhêê saw this, and he had prepared much game meat, many tools, many baked goods, and money too – a huge amount of money on top of the table in a package. He saw these two messengers, and he let his cattle free – they had huge, pointy horns. One messenger saw this and was afraid of the cattle. He went back and told the other messenger, who said, ‘no, you’re lying!’ ‘No, I am not lying. There is a huge beast with enormous pointy horns, and it is huge!’ A second time, they sent the other messenger. ‘See the other messenger’s lie,’ [they said]. Nevertheless, this messenger saw the same thing, came back, and told the village.

Meanwhile, Ror-kwỳj prepared the cotton thread, dug the hole, and left. ‘Where is the *coivara*? Where are Awkhêê’s ashes?’ Awkhêê saw his mother and penned up all the cattle. Ror-kwỳj arrived there, and it was a beautiful place, with a beautiful house; there was a lot of game meat and it was full of cattle! Awkhêê was in the doorway and saw his mother. He called her on the telephone – he had already discovered the telephone. ‘Mom, you can see clearly, come here and let us talk! Your uncle threw me down and burned me, but I did not die! That is why my name is now Emperor [Imperador]; I am no longer Awkhêê.’ She sat at the table and Awkhêê gave her coffee and a snack, and they snacked together. ‘Mom, I am going to call everyone to present themselves here to receive this

wealth. They burnt me, but I am still alive, and I have changed into another type, like the white people.’ His mother left, and one night passed, and another. The community had a meeting and sent the two messengers. ‘Bring back Ror-kwỳj; could it be that those horned beasts ate her?’ The messengers went, but Awkhêê did not let his cattle loose. They arrived at his house, and Awkhêê said, ‘I am alive!’ ‘The community sent us to see if you were alive,’ they said. ‘Yes, I am alive, but of another type; I am different now. Go back and tell the community and all the peoples to come here. Everyone present themselves here to receive this wealth.’

He was not hiding his wealth! However, that stupid messenger did not want to do it. Awkhêê placed watermelon on the ground, cut it up, and the messengers saw it. ‘I will not eat that; it is raw,’ they said. ‘It is red!’ Awkhêê put a piece in the fire and ate it. ‘This is fruit; it is not meat! Roast it; you can take some and try it. It is sweet; it is watermelon – a fruit!’ They tried it and liked it, and afterward they went back to the village. They arrived there in the afternoon, and told everyone the Emperor’s notice. ‘He called all of us, to present ourselves there to receive the wealth.’ ‘Let us go! Tomorrow let us leave early to present ourselves there. It is close; it is not very far away.’

In the morning, everyone went to Awkhêê’s house and sat down. Awkhêê had called the whites, the ‘Christians,’ as well. Awkhêê placed a shotgun and a bow [and arrows] in front of them, and said, ‘look, if you receive this shotgun, you will receive money, axes, machetes, baked goods, and more money.’ There was a huge amount of money on top of the table in a package. ‘It is wealth if you receive the shotgun. But if you receive the bow, well then, you will receive poverty – the bow is not rich, the shotgun is rich.’ ‘How do people shoot the shotgun?’ [Someone asked]. Awkhêê armed the shotgun and shot a

bullet – *pow, pow!* Everyone fell to the ground, rolling around and grabbing their children, afraid of the shotgun! Afterward, they stopped crying. ‘If you take this other weapon, the bow, you shoot it like this.’ Awkhêê placed an arrow in the middle of the bow, shot it, and it flew silently. Then, everyone wanted it. ‘That is what we want for a weapon; it is much quieter.’ Awkhêê became angry. ‘Why? Why do you not want the riches? Well, you will receive poverty then; I am throwing you out of here; go walk the earth! Suffering from thirst, from hunger, from necessity! You will never become rich; all the time you will suffer from poverty and steal cattle from the whites. The cattle are no longer yours, the money is no longer yours, the baked goods are no longer yours; they belong to the whites now.’ The whites liked this. Awkhêê was very angry. A [Canela] woman had already stolen a piece of meat and hid it under her dress. They all left, fearing Awkhêê.

Version 2 – told by Liliana

Rop-kwỳj is pregnant with Awkhêê. One day, she is gathering firewood in the forest and hears a voice say, ‘*Inxê! [Mom!]*’ She looks around but does not see anyone, until she realizes it is the baby inside her. He says, ‘stop gathering wood and go back home; I am tired.’ She follows his instructions and goes back home. Rop-kwỳj is very worried, but she does not tell anyone that her baby is talking to her from the womb.

Another day, Rop-kwỳj is going bathing and hears the baby say, ‘I am going to bathe.’ She does not notice, but Awkhêê leaves her body, transforms into a fish in the water, and then goes back into her belly. On a different day, she is gathering firewood again and Awkhêê tells her, ‘I am going to birth myself tonight.’ ‘Okay,’ says Rop-kwỳj, you can be born tonight. He is born that night while she is sleeping, and she does not even realize it is

happening! When Rop-kwỳj awakes, her baby is already lying next to her. She had already dreamt that she would name him Awkhêê, so she does.

Awkhêê grows very fast, and before long, he is a boy. One day he is playing with the other children in the stream and he says, 'I am going to play.' He transforms into a type of snake similar to a rattlesnake, and scares the other children. Awkhêê also transforms into a jaguar while playing – maybe at the same time, maybe at another time. Now the whole village knows of his powers, and that he is a powerful 'master' *kay*. The male leadership council meet in the ceremonial centre and Rop-kwỳj's brother urges them to decide to kill Awkhêê because he is too powerful. They are afraid that one day he will destroy them all. Rop-kwỳj's brother goes to her and tells her what will happen. She is very sad, but cannot find a way to save her son, so she agrees to the plan. Her brother, Awkhêê's uncle, invites him on a hunting trip at the hill in the mountains with a group of men the next day. Awkhêê talks to Rop-kwỳj, who is crying. He already knows about the plan to kill him, and tells his mother that he will die and he is not afraid. She feels very bad for him.

The next day, Awkhêê goes with his uncle and the group of men to the hill. Once there, the men push him off the side of the hill. As Awkhêê is falling, however, he transforms into a leaf and gently falls and lands on the ground, alive. He has to punish the group, so he makes a wall appear around the hill so that the group of men are stuck there for days, without food or water. Finally, he lets the men go and they all return to the village. The men still want to kill Awkhêê, so they make a giant *moquia* [earthen oven] to throw him inside and cover it up so that he cannot escape. Awkhêê already knows this is going to happen, and tells his mother again that he is not afraid and he is going to die. Rop-kwỳj

cries and cries, but she cannot stop the plans. The group comes for Awkhêê and throws him in the oven, and everyone thinks he has died.

A few days, two or three days, later, Rop-kwỳj goes to the earthen oven site to remember her son. When she arrives to the spot, there is now a giant house with all sorts of things, both *cupẽn* and *mẽhĩn* things. Awkhêê is living in the house, and he tells his mother to go back to the village and tell the people to present themselves to him. The *mẽhĩn* people come to the house, but Awkhêê has also called for the *cupẽn*, who have already arrived. Awkhêê then tells the *mẽhĩn* they can choose the things they want. They choose the bow and arrows and other things of theirs – *urucum*, gourd – because they are scared of the shotgun. The *cupẽn* then take the shotgun and shoot it into the air, scaring the *mẽhĩn*. Both groups go back to where they live, but the *mẽhĩn* have to leave their home. They suffer on their long journey to their new home in Maranhão. Before this time, they were leaving in or near Rio de Janeiro. On the journey to Maranhão, women have to leave their babies because there is no food or water, and jaguars eat the babies. Awkhêê and Rop-kwỳj stay in the big house, and it is said that they are still alive today, but no one knows where they live. The Portuguese name for Awkhêê is Pedro Álvares Cabral.

Great fire myth

Told by Leandro

It was Giant Anteater who encouraged the ‘revolution’ of setting fire to the brush in the forest [*capim da chapada*]. Tapir as well. At nightfall, Giant Anteater sang and sang, and Tapir heard him, until he said to himself, ‘well, my friend, my *compadre* is singing a nice song. I am going to sing too.’ Then, Tapir began to sing at nightfall as well. Giant Anteater heard Tapir’s song, and angrily appealed to him to stop singing and be quiet in Giant Anteater’s place! Giant Anteater came right up to Tapir, and said, ‘be quiet my *compadre*! Do not sing anymore. This is my place; this forest is mine; it is not yours. Go hunt for another place in which to sing! I will not let you sing in this place!’ Tapir became quiet and left. Later, Tapir thought, ‘I will race that Giant Anteater and win, and then I will take the forest as well.’ He told this to Giant Anteater, who responded, ‘very well. If you pass me in the race, and make it to the lake first, I will leave my forest and my lake to you. If you do not pass me, then this remains my place.’

[The race began], and the two ran up and down hills – they raced up a hill, descended a valley, ascended another hill, descended another valley, ascended yet another hill, and descended yet another valley. Giant Anteater said, ‘it is the lake that we are going to pass by. If you pass me, wait for me at the lake, where I bathe. That is my lake. If you do not pass me, I will not let you drink or bathe in the lake.’ In the first part of the race, Tapir passed Giant Anteater, ascending [a hill] first. Giant Anteater ran behind him, behind, behind, and raced up [the hill] to surpass Tapir. To descend, Giant Anteater passed Tapir and arrived first in the valley. When Tapir came to the valley, Giant Anteater was already above him, passing him, and he made it to the lake first. Giant Anteater told Tapir, ‘hey,

are you seeing this? Well, go find yourself another place, where the river is [and] where you will stay. Here in this forest around this lake, I will not leave, and neither will you sing here.'

Afterward, Tapir left the area and encountered Deer. Deer greeted him, 'hello, friend!' Deer is Tapir's friend. 'My friend! Giant Anteater won your race; he beat you. Only I will race him too!' Then, Deer arrived at Giant Anteater's place. 'You won the race with Tapir, but let us race and I will beat you,' Deer told him. 'You may beat me, because I already raced and I am slow. It seems that you will beat me. Let's go!' Giant Anteater responded. They went to the same racing place, and they ran. Giant Anteater won his race with Deer as well. Deer ran behind him, [and] when he arrived, [Giant Anteater] dismissed him. Having lost his race, Deer went to find Peccary. Peccary is Giant Anteater's friend. 'My friend beat you in the race?' Peccary asked Deer. 'Yes, he passed me,' Deer responded. 'Well, I will race him too,' Peccary said. He arrived at Giant Anteater's place, who had beaten both Deer and Tapir. 'Here is the racing place. If you pass me and arrive at the lake first, wait for me, and I will hand over my lake and my forest that I am using. I guarantee it,' said Giant Anteater. 'I already ran two races; I am in pain – my legs, my arms, and I think you will beat me.' Thus, they raced. Peccary arrived behind Giant Anteater, and Giant Anteater said, 'I will not let you drink or bathe in my lake, or [be] in my forest. The forest is mine. You need to find another forest and another lake.' Peccary, however, grew very angry and slashed Giant Anteater's neck – he killed Giant Anteater and his grandson as well.

Giant Anteater's great-grandson and [other] grandson heard about this. 'Ah, Peccary killed our uncle, our old grandfather! Well, we will set fire to the forest. All those other

game animals are going to burn, and then they will pay attention to us! We will be masters of the forest and of the world!' The Giant Anteaters advised the other game animals of their plan. The animals grouped together – Deer, Giant Anteater, Tapir, Armadillo, all the animals – and called on Tiny Armadillo, who is a maraca singer. Tiny Armadillo began to sing the song that people sing for the orange fruit. He began singing until it was time to set fire to the forest. Two Giant Anteaters set fire [to the brush] on one side of all the animals. When the fire took off, Tiny Armadillo sang, 'Hô! Hô!'

In the end, all the animals were running, and the fire came very close to them. When Tiny Armadillo noticed, the fire had already come very close and was burning animals. Tiny Armadillo broke his maraca on the side of a hole, and entered the hole to hide himself, there underground, beneath the fire. [The fire] was burning, burning, and burning nearly everything! Giant Anteater rolled through the fire, rolling, rolling, rolling, and his hair was burning, burning until it stopped burning and he passed through alive. The smoke passed by, rolling through, and the fire calmed down and stopped. Giant Anteater raised his head and said, 'I will go see Tapir's face, to see if he passed through the hot fire like I did.' He saw Tapir on the riverbank, looked at his face, and Tapir was dead. Giant Anteater returned, saying, 'well, now there is no one who can talk like [the animals] talk, in our language.' Thereafter, animals changed their speech [their language], and we cannot understand them! The game animals, the birds – the whole world, cannot understand each other.

Origin of *Krě-re* birds myth

Told by Leandro

There are women – a single woman, and two married women. The husband of one of the women went to the garden with *inxê* [the woman's mother], because the mother became angry with her daughter. The mother went to the garden all by herself and spent the night there. The daughter's husband said to her, 'I am going after your mother to call on her, because she is sleeping by herself in the garden. I will go looking for your mother in the garden.' His wife said, 'you can go looking for her; she is sleeping there all by herself.' However, the husband was deceiving his wife – he went after her mother to make love to her! He arrived there [in the garden] to make love to her. 'I come here this afternoon to ask you to return today; I am afraid of you sleeping here by yourself.' The mother responded, 'no, I am not returning today. Let us sleep here tonight.' 'Okay, let us sleep here,' the man said. 'You lie over there, and I will lie close to you so that we do not sleep together,' [the mother said.] 'That is correct; we will sleep separately.' Then, the mother lay down over there. At nightfall, she was laying close to her daughter's husband.

The Turutuh-re bird began singing: '*turuh tuh, tuh, tuh!*' The mother responded, and her daughter's husband said, 'what is the bird saying?' 'I am ashamed of sleeping with you, but it is saying that we should get together and sleep together.' 'Then let us sleep together,' the man said. The bird sang another time, singing, '*tuh! Tuh!*' The man's mother-in-law asked him, 'what is it saying?' 'It is saying that we should sleep together.' Therefore, they slept together. Then, the bird sang once more: '*turuh tuh, tuh!*' 'What is it saying?' 'That we should grab each other!' [The man said]. He grabbed her once again, and began making love to her.

At daybreak, the man said, 'go ahead of me; I am going to hunt something for us to eat today.' The woman went ahead of him, and he hunted and killed a deer. When the mother arrived back home, her daughter asked about her husband, and the mother responded, 'your husband went looking for deer; he is hunting, and he slept away from me. I slept by myself.' She was deceiving her daughter. The daughter did not know the truth; she was deceived. The husband arrived with the deer, they ate it, and afterwards the husband and his mother-in-law began making love again [in the forest]. Meanwhile, the mother-in-law's husband had an eye infection. 'I am going hunting,' the father of the family said, but this was a deception, because he followed his wife and son-in-law, who were making love at the edge of the garden. All day, all the time. Prior to this, the son-in-law arrived home, and his wife saw him smile at his mother-in-law. 'But my husband is not ashamed; it seems that they are making love! I am going to tell my father,' the daughter said to herself. Then, she went to the garden, following her father, and told him, 'Father! Today Mother smiled at my husband, as if they had made love.' 'Could it be? Well, I will follow them and find out,' the father said. For many days, he had been cleaning the land to plant sweet potato. In the beginning, the Indians only grew sweet potato...the father took his arrows and went near the garden. When he arrived there, his son-in-law and his wife were there together, talking. The father entered near the side of the garden. 'Where is my wife; is she working?' he asked, walking slowly. He saw them together, and said, 'ah-ha! Now I know.' He placed an arrow in the middle of his bow, arming himself, but his foot broke a stick. His wife told her lover, 'watch out! My husband is here; his eye must have gotten better! Someone is here [walking around] breaking sticks.' The father broke more sticks, and made a noise, 'tchu!' With his arrow, he shot his son-in-law in the eye and left. His wife got up, crying,

and her husband shot another arrow at her, into her flesh, which killed her. He killed his wife and his son-in-law, and then he returned to the village.

Afterward, the father arrived back in the village and advised his daughters (the single one and two married ones), ‘women [*mẽcuprỳ*]! I killed my son-in-law and your mother as well; they were lovers. I am leaving now!’ ‘Which way?’ [The daughters asked]. ‘Anywhere in the world; I will be wandering.’ The three daughters responded, ‘no, Father, we will not leave you. We will all go together; we will accompany you.’ ‘Very well, but you cannot bring anything with you,’ the father said, and his daughters heard him. The two married daughters obeyed him, but the single one brought her *tucum* garment with her. ‘I will not leave my garment; I will take my *tucum* thread with me,’ she said. ‘Leave it; our father said not to bring anything!’ the other daughters told her. In the beginning, the *tucum* thread was the garment of the ancient women. They placed any type of leaf, such as of *pau de leite*, as the ancient garment [along with *tucum* threads]. ‘I will go with this *tucum* thread; I gathered it in the garden,’ the single daughter said. The father told them, ‘let us transform into yams, *Krẽrô -ti!*’ Then, he turned into yam [*Krẽrô*]. His two daughters said the same phrase and turned into yams as well. The one who brought her *tucum* thread, however, did not transform. She said, ‘*Krẽrô!*’ while sitting on the ground, but she did not transform into anything. Then, she got back up again.

[They travelled away from the village] far away, near the valley. The father said, ‘*Po Cahãj!*’ He began running and turned into a deer [*Po* = type of Cerrado deer], and he stayed there near the valley. His two daughters also turned into *Po Cahãj Cahàc* [deer]. They ran to catch up with their father, who had already transformed into a deer. However, the daughter who was carrying her *tucum* thread did not transform into anything. An

armadillo [Awxêt] arrived near them, and began catching fish on the riverbank. 'Wait here, I am going to transform,' the father said. This time, he transformed into a type of fish, Tep krĩ-ti. Then, he killed the armadillo, placed it in an earthen oven, covered it with sand, and left. The daughter with the *tucum* thread said, 'I will get my thread!' 'Leave your thread so that you can transform like we can!' Nevertheless, the single daughter did not respond to this request. Meanwhile, the father and his two daughters came back to the earthen oven, where the father said, 'I know that my meat is now cooked.' He opened the oven and distributed the meat.

Then, he whispered to the *buriti* [Crowa] tree, 'we are going to climb you to hide ourselves, [because] she [the single daughter] is nearby, and soon they will come here where we are!' He said, 'Crowa! Crowa!' The tree responded, and so they climbed the tree and stayed there, quietly. The single daughter [who had been following them] did not know how to transform. She spit, and her spit landed very close to Armadillo, who saw the spit and climbed to the top of the *buriti* tree. 'Unbelievable! How did you all climb up here?' [Armadillo asked]. It was very quiet at the top of the tree. They stripped off some *buriti* palm twine and descended from the tree. 'So near Awxêt; let us go now!' [The father and daughters said]. They bore away from the animal, climbing down the tree with the twine.

Next, they transformed into crabs. Then, the father told the *buriti* tree, 'now, we will turn into Krẽ-re birds. Those who cannot fly will stay here.' They gathered themselves together, sitting on a basin. 'We will leave that sister of yours who does not know how to fly. She never left behind her *tucum* thread. Now, we will enter in the nude and never become tired.' The father began transforming into a Krẽ-re bird, yelling, 'Krẽ! Krẽ! Let's go!' He

became feathered and stayed that way [as a bird]. The other daughters transformed and followed him, and they left.

Meanwhile, the single daughter arrived at Hawk's passage. The hawks did not have any women, only men. She arrived there, climbed a tree, and hid herself on a tree branch. Hàc Tyc-ti, the hawk chief, sent someone to collect water for cooking. He passed by the tree, balancing the gourd filled with water on his shoulder, on his way back home. Once again, the woman spit, '*chu! Chu!*' hitting the gourd on his shoulder, which fell to the ground and broke. When he arrived in his village, the other hawks asked, 'where is the gourd filled with water?' 'It broke!' 'Take the basket this time.' He took the basket, filled it with water, and placed it on his shoulder. When he walked past the tree, the woman spit and once again broke the basket. This time, he looked up and saw a beautiful woman wearing a *tucum* garment.

He returned to the village, and once again, they asked, 'where is the basket with the water?' 'It broke!' 'Then take a mortar to fill with water. You already broke the basket, but if you break this mortar, we will not give you any food.' The hawk cried and cried, and said, 'I will not talk about that beautiful woman who is dressed in a red *tucum* garment.' The chief responded in kind, 'you will show us this woman!' Then, he took them there, but the woman had climbed a different tree and no one saw her. 'You are lying, there is no woman there!' the chief said. 'You can hunt for her; you will see her.' One of the birds saw her: 'there she is!' Then, everyone saw her, and she came down from the tree. The king vulture took this woman, and everyone ripped apart her body, killing her. They distributed the meat, and the vulture distributed the tripe. When they trussed up the

meat of this woman, every man [the different types of birds] was given a woman [her body transformed into many women].

Next, the men organized themselves into a hunting party to hunt game for the women to eat. All the birds dispersed to go hunting. This woman's meat, which had transformed into a living woman, made a little house and sat down, waiting for her husband. When her husband arrived, she was very happy and content and she hugged him. What about the vulture? He does not have a woman, for he received the tripe, which was all tied up and hard. The vulture asked, 'where is our woman? The hawk received the woman's meat that transformed into women for them.' 'Your woman will arrive, [and she will be] very soft' [said the hawk]. Another day, when the vulture went hunting, the vulture-woman had already transformed and was sitting near her house. The vulture became happy, with his woman.

Myth of Cujuhtum-re, who discovered the *Pep Cahàc* and other festivals in the male initiation ritual complex

Told by Leandro

Long ago, there was a brave hawk who was grabbing people [in the village]. He grabbed a female and a male singer. Cujuhtum-re [or Cuhkõjatum-re] had two grandsons, who were canvassing [working] in the garden. Long ago, the Indian worked with fire – he only had fire, no machete, no axe, nothing. The white man still had not seen the 'wild' Indian at this time. They [the *měhĩn*] started a fire on a large stone, knocking it down and burning all of it, and they made a small garden in which they planted crops. The hawk kept grabbing and

taking male and female singers, and taking other women too. Once he grabbed them, the giant, valiant hawk took the people to his nest and ate them, throwing the bones. There were many bones, including skulls. Perhaps God sent Caxêt Prep-ti [a man] to take the Indians and move them to another village, for fear of the brave hawk. He took everyone! When the time came, everyone fled and built another village.

In the afternoon, Cujuhtum-re, his wife, and his grandsons returned from the garden to the original village. It was very sad; there were no more festivities in the village and everything was quiet and calm. Ahkre and Kenkutnã were Cujuhtum-re's grandsons. Cujuhtum-re told them, 'wait here, I will go look around the village. Perhaps another tribe came and already killed everyone.' He saw the face of one Indian, running from the village, but he did not see any other faces, for everyone had gone to another village. Arriving in the original village, Cujuhtum-re told his wife, 'wait here, I will go look around.' He went to the patio [ceremonial centre] where he saw the dust of Caxêt Prep-ti. He picked up a handful of the red dust and said, 'ah-ha! Caxêt Prep-ti took everyone to another place because of this hawk. Here we are, all alone, with the grandchildren. We cannot know to where everyone moved.'

The two grandchildren were still very young. Their uncle/grandfather, Cujuhtum-re, took them to the river because they wanted to bathe. The boys lay down in the sand on the riverbank, and one of them said, 'tell our grandfather, leave us here, we will go bathing.' 'Go ahead,' Cujuhtum-re said, 'afterward I will follow you, but do not delay because your grandmother is in the garden and will bring back sweet potatoes for us to eat.' Then, the grandchildren bathed and their grandfather arrived in the village and went inside his

house. Kenkutnã said, 'let's tell our grandfather to build a little house on top of the river and keep us here, so that we grow quickly.'

Back in the house, the grandmother asked her husband, 'where are our grandchildren?' 'They are on the riverbank,' Cujuhtum-re said. 'Perhaps another tribe came to kill them both, because they are separated.' Cujuhtum-re went back to the riverbank, and Kenkutnã told him, 'my grandfather, keep us here. Build a well-made house on top of this river, and we will grow very quickly.' Cujuhtum-re responded, 'well, do not delay; I am going to liven things up with a log race.' He took a log and raced around the village. He ran and ran, and ended in the patio. Then, he told his wife, 'wife! Take care, because today, we are going to keep our grandchildren in internment.' This is how the boy's initiation festival and the Pep Cahàc started; it was Cujuhtum-re who discovered it and showed it to the Indians long ago. Soon his wife responded, and went to fill her basket with sweet potato heads to save for later. When the two grandsons arrived in the patio, Cujuhtum-re took Kenkutnã, placed him on the ground, turned him around, and their grandmother became their *pĩnxwỳj* [*comadre*, or ritualized 'godmother']. They taught their grandchildren directly. Then, Cujuhtum-re performed the *Hô* – '*Hôô, hôô, hôô*.' He grabbed Ahkre and did the same things to him as well, and then they became interred.

In the afternoon, Cujuhtum-re imprisoned them, and then he took a maraca and sang how we sing for this festival, to enliven [the people]. In the morning, the boys were painted with *pau de leite* and they made a small house on top of the river in which to keep the grandsons. Thus, the two grandsons were interred on top of the river. You know that the river's water is cold, and things soon grow quickly [near the river]. Everyone [who had fled the village] left the crops growing in their gardens – many sweet potatoes, sweet manioc,

buriti, and the grandsons ate this food to grow quickly. They became big and loved. On another day, after they had been interred for a while, the Mě Hap̀yn Catê [the official adult male ‘imprisoner’ of the boys] went to see if the faces of the boys – the Mamkjêhti [group of boys with ‘higher’ ritual status] – were fat or thin, as they do today. The Mě Hap̀yn Catê [who was Cujuhtum-re] took the two boys out of the house, and told the grandmother. Afterward, on another day, the boys were taken out of the house on the river. Cujuhtum-re went to cut down a *buriti* log and submerge it in the water, as we do today. He found one and cut it down – it was heavy, very heavy, and he smoothed it down. By this time, the grandsons had grown very big; they were already made into men – they were heavy and tall. They ran with this heavy log to the village, and threw it down there. Afterward, in the garden, the internment ended. They painted themselves with *pau de leite*, sang in the village street, and then the internment was over.

Long ago, the partridge was huge! He sang, ‘*psiu! Psiu! Psiu!*’ They heard the partridge singing. Cujuhtum-re grabbed a log. ‘What is it that is flying up above?’ one of the grandsons asked. ‘My grandson,’ Cujuhtum-re said, ‘it is the partridge; it is huge.’ ‘I will go see,’ the grandson said. ‘You will not go far over there; he will fly away, high in the sky.’ The partridge is called Pekehti in our language. Kenkutnã sent his brother Ahkre to kill the bird. ‘Go on; go where the partridge is singing. I will wait for you underneath.’ Kenkutnã approached the bird, the partridge saw him and descended nearby, but Kenkutnã killed the partridge and took the body. He went back home and placed the body near the house. Cujuhtum-re asked, ‘did you see the partridge?’ ‘I saw him and I killed him,’ Kenkutnã responded. ‘Let us go collect the body to roast it in the earthen oven and eat it; it is very big.’ Cujuhtum-re said, ‘I cannot go; I am old and no longer have much strength. My grandchildren, I cannot endure it.’ ‘Brother Ahkre, go collect the body for our grandfather.

Remove a leg, so we can roast and eat it,' Kenkutnã said. Ahkre searched for the partridge, brought it back, and placed it in front of his grandfather. They removed the leg, pulling it off, and it turned into a hawk. They removed another leg, and it turned into a little bird! They roasted everything, but could not eat it all.

Another day, one of the brothers told his grandfather, 'we are going to build a little house near the brave hawk's nest, because that is the hawk that grabbed my mother and father, and I want to kill it.' 'Well you cannot kill it though, for the hawk is fast,' Cujuhtum-re said. The brothers wagered they could kill the hawk, however, so they built a little shelter underneath the brave hawk's nest. Then, Kenkutnã and Ahkre went inside the shelter, and Kenkutnã yelled out, '*ah! Ah!*' The hawk saw him and came to grab him, circling the small house until he grew tired. Ahkre emerged from far away, and then the hawk went to grab him, but he fell very close to the doorway of the house and Kenkutnã grabbed Ahkre's arm and expelled him [from the hawk's grasp]. 'No,' Kenkutnã said, 'the hawk is not going to grab you! I will make some dust [to distract the hawk]. Kenkutnã yelled and yelled for the hawk. Shortly after, the hawk became tired and landed on the ground, breathing heavily through its beak. Then, Ahkre killed the brave hawk, and took the body to his grandfather. Cujuhtum-re ripped off a leg, and it turned into so many little birds of every type – hawk, finch, gull, everything.

There is another 'hawk,' whose name I do not know in Portuguese – in our language it is Cukõj. He lived far away, and one of the grandsons told Cujuhtum-re, 'grandfather, I am going to build a house near the Cukõj.' Cujuhtum-re said, 'no; that bird is faster than the hawk; you will not do it.' 'We are going to do it; we are going to kill him,' the grandsons responded. They went to build another small shelter, and as they were finishing it, a stick

broke and hit Cujuhtum-re in the eye. He went back home and told his wife, 'wife, I do not know if our grandsons are going to escape or if they are going to die, because a pointed stick broke and hit me in the eye. Whatever will happen, we will see.' In the morning, they saw the Cukõj. Kenkutnã yelled and went to cut its neck, and Ahkre went far away from the shelter, yelling. Nevertheless, the Cukõj cut up everything and Ahkre died. Kenkutnã was very sad for his brother, and said, 'Ahkre, I will place you at rest far away.' He placed Ahkre's head on the ground, and it turned into an *aracuã* [type of native bird]. 'I will go now; I will not return to our old grandfather, because you died. I will search for the Indian's new village,' Kenkutnã said. Cujuhtum-re yelled, 'let us go to Cukõj's house, he who cut off Ahkre's head!' Kenkutnã placed Ahkre's body on the ground, it turned into earth, and the head turned into an *aracuã* once again.

The grandparents could not see Kenkutnã; they only saw his face as he entered the *chapada*. His grandmother said, 'let us go anywhere; it is certain that he is traveling to Rio de Janeiro...let us gather together on the hill.' The wife went to the hill first and waited for her husband. She had already transformed into a *cupût* [type of monkey from Pará state]. She reprimanded her husband, saying, 'Cujuhtum-re! You deceived me; I am leaving now; I will not wait for you.' Cujuhtum-re arrived and said the same thing. Then, they both transformed into *cupût*.

Meanwhile, Kenkutnã also travelled and travelled. He travelled through the *chapada* and saw *ema* birds setting fire to the brush [*capim da chapada*; Ahtu in Canela]. 'There is a village here; there is smoke and fire! I will go there,' Kenkutnã said. He arrived to the village smiling, bringing a bit of fire in his mouth. Someone from the village called out, 'Hĩ hô, hĩ hô!' Then, Kenkutnã responded, 'Hĩ hô, hĩ hô!' The man from the village showed

another place to Kenkutnã where he could catch deer and roast it in an earthen oven. They came to the Indians' village, and Kenkutnã saw it – they had trees and were growing many things. 'Can this be the Indians' village? I will stay hidden,' Kenkutnã said. He went bathing alone, and soon enough he saw her: 'there is my betrothed, showing her body to me!' After dunking his head in the stream, Kenkutnã got out of the water. His betrothed was afraid: 'you are going to kill me!' [She said]. 'No, I am not going to kill you; do you not know me from when I was little?' 'What is your name?' the woman asked. 'Kenkutnã.' 'Ah, Kenkutnã, you are my betrothed! Well then, take that cooked meat home. At nightfall, I will come looking for you. Do not be afraid because you are my husband,' the woman said. Kenkutnã took the deer meat and roasted it, and at nightfall, he went looking for his wife. He lay down next to her [in her house]. The young women of the village were singing in the street and arrived in front of the house. However, the woman told her mother, 'when they come to get me, tell them "she is ill and resting; do not bother her."' So many women came to the house singing, and the mother told them, 'no, no one can enter; she is ill.' Yet the woman's *comadre* wanted to see her, and as she entered the house she saw Kenkutnã with his large body, long hair, huge arms, and she fled! Arriving back at the Wuhtý [ceremonial girl's] house, she told them, 'hey, I saw my *comadre* – she is not ill! Her husband is there, and he is big!' The news of Kenkutnã spread throughout the village, and by morning, everyone came to see him. Kenkutnã became angry that they thought he was from a different tribe. People were saying they wanted to kill him, and Kenkutnã told the community, 'I am not from another tribe! My name is Kenkutnã, and you moved away! I stayed back with my grandfather and grandmother, and my brother Ahkre, but Cukõj cut off his head and killed him, and he turned into earth. No, I am not from another tribe.' Then, everyone accepted him into the village. Kenkutnã was a good runner, he hunted

deer by himself, and he discovered the Pep Cahàc [and other male initiation ritual periods] that his grandfather taught him. They made groups of boys near the water and discovered the Pep Cahàc.

Myth of Kruwapure, who discovered many ritual songs and the Wuh-tỳ girls' ceremonial role

Told by Leandro

When Kruwapure was a boy, he pulled out some sweet potato from the ground and ate it, but it was badly cooked. He suffered from a stomach-ache and a fever, but his illness subsided and he became better. Once he felt better, Kruwapure began eating earth [or sand] as well, which gave him worms in his stomach, and he became ill once again. At bathing time, Kruwapure told his grandfather, 'take me to the stream to bathe.' He only bathed a little, and once he came out of the stream, Kruwapure said, 'grandfather, go ahead of me [back home]. In a short while I will meet you back there.' Then, as Kruwapure lay down in the sand and rolled around, Alligator popped his head out of the water and called to the boy, 'Kruwapure! My *compadre*, *hapĩn*! I want to take you with me to my village. There is a village in another land, underneath the stream.' Kruwapure responded, 'no, I will not go with you, for you will kill me! You will swallow and eat me.' 'No, I am not going to swallow you! You are yellow; you are ill. I will take you there and send for a healer to make you feel well. And I will discover another festival for you, for your community to have a festival,' Alligator said.

Kruwapure grabbed onto Alligator's back and they dove [into the water], and then they arrived in the alligator village. It was like the Indian's village – they had a patio [ceremonial centre], and there were many alligators seated there. The Alligator Chief called on Kruwapure to present himself, and asked him, 'are you ill?' 'Yes, I am ill, I have stomach pains,' Kruwapure responded. Then, the Alligator Chief called on the fish that is known as Karà. 'I order you to cure him,' Alligator Chief told Karà. The fish opened Kruwapure's stomach, all the earth he had eaten fell out of it, and then he closed it again. Karà cured him! Next, the alligators gave Kruwapure sweet potato, squash, peanut, maize, and sweet manioc – they gave him all types of vegetables, and fruits as well. In addition, the alligators performed the Wuh-tỳ, or 'Queen' [girls' ceremonial role and ritual activities], for Kruwapure to learn and teach to his own village. It was Alligator who discovered the Wuh-tỳ festival. Kruwapure learned about it, and then he emerged from the stream.

Once he emerged, Kruwapure arrived back in his village. His grandfather told him, 'you were very delayed!' 'I was delayed, but I have returned,' Kruwapure told him. 'I waited so many hours for you; I thought that some animal had eaten you! Perhaps a jaguar came to swallow you,' the grandfather said. 'No, I am alive,' Kruwapure said. He was thinking, and he told his grandfather to dig a large hole in the ground. Then, Kruwapure gathered up all his vegetables [from the alligators] and hid them in this hole. He set up a line [or thread] toward the forest, close to the village. At daybreak, a hunter went hunting in the forest, and saw the tracks of a tapir – they were fresh. Yelling, he called for everyone to gather on a hunting party to hunt this tapir. They decided to kill it near the garden that belonged to Kruwapure's brother-in-law. Thus, Kruwapure told his brother-in-law, 'let us go and spend the day in the garden! Afterward we will return to the village.' 'Yes, let us go,' [his

brother-in-law said]. 'The community is going after the tapir,' Kruwapure told him. 'Let us go to the garden, for they will kill it there, you will see.'

They went to the garden. Kruwapure's brother-in-law did not know that Kruwapure was a 'master' of vegetables and of all game animals. Kruwapure went to the garden with his grandfather, brother, and brother-in-law. The community had already frightened the tapir. Next, they came running and yelling after it, and they killed it near the brother-in-law's garden. Kruwapure told his grandfather, 'I am going over there to ask the community to give me the tapir's liver, for you to roast in the earthen oven and for me to eat.' His grandfather responded, 'no you are not! I believe that your uncle is going to oversee [the distribution] of this tapir and he will not let you have the liver. I know that your uncle is going to distribute the meat to everyone.' Kruwapure's brother-in-law told him, 'stay here; I will go there myself to receive a piece of tapir meat.' The brother-in-law went, but Kruwapure followed him. There were many people, and Kruwapure arrived and sat down, observing. He was still slightly yellowish, since he had already been ill but had recovered. Kruwapure's *compadre* saw him and said, 'my yellow *compadre* has arrived! Which type of meat would you like?' 'The liver,' Kruwapure responded. His uncle, who was cutting off the tapir meat, heard Kruwapure and said, 'this boy is going to receive the tapir liver? I will not give it to him. After you have grown old, you can eat the liver, but you are not yet old so you cannot eat it! Sit over there, you will receive some meat.' Kruwapure became quiet, with shame.

After the meat had been distributed to the entire community, and everyone was taking their share back to the village, Kruwapure told his brother-in-law, 'let us go already. The community has already left, so let us go to the garden.' They walked a short while, until

Kruwapure stopped short. 'I forgot my knife [or other tool] back there where they distributed the meat,' he said. 'I will go looking for it,' his brother-in-law said. 'No, I will go myself,' Kruwapure told him. He returned to where the tapir was distributed, and cast a spell on the place. Returning to his brother-in-law, Kruwapure said, 'I think someone else must have taken it! I did not see anything there.' He was deceiving his brother-in-law, for he had really put a spell on the place of the tapir. Next, he hid all the vegetables! In the hole that he had sent his grandfather to dig, he hid sweet potato, sweet manioc roots, squash – all the vegetables [of the village].

The community had arrived back in the village, and the women went looking for sweet manioc in their gardens, to eat with the tapir meat. When they pulled up the sweet manioc, however, there were no roots; nothing was there! Kruwapure had hidden all the vegetables to punish everyone. Everyone gathered together. The chief asked, 'do you always find sweet manioc in your garden?' 'Yes, there is sweet manioc there, but when my wife dug them up there were no more roots!' Then, they made a decision. 'Tomorrow we are all leaving this village,' [the chief said]. The next day, everyone left, but Kruwapure did not want to accompany them. He told his brother-in-law, 'we are not going to take it. Let them leave, but we will stay, suffering as well.' His brother-in-law also had not found any sweet potatoes. Kruwapure hid all the sweet potatoes, sweet manioc, all the vegetables. The brother-in-law told his wife, Kruwapure's sister, 'I am going hunting. I will kill a deer, [since] we do not have a mixture [of food].' He went hunting, killed a deer, and Kruwapure saw him from afar. Kruwapure told his sister, 'make a large fire to roast sweet potatoes.' His sister became diffident, 'hmm! I do not know where he is going to find sweet potatoes for me to roast?'

Then, Kruwapure told his grandfather, 'open up this hole to remove sweet potatoes for my sister to roast, because my brother-in-law is already coming back with a deer. Soon he will arrive.' His grandfather unearthed a mountain of sweet potatoes from the hole, and he took a morsel. Kruwapure's sister arrived and placed the sweet potatoes in water. Then, she put them in the earthen oven. They ate and became stronger. 'I almost died from hunger, and my brother is hiding vegetables so that everyone suffers!' the sister said. Meanwhile, the community travelled and arranged themselves next to a different stream. They hunted many things but they did not find anything. Everyone was suffering from hunger away from the village. Back in the village, Kruwapure's brother-in-law arrived with the deer and smelled the smell of cooked sweet potatoes. He thought, 'but where did my wife find potatoes?' as he placed the deer in front of her. He sat down and ate silently, without asking his wife where they found the sweet potatoes. Kruwapure told his grandfather, 'dig up another hole to remove the sweet manioc, so that we can make a *beribu* [manioc and meat pie] for us to eat.' His grandfather dug up all the thick sweet manioc tubers, and they made *beribu* with the deer meat. At nightfall, Kruwapure told his brother-in-law, 'we will go after the community. From there, you will advise everyone to go find and observe their gardens. Their gardens will have already gotten better; the gardens will not delay [their produce] anymore. They will have vegetables. The vegetable gardens ceased, but [now] they have increased. They will see. You can advise everyone over there to observe their gardens. Today we will sleep nearby [the encampment], and from there you will tell them, and then we will return to the village.'

Later, Kruwapure told his brother-in-law, 'I forgot my little bow, over there near the sweet potatoes, below the earthen oven.' 'Really?' [His brother-in-law asked]. Then, his brother-

in-law went to the garden and observed all the stored sweet potatoes – there were so many! He ripped off a morsel of sweet potato, made a hole, placed the sweet potato head on his body, and left. When he arrived at the Cabiceiro do Brejo passage, once again he told his sister, ‘make a large fire and wait for my brother-in-law, your husband, to come back carrying the produce – will it be sweet potato or sweet manioc?’ The brother-in-law came back with all the sweet potatoes, and they ate them. In the morning, the brother-in-law advised the Indians in their new place. He arrived there with a basket full of sweet potatoes – and everyone was in a bad way, very skinny – and they ate them. The brother-in-law said, ‘Kruwapure hid these vegetables from you, because you gave the tapir liver to someone else. This is why he became angry and hid the vegetables, all your vegetables. Now, once again, the vegetables are in the gardens – you can go find sweet potatoes in your gardens. Now the new vegetables, if you planted them, are larger; there is much [produce] now!’

They went to their gardens, and everyone became very happy! They sent the women to the gardens. The sweet manioc had been very small, but now [the tubers] were thick and huge! In addition, there was much maize, watermelon, squash, and peanut. The people had not planted these things in their gardens, however – Kruwapure himself made the vegetables for everyone. Everyone became incredibly happy; there were so many vegetables there – the fruits of watermelon, sweet potato, sweet manioc! They made *beribu* from the sweet manioc and became strong. They went back to the village, and sent one man to kill a baby tapir; it was still new and small. They called over Kruwapure, for he knew how to sing! In the early days, the Indian did not know how to sing; he knew none of the ritual songs [*cânticos*]. Only Kruwapure discovered all the ritual songs for the Indian to sing. They called over to Kruwapure, ‘Kruwapure, have this baby tapir, and now begin

singing!' He discovered so many songs...this is why the Indian did not know how to sing in the past. Only Kruwapure taught everyone, like a professor.

Myth of Puret-re, who discovered the fish festival

Told by Leandro

The Indians [*měhĩn*] had finished planting seeds in their gardens. Everyone had planted the seeds of peanut, sweet manioc, sweet potato, and fava bean [*Pànkryt*]. In that time, they did not yet know about or have rice or common bean [*fejão*]; they only knew about fava bean, sweet manioc, peanut – only these types of vegetables. Maize as well, for in this time they always cultivated white maize. The chief of the Indians' community asked every father of each family if they had planted all their seeds in their gardens, [and] if everyone was ready. Everyone said that they were ready; there was nothing left that had not yet been planted. Then, the chief organized a journey away from the village, to establish a village [temporary encampment] for hunting and eating the hunted game. Thus, everyone travelled with their families, including children and women. They arrived at the riverbank – it was a long and large river. They cut down dry *buriti* palms [to make a raft] and crossed the river. Then, they found a suitable place and organized themselves to build a small village near another stream. They hunted in the forest for food, and lived that way.

A month passed, and the community chose two boys to return to the village and observe the gardens, to see if they were ready to harvest. The *Kàà-mã-?khra* [the 'Red Regeneration Season' moiety (Crocker 1990:197; n.d.a)] sent the boys. When the boys

arrived near the village and saw the gardens, they observed how the sweet potato, maize, and all the vegetables were already mature. The boys returned to the encampment, but they refused to say anything. 'No, the vegetables are still green and unripe; it is not yet time to harvest,' they said. Next, the A?tùk-mã-?khra [the 'Black Regeneration Season' moiety (Crocker 1990:197; n.d.a)] chose two different boys, Puret-re and his friend. They arrived at the riverbank. There were many groves of dry *buriti* palms, and they harvested two of them [to make two rafts]. Puret-re sat on his raft, and his friend sat on his raft made of *buriti*. They started paddling, crossing the river. When they were in the middle of the river, a huge anaconda lifted its large head from the water for an instant, and then immediately hid its head underwater. Puret-re told his friend, 'hey, my friend, Anaconda saw us! I am crossing by Anaconda. If it grabs me, go back to the encampment; do not go on to the village.' Shortly after, Anaconda grabbed Puret-re and dove underwater. His friend came back, crossing the river and looking into the water, crying with sadness for his friend. Puret-re's horn emerged from the river, then his *tucum* thread, and then his bow and arrows.

Anaconda swallowed Puret-re. It was an enormous anaconda! It swallowed him without killing him. Puret-re was still breathing in Anaconda's belly. The red *piabinha* [type of small fish] heard the sounds of Puret-re, and entered Anaconda's mouth to see Puret-re still alive and breathing! Quickly departing, the *piabinha* returned to the fish village. The fish chief, who is called Tep Tyc-ti ['Large Black Fish'], was seated, and asked the *piabinha*: 'what happened that frightened you, so that you came running back here?' 'Anaconda swallowed our friend; he is in its belly! I saw him, and the man is still breathing,' the fish replied. Then, the chief sent for all the fish to gather, and ordered the *pacu* [general name for fish from *Serrasalminae* subfamily] to enter Anaconda's mouth. The *pacu* fish circled

around inside the mouth, but he did not emerge again. Next, the fish chief sent the *pião* fish into Anaconda's belly, and he too circled around nearby Puret-re, but did not emerge. Finally, Tep Tyc-ti sent Cutap-ti [another fish] – as it is called in our language – into Anaconda's mouth. Cutap-ti removed Puret-re from Anaconda and took him to the fish village. Puret-re was still breathing slowly; he had almost died. They tried talking to him, but he did not speak at all.

The fish chief sent for Karà fish – he is a healer and a master. Karà healed Puret-re, and the boy quickly improved, waking up and talking. Tep Tyc-ti asked him, 'do you have some objects?' 'I do – I have a horn, a bow, and a *tucum* thread,' Puret-re responded. Then, the fish chief sent the *pacu* fish to go after these objects, but he could not reach them. The *pião* fish was also sent, and but could not reach them. Finally, the fish chief sent Cutap-ti, who is a skilled runner, and he reached the bow and arrows, as well as the *tucum* thread and the horn. He returned to the village with the objects.

After some time, Puret-re became accustomed to living with the fish, and the chief decided for Puret-re: 'look, do not bother these new fish; if you do, you will have to return [to your village] and we will not perform the festival for you to learn and send you back to your village for you to perform our festival. You will discover the fish festival.' Then, the fish performed the fish festival. The chief called on Puret-re to come to his house, and he ordered the boy to sing the fish ritual songs [*cânticos*]. Puret-re sang everything, for he had learned the fish's ritual songs. After the festival ended, Tep Tyc-ti sent another Cutap-ti fish to listen to Puret-re's mother. 'If his mother does not cry, we will not send her son back. He will stay here,' the fish chief said. Cutap-ti went to observe in the stream nearby the village, and he waited there listening. Eventually, he heard Puret-re's mother crying,

'my son is dead!' 'Ah-ha, Puret-re's mother *is* crying!' Cutap-ti thought. The test was complete. The fish returned to his village and told the fish chief that Puret-re's mother was indeed crying, so the chief sent Puret-re back to his own village.

Meanwhile, the women went searching for Puret-re's body. At seven o'clock in the morning, Puret-re appeared, singing! The fish sent Puret-re away, and here he came singing the fish ritual songs. The women heard him singing the ritual songs, and they heard his particular voice. One of them who recognized his voice said, 'oh, that is Puret-re who is singing nearby; it is his voice! It's really him!' 'Is it his soul [*karō*] or him alive?' [Another woman asked]. 'I do not know,' the first woman replied. 'Let us wait; if it is his soul that is coming near us, we will be afraid. But if it is him alive, we will not be afraid.' Puret-re came closer, singing another ritual song. The women heard him, and then he arrived in front of the group. The oldest woman asked him, 'are you a soul or are you living?' Puret-re responded, 'no, Anaconda swallowed me, but I am alive! The fish – I come singing this ritual song, which is the fish ritual song. They have a festival that they showed to me, and I learned from them. They sent me away, and I come here, singing in our village, to discover the fish festival.'

Then, the group sent two of the younger women to tell Puret-re's mother to stop crying, for her son had returned. 'We will go behind them; they can run and arrive there first to tell his mother to cry no more, because Puret-re returned alive!' The two girls ran back to the village. They heard his mother crying, 'my son is dead!' 'Stop crying,' they told her, 'your son came back; we know it over there [by the riverbank]. The other women are bringing him here, and in a short while, he will arrive. Stop crying, cry no more!' His mother stopped crying and waited. As soon as she quieted, Puret-re arrived at his mother's house,

and she received him in peace, having missed him so much. Everyone saw that Puret-re returned. 'Puret-re escaped the Anaconda's mouth! Anaconda swallowed him, but the fish helped him! It is not his soul; he is alive!' In the afternoon, they called Puret-re to the patio [ceremonial centre], and he told them everything about the fish festival that he had discovered. His friend told Puret-re to perform the festival soon, because everyone wanted to see it. However, Puret-re responded, 'no, not now! Do not bother me. If you perform the festival soon, after you are finished I will die! Wait at least two or three years, for much time to pass to accustom you [to the festival], and so that I do not die.' The community did not respond, and they performed the fish festival anyway. After the festival was completed, Puret-re entered his house, lay down, and shortly thereafter, he died! Puret-re died only because he discovered the fish festival. He discovered the festival and every ritual song of Tep – the ritual songs of every male ritual group for the fish festival.

Myth of Yah-wuh, the great shaman

Version 1 – told by Leandro

Yah-wuh had a headache, and he fell on top of the fire and burned his leg [or foot]. He suffered from his injury. To take care of him, his father did not want to feed him heavy meats to see if he would become a great healer. Yah-wuh was undergoing a strict restrictive period [*resguardo*] – his father only gave him sweet potatoes roasted in an earthen oven for him to eat. A soul [*karō*] saw Yah-wuh – it was his grandfather [or uncle's] soul, who was named Katyc Kryi-re. His grandfather had already died, but his soul remained. The grandfather's soul told his wife's soul, 'our grandson [or nephew] is

suffering!’ His wife’s soul responded, ‘yes, our grandson is suffering; it is not someone from another tribe.’ ‘Well, I am going to see him,’ the soul of Yah-wuh’s grandfather said, and the soul transformed into a tiny hummingbird and flew to the village. The soul saw Yah-wuh crying and suffering, and as a hummingbird, it entered the house, coming close to Yah-wuh.

Then, the hummingbird transformed back into the grandfather’s soul, and asked, ‘who are you? Tell me your name.’ Yah-wuh responded, ‘no! You tell me your name first, and then I will tell you mine.’ ‘Well, I was once alive, and I did not go looking for *buriti* trees near the stream, and a woman came after me, looking for me. “Who is not with us?” she asked, and it was Katyc Kryi-re who had not yet arrived. My name is this, Katyc Kryi-re. My [male ritual plaza] group calls me, and asks me who is missing to look for logs? My friend tells me that Yah-wuh is missing! It is you who is suffering! What happened to your leg?’ ‘The fire burned my leg,’ Yah-wuh said. ‘Wait, I am going to retrieve my wife, your grandmother, for her to see.’ The grandfather’s soul told his wife’s soul, ‘it is our grandson who is suffering; he burned his leg in the fire. Let us cure him!’ Then, the two souls transformed into two hummingbirds. The grandfather’s soul asked, ‘my grandson, are you still in pain?’ ‘Yes, I am,’ Yah-wuh responded. The soul had brought medicine, a forest leaf, and he placed the leaf on Yah-wuh’s leg. The wound healed – his grandfather’s soul cured him. Next, the soul arranged to meet with Yah-wuh: ‘early tomorrow morning, you will go to the stream, and we will wait for you there. There you will see another thing, another [type of] people. You will see all the people, and we will have a meeting by the stream.’ ‘Yes, I will go,’ Yah-wuh said. The grandfather’s soul asked his wife’s soul, ‘what are we going to transform into near the stream?’ ‘The *rolinha* bird [*rolinha-roxa*],’ she said. They transformed into *rolinha* birds and flew away.

There was another boy who was shooting arrows from the patio [ceremonial centre], and he saw two *rolinha* birds: 'there are two *rolinha* birds leaving that big house!' he said, but no one responded to him. It became calm, and in the afternoon Yah-wuh's father arrived with the roasted sweet potatoes. Yah-wuh was only eating sweet potato, all day every day, never meat or anything else. Yah-wuh ate the sweet potatoes, and told his father, 'tomorrow you will go to the garden and roast sweet potatoes. Do not return early, and when you do come back, come in the afternoon.' 'I cannot delay, because there are women who like you, yet you are undergoing the restrictive period! I am afraid that a woman will break your restrictions,' his father said. 'No, they will not come here,' Yah-wuh told him. In the morning, his father left early.

Meanwhile, Yah-wuh went to the stream, but one of his sisters saw him and said, 'Yah-wuh, come here! I will collect water for you to bathe here at home; you are still wounded, and you will feel worse if you go!' 'No, I will not stay here; I will go to the stream to bathe myself,' Yah-wuh told her. 'Very well, but be very careful with your wounded leg.' Yah-wuh came to the stream, and his grandfather's soul spat and threw a stick at him [to get his attention]. Yah-wuh arrived in front of two *mẽkarõn* [souls] that came down from the tree and went in front of him. They spoke to the community [of souls] there. There were so many 'people' – all were *mẽkarõn*, souls of people! The chief of the souls had not yet arrived. 'Let us wait for our chief to arrive; you will see,' they said. The grandfather's soul said, 'my grandson's father is already looking for Yah-wuh, and if he finds him, he cannot take advantage of Yah-wuh to make him a master *kay* [shaman]!' Next, the grandfather's soul placed something in front of Yah-wuh that made him fall, and then the soul cured Yah-wuh once again. After this second curing, the grandfather's soul placed a spell in Yah-wuh's hands. 'You are going to cast a spell on me, to see if you are a skilled shaman.' The

grandfather's soul remained in front of Yah-wuh, and Yah-wuh cast a spell that made the soul fall to the ground. Yah-wuh cured the soul, and then he left. He was already very good! His grandmother's soul told him, 'grandson, heal my belly! I want you to heal me when the baby leaves my belly, and I want it to leave now! Heal me.' Then, Yah-wuh healed her.

Yah-wuh's friend, meanwhile, was laying down with the community in the centre. The community was arranging a hunting trip to kill some game animals and give them to Yah-wuh for his father to eat. They were talking, and Yah-wuh's friend called to him, 'come here my friend, I want to tell you to see something good and different!' Then, his friend presented Yah-wuh with a woman. However, Yah-wuh's father did not allow a woman to enter [the house]. When Yah-wuh saw this girl, his father found him there and sent him away. Yah-wuh's friend called to him, 'go see her in the forest!' Yah-wuh's woman was making love [in the forest], but he was not allowed to become angry with her. 'You will not sleep with her anymore, because now you are different.' Yah-wuh returned to the soul village. There were all types of souls of 'people,' and they dispersed. The [living] community gathered and said, 'let's go hunting and kill some game animals!' 'Only I will hunt the animals,' Yah-wuh said. Shortly after, a baby deer, agouti, and many birds arrived. They did many things, and they talked. Yah-wuh did not kill anything, and he entered the forest. The community ordered Yah-wuh to collect some game, and so he shot a parrot, an agouti, and a baby deer. The rest of the animals he left alone. The souls had transformed into all the game animals – deer, armadillo, hawk, and they left. Next, Yah-wuh came to the stream, and a tiny toad spoke to him: '*compadre*, here I am! I would like to see you!' Yah-wuh presented himself for the tiny toad, and he went swimming near the soft *buriti* palms.

Afterward, Yah-wuh arrived in the village with the agouti, baby deer, and parrot hanging [from a stick]. Before noon, his father came back to the village as well. He saw Yah-wuh's tracks around the house, and protested, 'woman, if you are going to break my son's restrictions, I will catch you!' However, he did not see anyone. 'Father, I went bathing in the stream. You saw my tracks,' Yah-wuh said. 'Ah yes, that could be. Let us eat the sweet potatoes now.' Yah-wuh told his father, 'I will not touch the sweet potatoes, for they will dirty my hands. You are going to plant and peel them.' His father became very happy. 'Ah-ha!' he said, laughing. 'This is what I wanted for you! Later I will eat *paca* meat, because your restrictive period has ended; your leg wound has healed. I am very happy.' He gave Yah-wuh some peeled sweet potato, and he ate a little bit. 'I do not want to eat any more,' Yah-wuh said. 'There is a [male] group that killed an agouti, a baby deer, and a parrot, and they are coming here for you to eat the meat. I am not going to eat it.' 'I will eat all the meat,' his father said. He did not want to share the meat with his other son who was in the garden harvesting sweet potatoes.

During the night, Yah-wuh's father slept heavily. Another soul transformed into a young woman, and at midnight, it placed its hand on Yah-wuh's stomach, waking him. Yah-wuh saw the different young woman who was painted. 'I come with your woman; she is waiting for you outside of the house.' Yah-wuh said, 'let us go there, to the forest, and I will catch a deer [*veado-mateiro*] for you to eat.' 'I will accompany you,' said the soul transformed as a young woman. They came to the deer's place, and shortly after the deer arrived. They almost did not catch it; it escaped, but Yah-wuh's woman caught it. Yah-wuh killed the deer, left it in the garden, and went back home. He entered his house, and his father was still sleeping.

Yah-wuh woke up his father, 'wake up! Light the fire! You slept too long!' 'It is because I was clearing the garden to plant sweet potato. I slept a long time,' his father said, and he lit the fire. Yah-wuh told his father, 'tomorrow you will receive the deer that is in the garden, and you will give a piece of it to your son.' 'I will not give away the meat, because I am clearing the garden for the sweet potatoes to grow in abundance, and it is *me* who suffers! I will not give it away,' his father said, but it was just talk. In the morning, his father went to the garden, and made an earthen oven to cook the deer meat. Cutting it into pieces, he came to the garden where his son and grandson were. 'They killed a deer for me to cut up. Your brother ordered me to tell you to eat *beribu* made of *piabinha* fish,' the father said [deceiving his son]. Yah-wuh's brother [or brother-in-law] got up. 'No, *piabinha* fish has so many bones. I will kill a *paca*.' His father became angry with him. '*Paca* meat was not recommended; *piabinha* fish was. I will not wait for you.' Then, the father left, taking the deer meat with him and eating it along the way.

Meanwhile, Yah-wuh saw his woman in the forest, making love to her lover. [He transformed into a *juriti* bird and saw her]. His grandfather's soul came near them as well, transforming into an ant and biting her. Yah-wuh's woman suffered much pain. 'How are we going to go back there?' [She asked her lover]. 'I will say that I saw a howler monkey up above and that I was cutting down brush to make an earthen oven to roast the sweet potatoes, and that those monkeys scared me.' 'I do not want to say that,' [her lover said], and he left. The woman came back moaning and suffering. Her brother-in-law [Yah-wuh's brother] killed a *paca*, took a leg, and roasted it in the fire. He also removed the liver and roasted it, but did so badly, and without washing his hands – his hands were covered in *paca* blood. He put his hands in the water to take a drink, and then his stomach began to hurt. The woman was suffering, her 'friend' [lover] was suffering, and the brother-in-law

was suffering from pain. They were all ill. The brother-in-law was ill from stomach pains, and the woman [Yah-wuh's woman] and her 'friend' were suffering from Yah-wuh's spell cast upon them.

In the afternoon, the brother-in-law's wife arranged to bring her husband back to the village: 'let us bring him back; I do not know if he will die.' They brought him back, and everyone said, 'Yah-wuh's brother-in-law is ill with stomach pains!' As he arrived, the brother-in-law moaned and moaned, and everyone saw him suffering from stomach pains. Yah-wuh said, 'father, light up the fire to illuminate my brother-in-law. I will observe his stomach.' 'Son, put more logs on the fire; your brother is a healer!' [Yah-wuh's father told another son]. They added many more logs. Yah-wuh was beautiful, with long hair! Everyone was watching him. 'Yah-wuh is a master!' everyone said. Yah-wuh removed the *paca* from his brother-in-law's stomach and threw it aside. [The brother-in-law] calmed down; Yah-wuh had healed him. What happened in the forest with the grandfather's soul? The grandfather's soul had advised Yah-wuh: 'you are going to heal your brother; he is suffering [because] certain things have frightened him.' 'It is the howler monkey; I saw it at the top of the tree. It was looking at me and injured my foot,' his brother said. Yah-wuh cured him and calmed his pain as well.

At daybreak, Yah-wuh went to see his woman and healed her too. The woman's brother advised her to wait there, for he was going to harvest some sweet potatoes and come back in the afternoon to feed Yah-wuh and herself. She was all by herself. At this point, she was already pregnant, for her lover had impregnated her. Yah-wuh had been nearby, waiting there in silence. Yah-wuh's woman became angry with him. 'You went to calm the pains of the two men first, and when you came to heal me it was nearly daybreak! I am

angry with you,' she said. Yah-wuh told her, 'calm down; I do not wish to speak about this. Leave it be.' 'I will not leave it be that you healed your brother-in-law and his friend before me! That is why I am angry,' she said. Yah-wuh got up from the *buriti* mat and became angry too. 'You are a liar! Who impregnated you? I know it was your lover who did so! Who was there above you, in the *buriti* palm? It was I! You said, "Oh, it's the *juriti* bird!" And your lover said, "If I had a bow, I would shoot it for you!"' Yah-wuh hit his woman's belly with the *buriti* stick, and the child fell out, along with much blood. Yah-wuh was already a master. He could already fly. That was that. 'I will not see you anymore. We are separated. I am going to my father's house, and you will never enter my father's house.' Then, Yah-wuh left her.

He went back to his father's house, and his old grandfather [his grandfather's soul] was there. Yah-wuh asked his grandfather's soul, 'what things did you see when you were young?' 'You are going to introduce ashes [into the forest] and quickly build them up [into a fire] to burn game animals and people, and the fire will pass through the dry *buriti* grove. Afterward, you will go to the waterfall, and then you will go to another place. Next, you will enter the hole in the mountain and pull the armadillo's tale. Finally, you will go where the puppy is.' [His grandfather's soul gave him these instructions]. In the morning, Yah-wuh transformed into an 'angel' [*anjo*] and flew. He flew until he saw a bit of ashes. Then, he transformed into a tapir and ran and ran, fanning the ashes into large flames. The ashes burned and burned, until they diminished again. 'That is what my grandfather told me! I will go over there where the *buriti* is burned.' He came to that spot, and there was a small fire on the *buriti* palm. Then, Yah-wuh transformed into a macaw and came close to the *buriti*. 'Caw, caw!' he yelled. The fire increased, and Yah-wuh deceived the fire by flying underneath it, so that he came out alive. It was a huge fire!

Afterward he came to the waterfall, which almost took him, but he passed through it and arrived at the other place, which again almost took him but not quite. He passed by Hác-ti, the giant hawk, who was hiding in the armadillo's hole. Yah-wuh entered, pulled the armadillo's pulsing tale, and threw Hác-ti out. Then, he flew again, quickly, and Hác-ti flew as well – he was huge! Hác-ti grabbed many things – deer, people, and other game animals. Eventually, Hác-ti became tired and hid. Yah-wuh then came to the small puppy. Its mother was hunting, and Yah-wuh caught the puppy. His grandfather's soul was up above him. After enduring so much, Yah-wuh came close to the village, and the puppy came behind him, but tried to deceive him. Yah-wuh thought, 'I am going to stay in the village with this puppy.' The puppy came to him and stayed there.

On another day, Yah-wuh went to the village of another tribe, the hawk tribe. He stayed there, grabbed a *cocá* [some type of ornament], and flew to the top of a tall tree. Everyone [from the hawk village] shot arrows at him, but he flew away with the ornament and came back to his own village. 'Ah, Yah-wuh is flying; he really is a master!' everyone said. This is why Yah-wuh's name is 'master,' a real master. His grandfather's soul was also a master, and taught Yah-wuh to see the dangerous things and become a master too.

Version 2 – told by Liliana

Yah-wuh was a great shaman who transformed [with the help of] a 'soul' [*karõ*] and that soul was also a 'master.' Yah-wuh flew to another village, another Indian tribe. He brought back ornaments, artisanal crafts from the other Indians to our village. Hác Jarati – that headdress made from macaw feathers, he brought back from another village. He transformed into a parrot. The story of Yah-wuh is very beautiful. He talked with another

shaman from another village. The other shaman had been saying, 'I am more of a "master" than Yah-wuh. Call for him, I want to try out our master! I have the power of being a master, and he has the power as well. We will see who has more power!' The other shaman was from another village, from Porquinhos, and he could 'see' as well. Over there it is similar to here, with the circular village and the patio [ceremonial centre]. They placed a log in the patio, and they sent for the shaman from the other village and for Yah-wuh from this village. At the same time, everyone else arrived. They placed logs in the centre, and the two shamans stood on top of the logs. Everyone was situated around them in a circle, watching them.

Then, Yah-wuh made the same movements as a bird that flies [flapping his arms]. Shortly after, Hukryc [the other shaman] also performed the same movement, and made baby bird feathers on his skin, similar to the feathers of a baby parrot. Yah-wuh waited to see the other shaman's power; his feathers had not emerged yet. When Hukryc was already covered in feathers, Yah-wuh saw his power. Then, Yah-wuh's feathers emerged on his arms and his entire body, all of a sudden. Shortly after, he began to fly. Hukryc remained rooted in the centre, in the same manner, with only a small amount of feathers.

Yah-wuh travelled to another village and flew to the earth. In the doorway of a house in this other tribe, there were peanuts. The couple [that owned the house] were in the doorway. Suddenly, a beautiful parrot appeared! It was Yah-wuh transformed into a parrot. He walked around, grabbing peanuts and chewing them. The owner of the peanuts said, 'where did this parrot come from? Who is breeding beautiful parrots?' Others heard him and said, 'grab it; we want to remove its feathers to make an ornament for our arrows!' Yah-wuh heard this and thought, 'no, I am going to leave now; if not, they will

grab me!’ Then, he flew away. Next, he transformed into another small animal – I never remember the name of it. He transformed again and saw the Hác Jarati, that headdress made of macaw feathers, and it was very well made. There it was, far away. Next, he transformed into a mosquito and flew over to it.

When he was nearby, Yah-wuh transformed again into another bird, Hateti, and he meddled until he took the ornament. ‘That bird took our ornament!’ [The other tribe said]. He took it, and everyone ran after the bird. Yah-wuh flew to a tall palm and stayed there. The Indians ran after him, but they could not reach him. Yah-wuh came back to our village and handed over the ornament. Afterward, some people performed a ritual song in the village. Yah-wuh showed many things because he was a great shaman. He spent much time [undergoing *resguardo*] – he only ate sweet potato, peanut, and Põhy Pej-re [‘True/Original Maize’] – only these three foods. That is why he transformed into a ‘pure’ shaman and did these things. [...] Yah-wuh also showed us the Kô-khrit-re [Ku?khrüt-re-?hô; Crocker 1990:276] festival, the mask festival; he is the one who brought that to us. He brought many things to the Canela because he knew how to fly.

Version 3 – told by Fernando

I am going to tell you a little story about these *měkarõn* that cured Yah-wuh of his wound. They cured him, removed the burn [from the wounded leg], and they say that after the *měkarõn* left, they made Yah-wuh *impej*. They cured and saved him at the same time, and nothing else happened to him. *Měkarõn* is like God. [...] Back in those days, the shaman underwent a large and serious *resguardo* [food and sex prohibition period] during I do not know how many months – perhaps 8-9 months, or even more than a year to 14 months,

to become very skilled. Those who work on health become this way. They say that, in that time, the shaman was very knowledgeable because he underwent a large *resguardo*. That is why *mėkarōn* gave him, handed over to him, this type of knowledge. Then, these shamans could also do what *mėkarōn* can do. They could cure illnesses and save people at the same time. They say that if someone was robbed, the shamans could also 'see' – he would look around until he found the thief and he would find the item that had been taken as well. The shamans did this. Nowadays, the shaman says, 'I can see, I can imagine,' but I do not think it is as it was in the beginning.

Those early shamans who were transformed by the *mėkarōn*, and who received their powers from the *mėkarōn*, those people could 'see.' They could see if their wives were making love to another! Back then, Yah-wuh saw this, and said to himself, 'oh boy, that is my wife!' Shamans like Yah-wuh could perceive [things like this]. Yah-wuh saw this, and went to where his wife was with her lover in the garden. Her lover was lying next to her, and the two of them were making love. Yah-wuh transformed into a bird and sat on a tree branch above his wife. She said to her lover, 'there is a bird right above us!' The lover was not bothered by this. 'I will take it down! I have my bow here. Let it stay there,' he said. Then, Yah-wuh came down to the ground and transformed into an ant. Looking around, he thought, 'what will I do now? First, I will bite her lover.' As the ant, he bit his wife's lover, and he bit his wife as well. The man could not handle it, and he left. Yah-wuh kept looking and looking [perceiving in his *kay* state]. Afterward, he saw that at the same moment his brother-in-law ate *paca* blood. The brother-in-law ate *paca* liver without washing off the blood from his hands, then he drank water, and immediately afterward, he started to feel stomach pains. The night passed, and he was nearly dying. His relatives took him back to the village. Thus, these three people were suffering at the same time.

Yah-wuh responded, saying, 'I will not let my brother-in-law die!' He told his sister, 'light the fire to illuminate [the house] for me.' Yah-wuh's father got up and said, 'daughter, light the fire!' Then, Yah-wuh came and passed his hands on top [of his brother-in-law's body]. His brother-in-law was above Yah-wuh, and all the women got together to watch. Yah-wuh passed his hands, and then he grabbed the *paca's* head [inside his brother-in-law's body]. The *paca* was still alive! Yah-wuh pulled and pulled, and they say that the *paca* was in the hands of this shaman, with all the women watching. 'That *paca* was going to kill him!' [They said]. The brother-in-law's wife placed her hand over him, catching the blood, and he still appeared to be dying. Then, he began to moan. They gave him some water and he took it. Then, he asked for food, ate some, and suddenly he sat up [cured of his illness by Yah-wuh].

A short while later, the relatives of Yah-wuh's wife's lover came running. 'Yah-wuh, come quickly, they sent me to come looking for you! Our relative is moaning in pain.' 'Very well,' Yah-wuh said. He arrived to the place [where the man was], and looked around, standing above them. One of the relatives said, 'should he stay there?' 'Keep him where he is,' [Yah-wuh said]. He removed the ant, placed it in his hand, and showed it to the man. 'Look, an ant bit you.' He removed another one, and then he left. Shortly after, his wife's relatives came running. 'Yah-wuh, we came looking for you to come see your wife!' 'No, it is already late, I will not go now. Leave it until tomorrow. I will only go tomorrow morning.' At daybreak, he went to her, removed, the ants, blew on her, and she calmed down.

Yah-wuh also transformed into birds and into a bat. Another time, he made a bet with another ethnic group; I think it was with those from Porquinhos. He brought them to the

village and placed one log in front of himself, and another in front of [another shaman] from Porquinhos. Yah-wuh said, 'look, you doubt me. We are here, you all and my people, and the two of us are going to travel. We are going to transform and bring back items from another ethnic group. Whichever of us is better than the other.' Yah-wuh's own people were looking at him and they placed on log near Yah-wuh, who stayed above it, and the other shaman remained above his log too. Yah-wuh said, 'all set, now you [the other shaman] have arrived, and now you take care of yourself, and I will take care of myself. [Let us see] what you bring for your people, and what I bring for mine.' Yah-wuh opened his arms and flapped them, and they say that Yah-wuh's legs became covered in feathers, and then his whole body, until he had hawk feathers. He transformed into a hawk. He jumped and rose into the air, circling and circling, until he disappeared. His friend [the other shaman] also opened his arms and flapped, but only a few feathers covered his legs – he did not fly or disappear, and only became a real fool!

While Yah-wuh's people remained there, Yah-wuh had already arrived at the other group's village. Yah-wuh lay peanuts in the sun, transformed into a parrot, and grabbed some food. 'Ah, now that I already took different foods, now I have strengthened myself,' [Yah-wuh said]. He saw the large *cocá*, [type of ornament]. 'There, that is mine; I am going to grab this *cocá*.' Then, Yah-wuh transformed into a type of small rodent, and next he transformed back into a hawk. He passed once, twice, and the head of the household said, 'that hawk is passing by; I know that he will grab this *cocá*!' Yah-wuh grabbed the large *cocá* and flew away to a very tall palm tree to sit on a large branch. Everyone began shooting at him with arrows, until Yah-wuh brought this *cocá* to our people.

Meanwhile, the other shaman who did not transform became very ashamed, at the same time that Yah-wuh travelled to another village, because he did not measure up to Yah-wuh. Yah-wuh underwent a large *resguardo* – he did not eat anything heavy, only sweet potato, peanut, and white maize – these are the foods that he ate. That is why Yah-wuh perceived a great amount of knowledge. He left his wife and never returned to her. Shortly thereafter, there were some shamans that also achieved great knowledge, and they carried his same log. They say that Yah-wuh entered [the person?], stayed inside, and the person carried the log with Yah-wuh. Those who undergo a great *resguardo* can perceive. They see everything; only they know.