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Title: Hybrid Healthscapes: Mothers' Health Care and Food Practices in the Ecuadorian Andes.

Abstract approved: _____

Joan E. Gross

After decades of expert-based modernization efforts that have had profound negative impacts on human and environmental health, Ecuador is currently pursuing a rights-based, participatory development paradigm known as *sumak kawsay* or "the good life". Despite its promises of inclusion and interculturality, this approach continues to rely on highly trained specialists, leaving little space for local practices that create and maintain well-being. Research has found that women are central figures in the medically pluralistic health systems that characterize the Andes. This ethnographic study explores the heterogeneity of mothers' food and health care practices in a rural village in the province of Carchi. Participant observation, semi-structured interviews, and free listing provide evidence of a wide variety of practices involving foods and home remedies that serve to maintain health. These are often reflective of a nostalgia for an imagined healthier past, which comes forth strongly during the postpartum period and young child feeding. Mothers often treat the most common child illnesses at home with a variety of

remedies, many of which are also consumed as foods. In addition to home care, mothers navigate and engage with a pluralistic health system by visiting folk healers and consulting medical doctors when needed. Their practices are inherently shaped by their limited access to resources, and they reflect hybrid knowledges that are responsive to dynamic "healthscapes". These findings suggest that mothers act as primary care givers by enacting dynamic knowledges through their practices, and I argue that fostering the diversity and interculturality of *sumak kawsay* may require greater inclusion of mothers' home practices in national development agendas.

Hybrid Healthscapes:
Mothers' Health Care and Food Practices in the Ecuadorian Andes

by
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I understand that my thesis will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my thesis to any reader upon request.

Michaela Hammer, Author

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TABLE OF CONTENTS

TABLE OF CONTENTS (Continued)

TABLE OF CONTENTS (Continued)

LIST OF FIGURES

LIST OF TABLES

GLOSSARY

Achiote: the bright red seed of the annatto plant, used to give foods color

Agüita: an herbal tea

Arroz de cebada: barley gruel

Barrio: Neighborhood, often used in rural areas to refer to small towns

Campo: the countryside

Chicha: a mildly fermented grain beverage made with fruits and herbs, often consumed at parties

Colada: a thick milk-based beverage served warm

Espanto: a common fright illness among children

Granadilla: a fruit related to passionfruit, known for its digestive system benefits

Habas: fava beans

Hacienda: a large farm, often a piece of a landholding from before the era of land redistribution in the mid-twentieth century

La dieta: a forty-day postpartum rest period

La gripe: the common cold

Limpia: a ritual cleansing to cure *espanto* or *malaire*

Máchica: traditional barley flour drink

Malaire: a common illness believed to be caused by bad energies or spirits

Mayores: the elders, the older generation

Melloco: a small Andean tuber known for its wound-healing properties

Morocho: a corn variety commonly used to make a thick beverage

Mote: a large corn variety similar to hominy

GLOSSARY (Continued)

Mote de trigo: wheat berries

Oca: an Andean tuber

Páramo: the wet highlands that surround Jesus del Gran Poder

Patrón/ Patrona: commonly used to refer to a wealthy employer

Runa: home-grown or wild

Seco: a main dish served with rice and potatoes

Sopa: a soup

Tos: a cough

Tostado: toasted corn, often served with a little oil and salt

Trago: sugar cane alcohol

Viveres: a small convenience shop, often operated from a home

Zanahoria blanca: white carrot, a local root vegetable

Chapter One: Introduction

Atop a hill in a rural highland town in northern Ecuador, Penelope had been treating her newborn daughter's rash with chamomile teas, and at her mother's advice kept the curtains closed to keep bad energies in the clouds from further harming the baby. Down the hill, Aurelia's son was just beginning to crawl and explore on his own, and she was constantly trying to keep him from putting every last shoe and pebble in his mouth. Across the main road through town, Ana made a guava-papaya juice to help regulate her two-year-old son's digestion as her sister- and mother-in-law prepared a lunch of rice, potatoes, salad, and chicken with tomato sauce. Meanwhile, Rosa was desperately trying to heal her six-month-old son from a persistent cough that had slimmed his chubby cheeks and been waking them both up in the night for weeks. I was with Estefanía, who was treating her four-year-old daughter's cold with quick *espanto* healings in her bedroom and some syrup from the pharmacy.

I could tell stories about how women earn livelihoods, how they clean their family's laundry, or how they interact with their husbands, friends, and parents. These stories would tell of important issues that affect many areas of these women's lives. Instead, I direct this thesis toward mothers' overlapping practices surrounding food and health care because they are fundamental to family health. The stories above and the many that follow demonstrate the heterogeneous ways that mothers care for their families and actively participate in the evolving co-

production of health. Embedded in a region that continues to experience the negative impacts of expert-driven development, these stories will help to illustrate the value of mothers' local knowledges and practices.

The research context

This thesis is part of a project funded by the Dutch NWO-WOTRO Science for Global Development grant program and facilitated by researchers from multiple institutional and disciplinary affiliations. The overall objectives of the WOTRO project are first, to identify positive deviance within the heterogeneity of farming, water, and nutritional practices in three villages in the northern Andes, and second, to catalyze change in these communities by highlighting these positive practices in workshops and trainings. All four sub-projects use a combination of quantitative and qualitative methods. Sub-project One, led by Dr. Myriam Paredes of FLACSO-Ecuador, focuses on agricultural production. Sub-project Two is directed by Wageningen University doctoral candidate Horacio Narvaez and focuses on water practices. Sub-project Three, directed by Dr. Joan Gross at Oregon State University, explores nutritional practices. Sub-project Four is a meta-analysis of the other sub-projects and is being conducted by Dr. Stephen Sherwood at Wageningen University. All portions of the WOTRO project have taken place in close collaboration with Ekorural, an Ecuadorian non-governmental organization that has facilitated Farmer Field Schools in the communities and maintained positive long-standing relationships with residents.

As part of Sub-project Three, the research for this thesis was shaped by the goals, research questions, and methodology spanning all three communities. The primary goal of this nutritional sub-project was to identify positive practices that already exist in the communities and can therefore be expanded to help improve family nutrition and health. In the first phase of the nutrition project, the research team sought to provide baseline information about household diets and health in the communities. This involved a survey administered by local field staff in every household, which included a 24-hour food intake recall for the mother and any children under six in the household, demographic information, and photographs of growth charts for every child under six in the household. Dr. Peter Berti of Healthbridge then analyzed these data for diet diversity and child growth. Due to small sample size and lack of significant differences between "positive" and "negative" indicators for diet and health (fortunately, most residents have very diverse diets and child stunting does not appear to be widespread in the communities), we used these data primarily as sampling tools for heterogeneity in the ethnographic portion of the sub-project.

The second, ethnographic phase was conducted by four researchers, including Dr. Gross, Dr. Carla Guerrón at the University of Delaware, and two Masters students (myself and Gabriela Jaramillo at Wageningen University). The following research questions guided our participant observation and interviews: What are local perceptions of how diet diversity has changed over time? Based on ethnographic research, how can we explain patterns in growth charts and diet

diversity surveys? What are the nutritional practices in use in these three poor rural communities that may lead to the good health of children? How do children, operating in networks of peers and adults, co-create healthy nutritional practices in their family? How might family, and especially children's, food and nutrition practices in positive deviant households be strengthened to enable families in the broader community to improve nutritional practices using existing resources?

While our approaches varied slightly as a reflection of differing time constraints and positionalities within the communities, the overall methodology employed was similar to what I describe in the Methodology and Methods chapter. Within this research framework surrounding nutritional practices, I sought to investigate how these practices act as part of women's general health care practices. The relationship between this thesis and the WOTRO projects is represented visually in Figure 1.

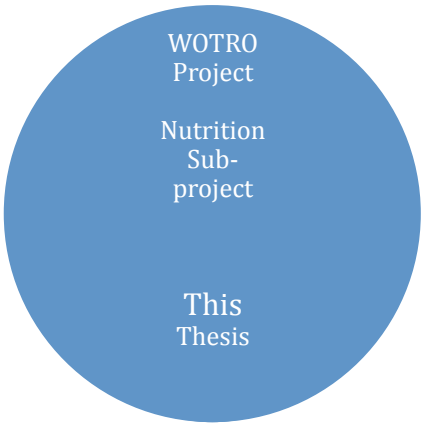

Figure 1. Simplified relationship between WOTRO projects and this thesis.

Study site and population

Two of the three communities that participated in the WOTRO project lie just below the wet highland *páramo* zone in the northern province of Carchi, Ecuador (Figure 2). The third is located in a lower, hotter valley in the province of Imbabura. The purpose of including these three communities was to better understand the heterogeneity of practices in distinct ecological and cultural areas, and to work with communities that already had strong ties with the project leaders and Ekorural.

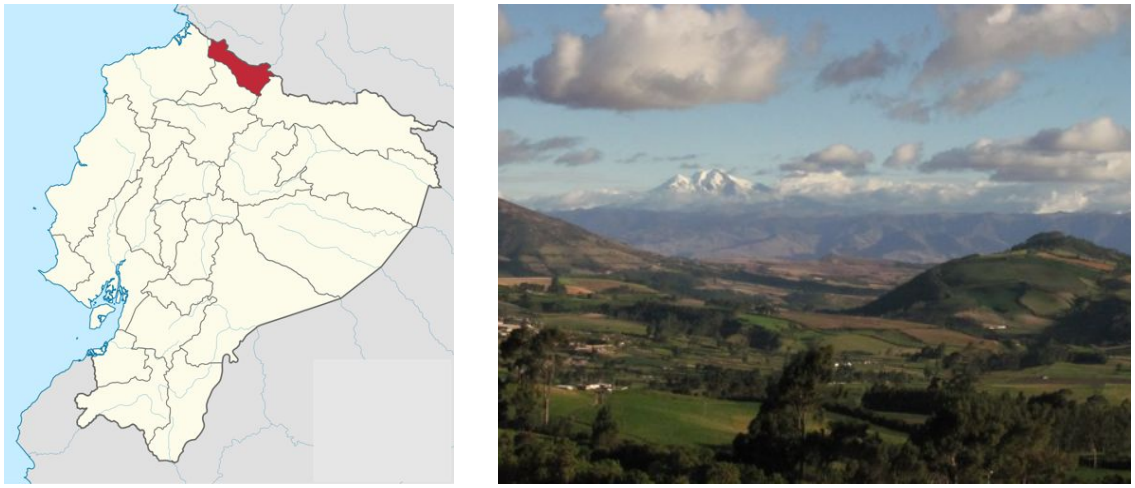

Figure 2. Location and landscape of Carchi province, Ecuador.

I conducted fieldwork for this thesis in the *barrio* (village) of Jesús del Gran Poder, located in the province of Carchi, canton El Espejo, parish of La Libertad in northern Ecuador. The town lies close to the *páramo* and La Reserva Ecológica El Ángel, making wild resources accessible to residents. The proximity to the nature reserve also means that water resources are relatively abundant and unpolluted here, although distribution of those resources is a contested issue. Situated along a

hill reaching from 3125 to 3278 meters above sea level and nestled at the head of a large valley, the town often receives colder, rainier weather than surrounding areas.

The town includes four small *viveres* stores, one of which began as a community meat processing center but now functions solely as a grocer. There is an elementary school, a *casa communal* (communal house), and a Catholic church with sports fields and playground nearby. Electricity, water, sewage, and garbage pick-up are available for every home, and most houses are made of brick or concrete. As indicated in Figure 3, the town is about a 20 minute walk from San Francisco where more small shops, a plaza, and a larger school are located. The nearest *colegio* (high school) is in La Libertad, which is accessible by foot (45 minutes total), taxi, or school shuttle for children. El Ángel (population 5645) is the main commercial center in the area, with a large weekly market, banks, farm supplies, and regional buses running regularly. From San Francisco, Jesús del Gran Poder residents can arrive in El Ángel by bus (which runs three times daily), taxi (for which they must call or wait in the plaza), or occasional cars and trucks that are willing to pick up passerby.

There is a small health center and *seguro campesino* (rural health post for peasant farmers) in San Francisco, but a lot of residents now bring their children for check-ups at the health center in La Libertad. The nearest hospital is in El Ángel.

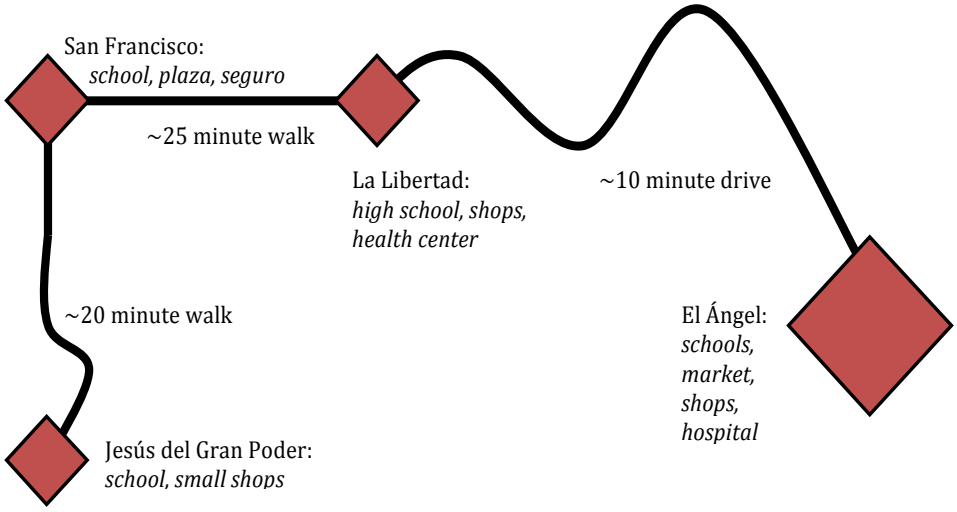

Figure 3. Schematic map of area surrounding the study site.

The main source of income for families in Jesús del Gran Poder is production and sale of potatoes, fava beans, and milk. Families rotate their cows over available pastures throughout the year and access them with different means depending on the season. Some ride in the milk trucks that fill with (mostly female) milkers who own a small number of cows but no vehicle. Others walk many miles or drive cars or motorcycles to their pastures. Many families are in debt from purchasing cows, bulls, cars, or agricultural inputs, and expenses for potato production have not been consistently matched by market prices in recent years. Men and women also seek outside work as day laborers, housekeepers, and plantation workers when necessary, but options are limited.

Residents are Spanish-speaking and of mixed Spanish and indigenous ancestry (commonly referred to as *mestizo)*. Most residents are Catholic and,

though many do not regularly attend mass, participate in culturally important rites (baptisms and confirmations) and celebrations. A few families, including one that participated in this study, have more recently converted to Evangelicalism and distance themselves from Catholic gatherings and traditions.

Overview of thesis

Before examining mothers' food and health care practices in Jesús del Gran Poder, I will provide an overview of existing literature and describe my approach to the research. Building on this foundation, I then describe mothers' health-producing practices—using foods, home remedies, and outside support—in three chapters. Chapter Four: Food for Health provides an overview of the general diet in the area, explores how mothers conceptualize that diet in relation to the past, and details how maternal and child diets are enacted to promote health. Chapter Five: Home Health Care focuses on mothers' home-based practices of preventing and treating common child illnesses. In Chapter Six: Navigating Healthscapes, I place these home practices in context by describing various issues that arise when mothers decide to pursue outside health care. Ultimately, I characterize health and health care as iterative, dynamic processes and consider the implications of this perspective for Ecuador's national health system.

Chapter Two: Literature Review

Nutrition and health in Ecuador

In late 2013, the Ecuadorian Ministry of Health released a comprehensive study about the state of health and healthcare in this small Andean nation (Freire et al. 2013). Nationally, stunting still affects 25.3 percent of children under five years old, although there is much variation within the country. For example, rates of stunting are much higher in the poorest quintile (36.5 percent) and indigenous populations (42.3 percent) than the wealthiest quintile (13.8 percent) and *mestizo* populations (24.1 percent; Freire et al. 2013).

In addition to persistent undernutrition, Ecuador now faces a growing "double burden" of diet-related disease that has become notorious in rapidly developing and low-resource regions of the world (Lopez-Cevallos and Chi 2010; Popkin et al. 2012; Waters 2006). Overweight and obesity affect 62.8 percent of the Ecuadorian adult population (ages 19-60), and childhood obesity has risen significantly since the first national health survey in 1986: the rates of overweight and obesity among children under five years old has doubled, from 4.2 to 8.6 percent, and today overweight and obesity affect nearly 30 percent of children aged 5-11 and 26 percent of adolescents 12-19 years old (Freire et al. 2013).

In addition to increasing at the national level, the coexistence of over- and undernutrition also exists at the household and individual levels. For example, more than half of children under 5 years of age who are stunted have a mother who

is overweight or obese. Although 20 percent of 5-11 year-olds who are stunted are also overweight, only about ten percent of overweight or obese children are also stunted (Freire et al. 2013). This suggests that overnutrition is becoming as equally serious a concern for public health as undernutrition.

Malnutrition in any form remains the most widespread public health concern for children under five years old. Chronic undernutrition leads to growth faltering and eventual stunting (defined as height-for-age at least two standard deviations below international standards). This is often permanent and has major negative health consequences throughout life (Martorell 1989; Stinson 2012; Victora et al. 2008). Maternal and child undernutrition are associated with decreased adult height, poor educational outcome, lower income, higher infant mortality of offspring, and lower birth weight of offspring (Crooks 1997; Martorell 1989; Victora et al. 2008).

Poor diet is the primary immediate cause of malnutrition. Healthy diets provide adequate amounts of macronutrients, which are the primary source of calories, as well as micronutrients, which support specific functions and structures within the body. According to Freire and colleagues (2013), the most widespread micronutrient deficiencies in Ecuador (protein, vitamin A, iron, and zinc deficiencies) are associated with diets dependent on carbohydrate foods like potatoes and cassava.

Infectious disease affects children in tandem with poor nutrition. Stinson (2012) explains that a child's pathogen exposure increases around the time of

weaning due to greater mobility and diet diversification. This wider exposure results in high levels of diarrhea and infectious disease in young children, which cause both direct nutrient loss and lowered overall food intake. Illness also stimulates the immune system, which diverts energy away from growth and development (Stinson 2012).

A variety of other factors such as stress, exposure to toxicants such as lead or agricultural chemicals, and hypoxia at high altitudes can affect how children grow and assimilate nutrients (Stinson 2012). Fetal programming also plays a role, since uterine conditions, which are based on a mother's health and body size, dictate how an infant's genes will be expressed (Bogin 2012; Himmelgreen et al. 2011; Krieger and Davey Smith 2004; Victora et al. 2008). This means that maternal wellbeing significantly impacts fetal and infant growth and development, creating intergenerational links between women and their children's health.

These immediate causes of malnutrition act synergistically with other factors to affect health. From a public health perspective, underlying issues include access to foods and health care, caretaking practices, poverty, and inequality. This is complemented by the salutogenic orientation, which views health beyond the mere absence of disease (Antonovsky 1996; Lindström and Eriksson 2010). From this perspective, health is a process that is intimately linked to how a person views and copes with life. The original theory relies heavily on a "sense of coherence" model to assess how people manage stress, mobilize their resources, find solutions, and resolve tensions in a way that promotes health (Lindström and Eriksson 2010).

Salutogenesis is also considered in light of other assets, such as resilience, self-efficacy, and empowerment. In this thesis, I draw most heavily from the ideas of self-efficacy and empowerment. Eriksson and Lindström (2010) describe empowerment as giving people control and mastery over their lives, building social capital, and supporting the ability for "critical conscious-raising" (344) to examine structural power. I use the salutogenic perspective to view health as a dynamic process concerning whole people rather than simply their dis-eases, based in practices that promote rather than threaten good health (Antonovsky 1996).

Anthropological research adds to these frameworks with questions about how power, knowledge, and culture affect health. Current medical anthropological and ethnomedical studies in the Andes emphasize intercultural health, defined as "practices in healthcare that bridge indigenous medicine and western medicine, where both are considered as complementary" (Mignone et al. 2007:1), and medical pluralism, defined as "the existence of multiple theories of illness/disease and corresponding therapeutic strategies in a single society" (Giovannini et al. 2011:929). Researchers today must engage with the effects of modernization and globalization on local populations, intercultural and intra-community diversity, and political-economic inequality within the complexities of medical pluralism (Giovannini et al. 2011; Mathez-Stiefel et al. 2012; Miles and Leatherman 2003).

Development in Ecuador

Over the latter half of the twentieth century, Ecuador experienced profound changes in social structure due to modernization efforts. These efforts consisted primarily of natural resource exploitation, including oil extraction, and agricultural technification promoted and facilitated by the national government and agrochemical companies (Sherwood 2009). These activities have had substantial environmental and human health costs (Cole et al. 2011; Sherwood 2009; Suarez-Torres et al. 1997). The province of Carchi, in fact, has among the highest rates of acute pesticide poisoning recorded worldwide (Cole et al. 2011). After the international debt crisis of the 1980s that caused many countries to default on international loans, neoliberal reforms exacerbated these processes and set Ecuador on a course of development that has shaped contemporary socio-economic, cultural, and environmental circumstances (Suarez-Torres et al. 1997). Similar to other countries in Latin America, Ecuador eventually responded to external pressure from international funding and trade agencies by resisting privatization and propounding a "postneoliberal" ethic of decolonization and autonomy (Iriart et al. 2001; Radcliffe 2011).

The most recent shift in the national agenda has been to embrace a rights-based, postneoliberal paradigm founded on the concept of *sumak kawsay,* a Kichwa term encompassing all aspects of "the good life", also known as *el buen vivir* in Spanish (Radcliffe 2011). The concept represents a holistic restructuring of the neoliberal development paradigm and is founded on social, cultural, and economic

diversity, alternatives to mainstream market integration and resource exploitation, and citizen participation in government (Radcliffe 2011). *Sumak kawsay* provides a foundational philosophy for ensuring health as a human right, as it is embedded throughout the Ecuadorian Constitution (2008), elaborated in the National Development Plan (*Plan Nacional para el Buen Vivir*, 2009), and put into policy through the Organic Health Law (*Ley Organica de Salud,* 2006; Flores and Castillo 2012).

In the health system, these development approaches have created a complex web of public and private providers, training opportunities, and funders. Hospitals and health centers funded by the Ministry of Public Health are free and cover about half of the Ecuadorian population, and the social security system, which includes rural health posts for farmers, covers another twenty percent (Lucio et al. 2011). There is also a plethora of private for-profit providers that generally serve middle- and high-income Ecuadorians with insurance coverage, as well as not-for-profit private clinics that have served to supplement a historically weak public system (Lucio et al. 2011). This system still has two major flaws.

First, primary, preventative, and family care have been limited and generally underrepresented by health provider training (Candib 2004; Lopez-Cevallos and Chi 2010). Family medicine in Ecuador has lacked prestige, funding, and training, which has contributed to a significant imbalance between preventative and curative care. In contrast to the holistic, integrative, and biosocial perspective of family medicine and primary care, Candib (2004) argues that the model of health care in Ecuador

has been dominated by cost-benefit analyses, expert male doctors, and the medicalization of well-being. A second, related issue is the disproportionate distribution of providers between urban and rural settings. The density of public medical personnel is associated with the use of preventative care across populations, and urban residents have much greater access to both private and public providers than rural populations (Lopez-Cevallos and Chi 2010). Ecuador's *año rural* (year of mandatory rural service for recent medical graduates) does little to ameliorate this situation, since the majority of doctors return to the city after their service to pursue higher-paying specialized positions (Candib 2004).

Since President Rafael Correa was elected in 2006, the country has made great strides to improve infrastructure and access to health care, and his charismatic leadership has offered political stability after a decade of short-lived presidencies. However, Correa has been heavily criticized by scholars and indigenous groups as elitist, authoritarian, and technocratic (de la Torre 2013; Radcliffe 2011). They argue that there has been little room for alternative models of health and health care, and changes have failed to integrate true "border thinking" that presents alternative epistemologies and "challenges development's colonizing discourses and practices" (Radcliffe 2011:248). Marginalized and subaltern groups have "symbolic dignity" and a theoretical place at the governing table, but their knowledges, practices, and voices remain excluded from decision-making (Clark 1997; de la Torre 2013:34). In other words, while the current course of development in Ecuador has brought some tangible and symbolic benefits, it has not

fundamentally improved the status or raised the voices of historically marginalized people as envisioned in *sumak kawsay*.

Dynamics of medical knowledges

The interaction of local medical knowledges with global medical science is one of the fundamental issues in integrating "border thinking" into development. "Local", for the purposes of this thesis, refers to any phenomenon rooted in a particular place, and is distinct from "indigenous" in the sense that local people do not necessarily identify themselves as ethnically indigenous. Vandebroek and colleagues (2011) define local knowledge systems as "the knowledge, beliefs, traditions, practices, institutions, and worldviews developed and sustained by indigenous and local communities, and are believed to represent an adaptive strategy to the environment in which these communities live" (1). Drawing from Sillitoe's (2007) discussion of local sciences, I use the term "knowledges" instead of "knowledge systems" to emphasize their potential heterogeneity within seemingly coherent, codified, or formalized "systems".

Local knowledges are beneficial for many reasons. First, they act as the basis of primary health care in poor rural settings where access to biomedical care is limited. As Bodeker (2007) points out, "the majority of the population of most developing countries regularly use and rely on traditional medicine for their everyday healthcare needs" (23). Second, local and traditional medicines are also the preferred form of health care in some medically pluralistic settings (Gold and

Clapp 2011; Wayland 2004). As a complement to biomedical care, local medical knowledge among health care providers can help foster a "meaning effect"—an enhanced efficacy of medications based on patients' relationship with the provider—as well as offer a "coping strategy for psychosocial pressures" (Vandebroek et al. 2011:2). Local knowledges also have potential to offer nutritional benefits through incorporation of wild, weedy, and semi-domesticated plant species in the diet. Knowledge of local plants has been associated with rural residents' ability to cure and prevent disease and nutritional deficiencies (Vandebroek et al. 2011). Local knowledges are also inherently valuable as forms of cultural heritage and manifestations of place-based identity.

Differentiating local knowledges from global science can be problematic, particularly in health care. Medical anthropologists consider biomedicine a specialized form of ethnomedicine that has been steadily establishing hegemony over health care worldwide (Mathez-Stiefel et al. 2012). Waldstein and Adams (2006) highlight three theoretical distinctions to better understand the relationships between globally normalized biomedicine and local ethnomedicines.

First, recognizing the difference between personalistic (supernatural, volition-based) and naturalistic (empirical, physical) etiologies demonstrates how treatments and causes of disease are correlated in a rational way (Foster 1976; Waldstein and Adams 2006). Most health care systems contain a mixture of both etiologies; biomedicine is fairly unique in denying personalistic causes of human illnesses. Second, it is important to understand how the physical experience of a

"disease" may differ from the cultural, social, and political-economic experiences embodied in an "illness" (Kleinman 1980). The term "illness" encompasses much of the psychological and cultural elements of ill health that biomedical diagnoses do not consider. Third, any health care system involves various sectors, which Kleinman (1980) divides into three categories: the popular sector involves self-treatment (often at home with family members), the folk sector includes specialized folk healers often operating with traditional medicinal plants and healing rituals, and the professional sector refers to specialists trained in formal medical schools.

For the purposes of this thesis, I use the terms "lay" and "home" healing more than "popular" to emphasize that these practices are employed by non-expert women in the home setting. Likewise, "folk" healing is used interchangeably with "traditional medicine" since specialized folk healers in this region generally follow medical practices from traditional systems. I avoid conflating this sector with indigenous medicine, however, since some local folk healers are not indigenous. The "professional sector" here is dominated by "biomedicine," which will be the primary term used for professional Western medical practices.

These distinctions help to understand how medical systems interact and hybridize. Originally, researchers thought that biomedicine would systematically replace traditional medical knowledge and practices, and this displacement has been observed in a variety of contexts (Mathez-Stiefel et al. 2012). Traditional medicine is sometimes considered a barrier to the introduction and proliferation of biomedicine (Giovannini et al. 2011). Similarly, some researchers have noted that

increased access to pharmaceuticals and biomedical facilities can lead to the abandonment of traditional medical knowledge and practices (Giovannini et al. 2011).

In contrast, evidence from the Andes and other regions of Latin America argues for complementarity and a complex integration of the two systems (Giovannini et al. 2011; Mathez-Stiefel et. al. 2012; Mignone et al. 2007). In some studies, researchers have observed that the systems remain two discreet domains of knowledge existing simultaneously and separately in order to appropriately address conditions with different etiologies (Giovannini et al. 2011). Other studies have found that biomedical and traditional medical knowledge merge to inform integrated, syncretic medical strategies in which biomedicine is reinterpreted through an ethnomedical lens (Garro 1986; Giovannini et al. 2011; Mathez-Stiefel et al. 2012). Sillitoe (2007) points out that these interactions show "radically different worldviews and epistemologies" (8) rather than the superiority of any particular system. The fact that some populations use biomedicine and local medical practices concurrently indicates that the systems are not mutually exclusive.

Past studies of these interactions offer two important reminders: first, the efficacy of health care programs depends on their ability to fulfill the perceived needs of patients (Schoenfeld and Juarbe 2005). For example, Finerman (1983) found that indigenous inhabitants of an Ecuadorian community rejected a new hospital because it differed from traditional home care in terms of admission, diagnosis, provider attitudes, and treatment options. Residents did not feel that

their concerns and needs were being met by this new facility, and it failed. This suggests that access to biomedical health care is not the only limiting factor in meeting the needs of local populations.

Second, fulfilling perceived needs depends on a nuanced understanding of the emic experiences of illness in the context of broader worldviews and conceptions of the body. Biomedically-recognized diseases such as diarrhea, respiratory infections, and diabetes are of immediate concern and are the subject of many health studies in the Andes. Other illnesses labeled as "culture-bound", "magical", "supernatural", and "personalistic", among other terms that gloss over their complex etiologies, also have very real biological effects (Bussmann and Sharon 2009; Waldstein and Adams 2006). In the Andes these include soul loss, fright, *susto*, *espanto*, *mal aire*, *mal de ojo*, and *debilidad*, among many other locally prevalent syndromes (Mathez-Stiefel et al. 2012).

Women's health care practices

Amid these complex interactions between local medical knowledges and practices and other forms of health care, women's health care practices are profoundly affected by access to resources. Mothers consistently cite lack of money as a constraint to ensuring optimum family health, which is often directly due to the cost of transportation to arrive at medical facilities and the actual cost of consultations and medicines (Schoenfeld and Juarbe 2005). Lack of access to biomedical care is also a limiting factor in managing chronic diseases, and it affects

women's physical health and quality of life by causing anxiety and aggravation (Miles 2011).

Poverty, inequality, and lack of access to foods and health care also exacerbate women's illnesses based on local conceptions of the body. For example, Larme (1998) argues that in southern Peru, the view of the female body as weak and fragile reinforces gendered inequality and power dynamics. This view aligns with the widespread vision of a hostile, menacing environment that carries various forms of windborne spirits that can infect the human body to create a condition known as *debilidad* or vulnerability (Greenway 1998; Larme 1998; Oths 1998). *Debilidad* and other psychosocial illnesses demonstrate how poverty acts cyclically: by reinforcing gendered inequality and emotional strife, this condition can lower a woman's productivity and power in life, perpetuating her lack of access to resources and support (Oths 1998).

Women remain primary care providers for their families regardless of their economic status or access to biomedical care. In her study of the introduction of a hospital to an indigenous community in Ecuador, Finerman (1983) showed that mothers were involved in over 90 percent of treatment sequences and were the first to provide treatment in 72.5 percent of cases. Over twenty years later, Schoenfeld and Juarbe (2005) found that rural *mestiza* women in Ecuador also relied on home treatments and their personal knowledge and skills as the first line of treatment for family illnesses. Therapies employed by women in the context of the home contrast to clinics or hospitals by offering private, personalized, and emotional care. For

example, Finerman argues that in the same indigenous community, "women promote their image as nurturant guardians" and home care is valued and effective because it is familiar and secure (1989:37).

This tendency for women to act as primary care givers is described within the hierarchy of resort model as "counter-acculturative" (Schwartz 1969). Among people of the Admiralty Islands in Melanesia, Schwartz (1969) argues that medical pluralism either follows an "acculturative" pattern in which biomedicine is the first resort to treat illness, or this pattern, in which traditional or home remedies are employed first and biomedical treatment is only sought if they prove ineffective.

A common form of home treatment in the popular sector includes the use of *agüitas,* or medicinal teas, often harvested from home gardens (Finerman and Sackett 2003; Luque 2007; Schoenfeld and Juarbe 2005). For example, Luque (2007) described how herbal remedies serve as diverse, no-cost alternatives to doctor or folk healer consultations for acute respiratory infections. Women's home gardens support their traditional roles as family healers and demonstrate their knowledge regarding the cultivation and use of medicinal herbs. In an indigenous community in highland Ecuador, Finerman and Sackett (2003) found that home gardens serve as family medicine cabinets, and they manifest women's status by reflecting the family's history and wealth to neighbors and visitors. Women who were just beginning to have children had small gardens with relatively few medicinal plants, but their gardens grew simultaneously with their families and healing experience. After years of caring for their families and expanding their

gardens, older women had pride in their knowledge and experience. Their home gardens communicated their knowledge and expertise to the entire community (Finerman and Sackett 2003).

From a biomedical perspective, women's caretaking and infant and child feeding practices are central to their maintenance of family health. Breastfeeding supports the immune system, lessens exposure to pathogens, and provides more complete nutrition than bottle-feeding (Stinson 2012). Infants tend to grow steadily for the first several months of life if their mothers have adequate social support and knowledge of breastfeeding practices. As noted above, young children become more vulnerable to illness when weaning because complementary foods may inadequately replace breast milk and introduce pathogens (Chavez et al. 1995; Pelto 2008; Stinson 2012). The World Health Organization (2003) recommends exclusive breastfeeding from birth to six months of age, introduction of complementary foods at six months of age, and continued frequent, on-demand breastfeeding until two years of age or beyond. In addition, Pelto and colleagues (2003) explain that responsive feeding practices, such as giving verbal encouragement, using appropriate utensils, and feeding in a comfortable environment, ensure optimum nutrition and healthy social relationships.

Beyond their nutritional impacts, mothers' food practices play an important role in maintaining health by balancing hot and cold humors, strengthening the body, and offering medicinal compounds in small, regular doses (Etkin 2006; Finerman 1989; Graham 2003). Dietary home remedies take many forms, and the

literature points to three broad categories of food medicines. First, plants are often considered food in one context and medicine in another with minimal or no overlap (Etkin and Ross 1982; Pieroni and Quave 2006). Alternately, foods might be considered "healthy" in a general way, such as being good for the blood or skin, but their effects are not targeted at specific illnesses. This area of the food-medicine spectrum contains what Pieroni and Quave (2006) classify as "functional foods". Lastly, foods may be ingested with a specific medical application in mind, in which case they are known as food medicines or medicinal foods (Ceuterick et al. 2007; Pieroni and Quave 2006). Regardless of how they are classified, recognizing both the nutritive and medicinal aspects of foods is essential to understand how diet and health are intertwined.

Both domesticated and wild plant species are used within the food-medicine spectrum by folk healers in the Ecuadorian Andes (Cavender and Albán 2009). Ethnobiological studies of food medicines in home settings are lacking from Ecuador. However, studies in other areas of Latin America (Poss and Jezewski 2002; Vandebroek and Sanca 2006), the Caribbean (Quinlan and Quinlan 2006; Volpato and Godínez 2006) and the Latino diaspora (Ceuterick et al. 2007) suggest that the overlapping uses of foods and medicines are widespread in these populations.

Implications of changing diets

A critical element of the interplay between food and health is that diets across cultures and regions have been shifting over the past several decades to

include greater overall energy density in the form of more vegetable oils, added sweeteners, and animal-source foods. In conjunction with these shifts, there has been a marked reduction in intakes of legumes, whole grains, fruits, and vegetables, which are nutrient-dense and culturally significant parts of traditional diets (Drewnowski and Popkin 1997; Popkin et al. 2012). One framework for understanding these changes is "dietary delocalization", which Pelto and Pelto (1983) argue has benefited industrialized countries but has generally had a negative effect on diet diversity and food sovereignty in lower income countries. The commoditization of food systems plays a large role in delocalization, and Dewey (1989) argues that this process of replacing food with cash translates to economic and nutritional vulnerability, changes in social organization, and ecological exploitation. Soon after these phenomena were defined and clarified, Popkin (1993) described the "nutrition transition" as a five-stage series of patterns involving diet, lifestyle, and disease prevalence that human populations have experienced over time. The fourth and fifth patterns, which are respectively characterized by degenerative disease and behavioral change, are the primary focus of Popkin's subsequent work because they characterize the changes described above that are currently underway in much of the world (Drewnowski and Popkin 2009; Popkin 2004; Popkin et al. 2012).

More recently, Monteiro and colleagues (2012) have argued that dietary changes should be framed in light of the increased availability of processed foods rather than traditional food groups like fruits, vegetables, or oils. They describe

"ultra-processed products" as foods that are formed almost entirely from industrial ingredients and, although they may imitate a food's appearance, generally contain no or minimal whole foods. They argue that the energy density, hyper-palatability, displacement of meals, aggressive advertising, and nutritional imbalance associated with ultra-processing act synergistically to damage human health and decrease popular control over the food system. As a novel form of food production, these authors point to how ultra-processing stems from technological, political, economic, and cultural factors associated with a globalizing world (Monteiro et al. 2012).

These frameworks show how foods are interdependent with social and cultural phenomena. This has been explored in the context of rapidly changing diets by a number of researchers. In a pivotal study of a rural indigenous community in Ecuador's Cotopaxi province, for example, Weismantel (1988) provides insights into how foods shape and reflect identity. She found that cooking traditional *nabus* (wild mustard greens) can be an act of self-affirmation for marginalized indigenous women. Their roles as mothers and cooks are reinforced as they prepare foods that have been a part of their families' diets for generations, and they tend to converse freely about them among peers. In contrast, white rice is a relatively new food in the indigenous diet and, while it carries high status and is quickly becoming the centerpiece of meals, it doesn't carry the same cultural meaning as local foods do.

Similarly, Weismantel (1989) describes the complex relationship between traditional barley gruel and store-bought white bread in the same indigenous community. In the past, white bread was a form of *wanlla* (a special treat) that was

given out rarely to children and family at holidays and fiestas. Recently, however, children have come to expect bread from their fathers whenever they return home from working in the city, creating an unspoken tension between the mother's traditional brown gruel and the father's modern white bread. Since bread can only be obtained with cash, when the "children cry for bread," as Weismantel quips, they are rejecting their indigenous identity associated with female gruel and embracing the process of *emblanquemiento* (whitening) that has gradually transformed the Ecuadorian people for centuries. These small changes in preferences and practices therefore have deeply rooted consequences for Ecuadorians' ethnic, racial, gender, and rural identity formation.

These dynamics have been characterized in relation to tensions between traditional and commercial foods throughout the Andes. In a similar study in the Peruvian Andes, Graham (2003) argues that locals are using different self-defined categories of foods in multiple, contradictory ways to assert their social status and identity by contrasting the values and meanings surrounding two types of foods—local/*yana mikhuy*/dark and commercial/*misti*/white—in the context of villagers' ideas of health, physical labor, and ethnic identity. *Yana mikhuy* foods have the ability to maintain health, provide energy for hard physical labor ("real work"), and serve as special markers of identity during the postpartum period and when men return from mining work and must regain their strength. In contrast, *misti* foods are considered a luxury in some contexts but local women do not talk about them at length and feel embarrassment and anxiety if they must rely on white flour during

the pre-harvest hunger season. In villagers' minds, these new foods also lack the health benefits that traditional foods offer, and can even be detrimental in certain circumstances. Through this examination, Graham (2003) highlights how a dichotomous food classification system can mask the complex and sometimes contradictory ways that different foods inform locals' experiences and values, health, nutrition, and social identity.

In a more recent case study of changing maternal diets in Costa Rica, Cantor and colleagues (2013) explain that in the context of major political economic shifts, mothers are moving away from traditional diets in favor of non-local, processed foods. In addition, young mothers are abandoning the practice of the *cuarentena*, a forty-day postpartum resting period that reinforces social ties and ensures that new mothers are well cared for and nourished. They also argue that knowledge transmission has shifted so that young mothers are receiving nutrition and health information primarily from medical professionals and television rather than family members. This points to the ways that food and health care knowledges interact.

Women in healthscapes

Similar to the impacts of changing diets on women's roles in the family, medical pluralism affects women's roles as home healers in a variety of ways. In discussing these implications, I borrow the term "healthscape" from Gold and Clapp (2011), which they define as: "the biophysical, social, and psychological space in which everyday 'health seeking' plays out, within the interstices of the various

medical systems" (96). These interstices are critical spaces in which global power relations play out, and they are inherently syncretic and dynamic. These authors remind us that the simultaneous use of biomedicine and traditional medicine "does not necessarily change people's beliefs about health and illness. It indicates they seek a solution for their health needs, not a change in ideology" (96). This section outlines some of the ways that women's health care practices are interdependent and embedded within complex healthscapes.

Extended social networks play a large role in health decisions, and women can assert their power and strengthen relationships—or vice versa—by collaborating with extended family. Price (2003) discusses this phenomenon in the context of treating a child's fright illness in a wealthy family in Quito, Ecuador. In this case study, a physician-father resists traditional healing for his sons who are experiencing *espanto* (fright illness), according to their rural maternal grandmother, because he believes that such a diagnosis is superstitious would undermine his identity as a well-educated urbanite. After many recurrences and under pressure from his wife, the father finally acquiesces to the grandmother's insistence that his sons be diagnosed with *espanto* and treated by a traditional folk healer. The mother and grandmother create social alliances through this process, which allow them to assert power over the male authority (Price 2003).

This study also shows that because men often control family finances, a reliance on biomedicine reinforces their power over women. In the scenario above, the mother was suffering from a debilitating chronic illness that the author argues

prompted a loss in her autonomy and agency. Her illness forced her to defer to her husband, who initiated a host of biomedical visits and treatments. As Price explains,

> Women's roles in healing the family are reinforced and celebrated through alternative healing in a way that is not possible through biomedical healing. This is partly because biomedicine often dismisses the role of mothers in illness management, appropriating all credit for cure. [2003:218]

In contrast to a singular approach, integrating traditional medicine and biomedicine not only allows women to maintain their power as healers within the domestic sphere, but also offers an opportunity to expand this power beyond the home (Price 2003).

From an applied perspective, Wayland (2001) asserts that it is important for development programs to consider the gendered nature of local medical knowledge in light of women's healing roles. Home health care practices allow women to maintain some control over the process of healing, and this author found that women felt disempowered and blamed for their children's health issues when they entered the public health system. It is therefore "important to note that the way in which medicinal plant knowledge is incorporated into PHC [primary health care] programs will affect women's authority as household healers" (Wayland 2001:182).

Wayland (2004) also argues that the efficacy of both traditional medicine and biomedicine is a cultural construction created by socially defined expectations and desired outcomes. She observed that some women in a peri-urban neighborhood in the Brazilian Amazon tend to equate the efficacy of pharmaceuticals with the failure and lost promises of development, while they relate traditional medicines to an

idyllic rural lifestyle. Because medicine carries symbolic meanings in addition to physiological effects, this author argues that the rejection of pharmaceuticals can be a reflection of broader dissatisfaction with modernity, urbanization, and development.

McKee (2003) argues that healing rituals performed in the home can empower women by acting as repetitive enculturation events. Many Andean children periodically suffer from *mal aire*, believed to be caused by evil spirits, winds, or ill intentions. Treatment usually involves a family member, local expert, or traditional healer who comes to the home and performs a *limpia* or cleansing ritual in front of other children (McKee 2003). In these instances, the healer cleans the patient by burning pungent plants, spraying alcohol on the skin, and creating friction by rubbing the skin. According to McKee (2003), repeatedly exposing children to the ritual creates foundational schema that align children's health conceptions and worldviews with those of their extended family.

Even if the healer is female and performs the healing in the family's home, however, Gold and Clapp (2011) note that seeking outside care inevitably entails navigating power dynamics for women. Such is the case with indigenous healers and biomedical doctors alike because "both are members of societies recognized by the rest of the community as possessing knowledge on how to heal, who wield power over other members of the group" (Gold and Clapp 2011:97). Even if women exert power by exercising choice over which healers or modalities to utilize first or most often, their roles as healers are still diminished in the act of seeking care

outside the home. This creates a distinction between biomedicine and folk or traditional healing on the one hand, and either of these sectors and home healing on the other.

These studies show how mothers' choices surrounding health care reflect complex social and cultural relationships and identities. In a region of such ethnic diversity sandwiched by an ideological dichotomy between indigenous and white, the Andean *mestizo* experience is particularly illustrative of the complex ways in which medical choices can serve as political statements.

The research reviewed here provides evidence that women can gain power by asserting their authority and agency as primary care providers. Their own health and that of their families is also dependent on broader cultural and political-economic developments. Biomedical care is a crucial element in improving the health status of Andean peoples, and access to resources supports strategies to manage Ecuador's pressing health issues. Anthropological research expands this discourse to show how food and health care practices reflect power dynamics, knowledge interactions, and ethnic identity in the context of modernization.

Chapter Three: Methodology and Methods

Research questions

As is evident from the introduction, this thesis is both a part of and apart from the WOTRO nutritional sub-project. While I sought to answer the research questions listed in the introduction alongside the research team, my knowledge and interests in ethnobiology and medical anthropology led me to focus this thesis on the following questions:

1. What roles do foods play in mothers' maintenance of family health?
2. How do mothers maintain child health within the home?
3. How do mothers navigate health care for their families?

As a subsidiary of each of these questions, I particularly sought to understand how mothers practice, acquire, and transmit knowledges surrounding food and health.

Methodological framework

Drawing from the methodology and theoretical perspectives of the WOTRO project, the framework for this thesis relies on several key assumptions about reality and the best ways to study, interpret, and present it. Like much ethnographic work, these basic assumptions are rooted in the interpretivist branch of the social sciences, which holds that there are many different versions of reality and the ways we apprehend them are intimately tied to our own perceptions and perspectives

(Bernard 2011). In essence, the acts of research (choice of methods, data collection, analysis, and writing) are co-creative with the subject.

Within this interpretivist framework, I rely on elements of actor-network theory to understand the complexity of practice (Latour 1993; Law 2004; Law and Hassard 1999). This collection of perspectives holds that practice is the enactment of relations between individual actors and the networks within which they exist, struggle, and change the world and other actors around them. These relations are not fixed or durable. Rather, they are constantly performed and re-performed as part of circulating systems of interactions and transformations. These translations among actors in turn lead to the proliferation of hybrids and heterogeneity that are fundamental characteristics of the modern world (Latour 1993).

This perspective shows that by "following circulations we can get more than by defining entities, essence, or provinces" (Latour 1999:20). By trying to follow movement, temporality, and dynamism in this way, we can better comprehend the "world-building abilities" of actors and sites (Latour 1999:21), which is ultimately the applied potential of the research. The challenge, therefore, is "how to *talk about* complexity, to *appreciate* complexity, and to *practice* complexity" as an actor in the research process (Law 1999:10). By focusing on practice as the basic element of performative relations between actors and networks in the broad sense of the terms, I apply this theory to understand the heterogeneity of food and health care in a rapidly changing, infinitely complex context.

Sampling

Approximately 85 households live in Jesús del Gran Poder, 18 of which included children ages zero to five at the time of the WOTRO survey (January-April 2013). At least two families with children of this age chose not to participate in the survey, so they were not considered for the ethnographic phase of the project. We sampled only from families with children in this age range for two reasons. First, the first five years of life are the most critical for growth and development, as elaborated in the literature review (Victora et al. 2008). Second, although growth faltering most commonly occurs during the period of complementary feeding (six months to two years of age), we extended the age range to include a larger sub-population from which to sample and to capture nutritional practices that may contribute to catch-up growth in later childhood.

Two sub-samples were selected for participation in the study based on purposive methods to capture heterogeneity in this small population (Bernard 2011). The first, Sub-sample One, included six families with a range of child ages, sex, number of children, and mothers' ages (see Table 1). I selected families with normal to high diet diversity scores and constant child growth to over-sample families with potentially positive nutritional practices for extended participant observation. Two local people working as field staff for Ekorural approached the first mother, Estefanía. To recruit subsequent families, I visited their homes during observation days with other families, either with the mother of the family I was currently working with, with field staff, or alone if no one else was available. This

recruitment approach was beneficial in allowing community members to see me on a regular basis and feel more comfortable with my presence and involvement with various families.

Table 1. Participants and variables used to sample for heterogeneity.

Pseudonym	Age	Number of Children	Age of youngest child (years.months)	Sex of youngest child	Diet diversity score*	Child growth **	Sub-sample 1 (days of participant observation)	Sub-sample 2 (interview & limited observation only)
Estefanía	31	3	3.10	F	6	Constant	7 days	
Damaris	20	1	4.4	M	7	Constant	4.5 days	
Rosa	33	3	0.6	M	7	n/a	7 days	
Penelope	18	2	0.1	F	6	n/a	3 days	
Ana	23	2	0.5	F	7	n/a	3 days	
Elsa	31	1	1.7	M	8	Constant	3 days	
Marcia	41	3	3.10	F	4	Problems		x
Luz	35	2	2.9	F	7	Constant		x
Marisol	35	2	1.7	M	6	Interesting		x
Aurelia	25	2	1.2	M	7	Constant		x
Cristina	37	3	5	M	8	Constant		x

*Scores were calculated as the number of the following food groups consumed by the mother in the 24-hour recall period: meat, fortified, fruits and vegetables, grains and tubers, fats, eggs, dairy, legumes, and vitamin A-rich fruits and vegetables.
**"Constant" refers to charts with relatively constant growth. "Problems" indicates that the chart includes a significant slowing or stopping of growth. "Interesting" indicates that the child's growth slowed but later recovered. "N/a" is used for charts that were missing or did not have enough points to establish a growth curve.

To supplement the observations and interviews from Sub-sample One, I selected an additional five mothers (Sub-sample Two) for interviews only. For this sub-sample, I selected mothers with a wider range of diet diversity and child growth

scores to capture more heterogeneity of practices in the community. I also sought out mothers with children within the critical age range of six months to two years to better capture the period of complementary feeding. Because I was not spending the entire day with these mothers, coordination and mothers' availability also had an effect on participation in this sub-sample.

Ethnographic methods

To better understand mothers' experiences, attitudes, and knowledges, I conducted face-to-face semi-structured interviews with all mothers in both sub-samples (N=11). These in-depth interviews took place in a comfortable environment of the mother's choosing: usually either in the mother's home or the guest room where I was staying. They addressed topics ranging from food preferences and pregnancy care to food access and opinions of food sovereignty (see Appendix A for full questionnaire), and they remained flexible to allow each mother to expand on whatever issues she felt were most important. They also included questions about child health and a successive free-listing exercise regarding child illnesses, treatments, and food remedies (modified from Berlin and Berlin 2005, Quinlan and Quinlan 2006, and Ryan et al. 2000). All interviews were audio recorded using an Olympus VN-701PC digital voice recorder.

These interviews support the bulk of this thesis, which stems from descriptive field notes of in-depth participant observation with mothers and their families in Sub-sample One throughout July and August of 2013. This involved

spending the majority of each day, often from before sunrise to after sunset, following, conversing with, and helping the mother in her daily routine. I excused myself at various points throughout the day to jot notes by hand, and each night after dinner to type extensive field notes in private. These notes included observations of breastfeeding and complementary feeding if applicable, young children's interactions with others, food preparation, meal time interactions, and agricultural and household tasks. If family members were sick during my stay, I also observed what they ate, how they were treated, what they did differently, and how family members talked about the illness. I also located the source of water for each home and determined how it was treated, noted hygiene practices such as hand-washing, dish washing, food storage, and bathroom hygiene, and documented passing comments regarding food, health, and illness.

Using participant observation as the primary method of data collection was beneficial on many accounts (Bernard 2011). First, it allowed an understanding of the context in which the practices that are the focus of the study take place. By being a participant in these families' lives, I was able to gain their trust and confidence, which in turn led to more openness and less reactivity to my presence. This method also gave me the flexibility to bring up appropriate topics in conversation, to ask more about topics that might not have come up using other methods, and to see the differences between what mothers *say* in interviews and what they *do* in daily practice. Most of all, living and interacting with participating families over many weeks gave me a better understanding of the meaning behind

their words and actions. By no means does this nascent familiarity with the cultural context and social underpinnings of my field site make me an authority, but it does seem to have offered some holism and realism to my analyses (Bernard 2011).

Two additional methods conducted with families in Sub-sample One provided supplementary information to observations and interviews. First, each mother and I constructed a social network chart to help characterize the degree of support that she and her children receive from family and friends. In addition to our informal conversations, these helped us visualize with whom each mother made both material and immaterial exchanges. Second, photography allowed me to record and revisit every meal, kitchen, and home in visual form. Along with photographs of the water source and kitchen of each household, I photographed food preparation techniques and at least three days of meals and mealtimes in each family in Sub-Sample One for later reference. Only photographs without identifiable images are being used in any publications emerging from this research.

Because of the communal and intimate nature of this ethnographic approach, it was important to obtain informed consent from everyone in the household, as well as relatives and friends that occasionally came to visit. I obtained approval for these methods from the Oregon State University Institutional Review Board and the Universidad San Francisco de Quito Bioethics Committee and undertook the process of informed consent or assent with all mothers in Sub-sample One and their entire families during the first day of observations. I also received informed consent from mothers in Sub-sample Two before our interviews.

To further explore emergent themes and findings, receive feedback from mothers about the process of research and interventions, and maintain relationships with people in the community, I re-visited Jesús del Gran Poder for two days in December 2013. This short visit involved informal interviews with eight of the eleven participating mothers (two had moved to a nearby town and one was unavailable), during which I asked specifically about themes that had emerged from the data. This method increases the validity of the study, meaning that the findings I highlight more accurately depict study participants' perspectives.

Table 2. Summary of methods and analysis.

Method	**Subjects**	**Who**	**Product**	**Analysis**
Participant Observation	Mothers' activities, meal times, food preparations, home health care practices, family interactions, informal interviews	6 mothers and their families	Field notes	Coding, memoing, theme mapping
Semi-structured interviews	Pregnancy and birth, food security, changes in diet and production, food movements	11 mothers	Transcripts	Coding, memoing, theme mapping
Social network charts	Mothers' connections with family and friends	6 mothers	Hand-drawn charts	For reference
Photography	Meals, meal times, house, fields, family	6 families	Photographs	For reference
Informal interviews (2nd visit)	Emergent themes	8 mothers and their families	Field notes	Coding, memoing, theme mapping
Free-listing	Child illnesses, home health care practices, food medicines	11 mothers	Transcripts	Number of mention and substances

Analysis

The initial analysis took place continuously and iteratively throughout the research process through series of analytical notes and revisiting emergent themes with each new mother. During the field work period, I also met regularly with other members of the WOTRO nutritional sub-project team, including local field staff that grew up in neighboring communities, in a nearby office to discuss emergent themes and find consensus about our interpretations of practices that we had observed, These conversations helped us find patterns and differences between villages and provided more validity to our conclusions.

After data collection, I transcribed all interviews in Spanish using ExpressScribe software and a foot pedal. These were coded, along with all field notes from participant observations, using Dedoose online software to index excerpts according to the particular topics they addressed. For example, commonly used codes included "food preparation", "sickness", and "intrahousehold interactions", and most excerpts were indexed with more than one code as appropriate. Because the field notes and transcripts that I collected are contributing to the WOTRO nutritional subproject, used a common codebook developed in cooperation between the team members. This codebook was modified slightly in consultation with Dr. Gross during the coding process as we identified additional codes that were necessary for analysis.

After this initial coding process, I extracted all excerpts from selected key codes relating to my thesis topic and re-coded them by hand for emergent themes.

For example, within the "home remedy" code, I identified themes such as "pride in locally sourced remedies", "traditional remedies lying outside social norms", and "doctors and nurses transmitting nutrition knowledge". Following the constructivist grounded theory methodology of Charmaz (2006), I wrote extensive memos for each of these themes to find connections between them, determine their relevance to my research questions, and relate them to the literature. I also visually mapped emergent themes to help form connections and understand their relationships. After many iterations of these two techniques, I developed a general outline of findings that forms the basis of the next three chapters of this thesis.

The analysis of the quantitative data collected during free-listing exercises consisted of two main phases. First, I organized child illnesses based on the names used by mothers and grouped the illnesses into several broader categories. I calculated the frequency of each illness category by counting the number of conditions that mothers mentioned within each category. See Appendix C for more information about child illness grouping and salience.

Second, I analyzed the free-list and interview data about home remedy substances for frequency of mention, number of illnesses treated, and number of women mentioning each remedy. For each condition mentioned, I also calculated the number of substances as well as the number of total mentions of treatments for that condition. Distinctions between substance/remedy and food/medicine are explained in Chapter Five. I chose to exclude analysis based on order of mention of illnesses and remedies because it is "highly correlated with simple frequency"

according to Borgatti (1999:149; cited in Bernard 2011) and mothers often started talking about remedies during the first part of the interview before the free-listing exercise.

These analyses were used to support the qualitative analysis of emergent themes surrounding home health care, rather than serving as a central focus of the findings. To this end, I expanded my qualitative analysis of home remedies based on the most common home remedies for each illness category, noting exceptional outliers, emphasizing particularly salient remedies, and problematizing the distinctions between "foods" and "medicines" when appropriate.

Limitations

This study was inevitably limited in a number of ways, not least of which involves the more philosophical difficulties associated with ontology, subjectivity, and methodology as a whole that I addressed above. In addition to these broader dilemmas, a few practical limitations were present. First, the limited time frame of the study made it difficult to work with a large sample of mothers. Enrolling mothers and families in the study took longer than expected at the beginning since I was unfamiliar in the community, but after several weeks I was being approached by mothers and had developed friendly relationships with many families and their neighbors. With more time, I could have invited every family with young children to take part in the research, which could have created a more inclusive environment for fostering community-based change. As it was, I chose to navigate this limited

time by interviewing more mothers (Sub-sample Two), which could be done quickly and conveniently for both parties.

Second, because the nutritional sub-project was already designed when I joined the team, my thesis research had to align with its goals, questions, and methods. This meant that my methodology and analysis could have been more tailored to my specific research questions regarding health care. In particular, identification of home remedy plant species and visits to biomedical facilities would have strengthened my findings. At the same time, this limitation was also an advantage, not only because of the support and enjoyment of working with a team, but also because it pushed me to gather seemingly disparate patterns and tensions into a single thesis. Regardless of its impacts here, working on a large project has offered valuable lessons to consider in future research.

Related to these first two factors is the nature of a single community ethnography, which limited my ability to cast a wide net across different social groups and institutions. Conducting interviews with biomedical practitioners and indigenous healers would have enriched and contextualized my findings about navigating health care, and speaking more formally with elderly residents may have elucidated certain complexities of people's perceptions of change and history. With more time, observing food and health care practices in more than one community would have strengthened possibilities to view heterogeneity in this region. Being able to compare various practices in the three communities in the WOTRO project helped alleviate part of this limitation. Even though these comparisons are not

included this thesis, they enhanced my overall knowledge and understanding of its context.

Finally, although being an outsider offers the advantages of relative impartiality and some awareness of culturally based assumptions, it also presents limitations. I can converse comfortably in Spanish, but I undoubtedly missed many side comments, jokes, and local expressions that a native Spanish speaker would have been more likely to glean from participant observation. In addition to this rather mechanical limitation, the content of conversations and interactions that I did have with families was undoubtedly colored by the way they perceived my national, racial, and class identities—a white graduate student from the United States—which conferred relative power and status to me in varied circumstances. Rather than pretending that my presence and identity had minimal impact on the way my research proceeded and the findings that emerged, I acknowledge their profound effects here and encourage readers to critically interpret my findings with an understanding of their inherent subjectivity.

This leads to me to a final note before introducing some of the major lessons from this study. As Law (2004) adeptly argues, despite (or perhaps in response to) our desire for knowing—in this case, knowing the answers to these research questions in the form of concrete findings—and our trust that research methods produce knowable knowledge, social science is inevitably messy and incomplete in its attempts to describe reality. This is a lesson I am still learning and struggled with throughout the course of research. The classic prescribed methods at our disposal

to try to know the social universe are wholly inadequate for capturing the contingency and ever-fluid relationships between the people we study and everything else in their worlds (Law 2004). Therefore, while I attempted to follow certain methodological standards, such as avoiding "leading questions" or withholding my own attitudes about nutrition and health as much as possible, I was embedded as a social actor in the research project. As such, I have inevitably crafted a version of reality by amplifying certain complexities and processes, knowing that in so doing I have also silenced and ignored limitless other elements. I therefore invite the reader to interpret this thesis through your own unique lens. Collective readings and imaginings will undoubtedly provide more nuanced, complex interpretations than I alone can propose and better reflect the unending evolution of what there is to find.

Chapter Four: Food for Health

General diet

In Jesús del Gran Poder and the province of Carchi, daily diets tend to revolve around the ubiquitous potato. Almost every meal includes *papas* in some form: as the main focus in a breakfast of leftover re-fried potatoes from the night prior; as a small addition to white rice with a fried hot dog and instant juice; as unpeeled complements to a chicken soup, taken from a communal bowl to add to the soup throughout the meal; or as backdrop to boiled *nabos* with *tostado* (see Figure 4).

Figure 4. Ubiquity of potatoes in local diet. Clockwise from top left: fried for breakfast, with rice and hot dog, with wild mustard greens and toasted corn, communal bowl with skins for chicken soup.

There are lively debates within families about whether one prefers the skins on or off. Women peel potatoes for the majority of dishes, tossing the skins in a bucket for her or another family's pigs, but for classic dishes in which the skins are left intact—chicken soup, fava beans and cheese, or with peanut or pumpkin seed sauce—everyone is left to decide whether to peel or not to peel before eating (Figure 4). In the families that I visited, most people preferred a peeled potato and everyone had different techniques for the task. However, there was an occasional mention that perhaps the skins are good for you, or that people rarely peeled potatoes in the past—casual observations among participants that their everyday practices are not inevitable, but in some way shaped by the world around them and therefore part of embedded processes of heterogeneous adaptation.

Regardless of the particularities of presentation and form in different dishes, potatoes remain the most fundamental staple for people in this region. The Super Chola variety is cultivated and consumed almost exclusively, being prized for its uniformity and versatility in many dishes, especially in frying since it does not stick to the pan. However, other varieties persist in smaller amounts and are sought after for more particular qualities. There's the Única, white skinned and ready to harvest in six months, which is also popular but sticks more when frying; the Capira, which is purple skinned and best for roasting with the skins on, but it takes a long time to mature; the Betiña, which can grow to the size of plates if they are fertilized well; and the Morazulco, a sweet potato-like tuber that is rare but sought after from families that grow it.

Despite the culinary merits within this modest diversity, not to mention most people's affinity for their staple food, potatoes are not considered particularly nutritious or healthy. They are, in a word, filler. Damaris illustrated this point when, after she carefully prepared a chicken sauce for lunch by chopping all the vegetables finely enough that her husband and four-year-old son would eat them, her son said he only wanted the plain boiled potatoes on his plate. Damaris commented that she didn't want him to eat only potatoes, and thought to offer him an avocado salad that she knew he would accept (Figure 5). Indeed, he got excited at the suggestion and she quickly prepared the salad with a bit of lemon and salt, explaining matter-of-factly that she knows what he will eat. This short, ordinary negotiation between mother and son is one example of how women's nutritional knowledge and family preferences play out against the backdrop of an ever-present staple food.

Figure 5. Avocado salad made to convince four-year-old to eat more than potatoes.

Beyond the base of potatoes, family meals take two forms: *sopa* or *seco* (Figure 6). *Sopas* are soups, most often prepared by finely chopping carrot, onion, and cilantro into a pot of boiling water and adding potatoes, bits of chicken or pork, salt, coloring (usually oil infused with *achiote*, the bright red annatto seed), and a small amount of milk. Soups can diverge from this basic recipe by adding seasoning packets or cumin powder, bow-tie pasta, balls of wheat dough, fava beans, peas, plantains, toasted oats, avocado, and other vegetables. *Secos*, on the other hand, are based on a plate of boiled potatoes and white rice. This type of meal is completed with some sort of protein: a fried egg or chicken wing, a hot dog, lentil stew, chicken in sauce, fried pork, or boiled fava beans and cheese. Women generally try to include a simple salad for the side—tomato-onion salsa, shredded lettuce with lemon, or broccoli florets with mayonnaise, for example—even if some of their children refuse to eat it. Although many mothers consider "ideal" the meals served at restaurants in town (which include both soup and *seco*) they generally choose one or the other for daily family meals.

Figure 6. Examples of potato *sopa* (left) and chicken *seco* (right).

There is an inevitable gap between what mothers actually prepare on a daily basis and what they see as an ideal diet. In addition to soup and a meat-based entrée, most restaurant meals include fresh juice. Some mothers do prepare this type of juice from any number of fruits (tree tomato, pineapple, blackberry, or guava, for example) by blending them with sugar and water. Others resort to instant powder juices or make a drink from Jello packets when they cannot access fresh fruit. In some families, mothers tend to replace the juice with herbal teas or barley gruel for after lunch.

Another important element of the general diet includes what is expected and eaten at parties. For first communions, confirmations, graduations, weddings, and other relatively common life events, the standard meal revolves around a roasted pig. This is served alongside *mote* (hominy) and a small lettuce salad, as well as chicken soup and *chicha,* a traditional beverage that varies by region. In the northern highlands, *chicha* is a mildly fermented punch made with rice, various fruits, and herbs. Sandwiched by a champagne toast and cookie before the feast and drinking and dancing afterwards, this meal is an essential component of celebratory events and helps to reinforce what constitutes an ideal meal.

This short tour of the "general diet" of Jesús del Gran Poder is inevitably incomplete, given the diversity of preferences, access to foods, knowledge of preparations, and temporal variations in harvests. Women's culinary repertoires are constantly evolving to incorporate new recipes, available ingredients, and

waning child enthusiasm for certain dishes. Across this heterogeneity, however, there are some striking patterns and consistencies that are worth exploring. In the following sections, I will describe several of these patterns and locate them amidst the heterogeneity of practices that exist in the community. First, I frame current food practices within participants' perceptions of history, exploring the ways in which re-imagining the past, *antes*, shapes current attitudes and practices surrounding food for health. Then, I describe how these ideas of *antes* continue to influence maternal diets and infant and young child feeding practices. These descriptions form a basis for understanding how mothers care for family health.

Antes

Casual debates about the healthfulness of different foods inevitably bring residents to a similar conclusion: *antes*, in the past, life was different and people were healthier. This nostalgia rests not only on the idea that different foods made up the diet, but also on the sense that agricultural chemicals have made today's foods less healthy. Residents' collective imagining of a healthier past is embodied in their knowledges and practices surrounding food, and in this section I suggest that these practices represent complex negotiations with modernity.

Constructing the past takes place both within and between individuals, and the present idea of *antes* often stems from stories told by grandparents. Many people of this generation that I spoke with asserted that they and their families ate healthier in the past. Rosas's father, for example, reminisced about taking packets of

máchica (toasted ground barley) to the field as a boy to mix with water and a drop of *dulce* (unrefined cane sugar). He recalled that this snack would keep him full and energized for hours, noting the difference with today's fare of white pasta and colas. He and other grandparents in the families I visited asserted that the foods they grew up with were more hardy, nutritious, and natural. As Elsa's father put it, they were "*más sanas* [healthier]". There are two reasons that people consider *antes* to be a time when food was healthier: first, the diet is thought to have consisted of a different balance between traditional foods and non-traditional foods, and second, it is imagined as the time before any chemicals were used in production. Both of these elements of the construction of a healthier past are more complicated than they appear, and they seamlessly integrate historical truth, present practices, and an idealization of bygone times.

The composition of family diets undoubtedly differed in the past. Grandparents in this area said they grew up eating primarily locally produced foods such as *mote de trigo* (wheat berries), *arroz de cebada* (barley gruel)*, máchica, habas* (fava beans)*, tostado* (toasted corn)*, morocho* (often in the form of a thick, sweetened corn beverage), and of course, *papas*. Grandparents asserted that refined commercial foods like bread, white rice, soda, pasta, and white sugar were unavailable in the area until relatively recently in their lives.

These local shifts in diet also reflect broader changes at the national and global levels. The incorporation of processed foods such as white rice, bread, pasta, and sugar is the most obvious example of how the global "nutrition transition" is

taking form at the local level (Popkin et al. 2012; Monteiro et al. 2012). Estefanía's great-grandmother recalled a time when white rice was only served as a very special treat at parties, and laughed that today no meal is complete without rice. Similarly, children and adults showed preferences for white bread, and many residents' palettes are so adapted to refined cane sugar that minimally or unsweetened tea or coffee is disgusting to them.

Older people recalled their parents working in the *haciendas* and receiving beef whenever the owners slaughtered a cow. On one occasion, Estefanía's extended family members laughed and waved their hands in excitement as they remembered the taste of smoked, salted beef during that time. Mothers explained that their families used to have just one cow to supply enough milk and cheese for family consumption, but now they have many cows and sell almost all their milk to earn money. Lamb was also more common, and Cristina discussed how the older generations were healthier because of eating lamb. Here, she relays her mother-in-law's views on lamb as a food of the past:

> *Dice que es la carne más sana. Por eso, ella dice que en todos han comido borrego. En cambio nosotros no. (¿Por qué no?) Porque uno, que no hay. Y a la gente, no cria.* [She says it's the healthiest meat. Because of this, she says they ate lamb in everything. Not in our case, though. (Why not?) Because for one thing, it's not around. And people don't raise it.]

Sheep's wool was also spun and woven by women in the communities, but this practice has nearly disappeared and cheaper, industrially produced textiles are now ubiquitous. These changes in the local economy of domestic animals have

significantly altered the basic elements of daily diets and reflect Dewey's (1989) explication of the commoditization of food systems.

Another major shift from *antes* involves dietary fats. In the past, people kept vats of pork lard under their counters to use in relatively small amounts for pan-frying and seasoning. Today, on the other hand, it is common for mothers to employ relatively large amounts of hydrogenated African palm oil on a daily basis for deep-frying wheat tortillas, meats, and eggs (see Figure 7). The availability of cheap edible vegetable oil, as noted in many other areas of the world (see Popkin 2004; Popkin et al 2012), has contributed to not only changing consumption of dietary fat, but also changing food preparation practices. In turn, these changes affect how and what foods are produced at the local level: today, women raise pigs almost exclusively to roast for special occasions rather than for home subsistence.

Figure 7. Grilled tortillas (left), as people imagine them to have been in the past, and fried tortillas (right) that are common today.

It is important to note that many traditional foods were introduced to the Andes during colonization, and that *antes* does not necessarily reach beyond a few generations. There is no memory among residents of any language other than Spanish in their families, and their original settling of these hillsides is absent from the imagining of *antes*. Sherwood (2009) found that farmers remembered several "critical moments" in Carchi's past, including market integration in the 1970s and the adoption of the United States dollar as national currency in 2000. Similarly, residents I spoke with considered these moments as different delineations of *antes*. However, the continuous push of modernization throughout these recent periods in history is reflected in the fact that in casual conversation, residents tended to blur and confound the timing of the introduction of chemicals, machinery, markets, potable water systems, indoor plumbing, compulsory education, and commercial foods into one general category of *antes*. Apart from the punctuations that market integration and dollarization provide, residents used an idealized, relatively homogenous vision of *antes* as a basis for comparison to life today.

One of the most common perceptions that mothers shared about the changes since *antes* was that people of older generations are much healthier than people today. Aurelia explained that this difference is due to the foods people ate *antes* in contrast to what people eat nowadays:

> *Ellos comían mejor. O sea, porque era más sano lo de antes. Ellos comían bastante habas. En vez de golosinas ellos habas tostadas o tostado. Eso, y parece que es más sano. El arroz de cebada. La máchica. En vez de pan ellos comían máchica. Hecho, como dicen, mezclado en el café ellos ponían la máchica y comían. Eso parece que es más sano. Por eso los mayores de antes son más sanos que nosotros.* [They ate better.

> You know, because everything was healthier before. They ate a lot of fava beans. Instead of sweets they ate toasted fava beans and toasted corn. That, and it seems like it's healthier. Barley gruel. *Máchica*. Instead of bread they ate *máchica*. Made, they say, mixed in coffee they added *máchica* and ate it. That seems like it's healthier. Because of this the elders of the past are healthier than us.]

This notion that food was healthier in the past places a normative value on how the nutrition transition has taken effect in this locality. Although people tend to remember that life was harder in many ways—for example, Rosas's mother explained that she worked like a man in her youth, hauling wood on a horse, hoeing, working a plow with oxen, harvesting potatoes, and cutting grains—they also have a clear nostalgia for the past, which comes to light particularly through food and health. Aurelia's idea that elders are healthier was echoed again and again by people of all ages, and the fact that more traditional foods were eaten in the past was only part of the equation.

The impact of agricultural modernization was equally prominent in discourses surrounding changes in food and health. The idea that everything was produced without chemicals *antes* was consistently cited as a reason that foods and people were healthier in the past. As Elsa's father plainly explained, "*la gente comía comidas más sanas* [people ate healthier foods]." When I asked why the foods were healthier, he and his wife explained that they did not use pesticides or chemicals. Later, when I asked about the healthfulness of different foods, Elsa's mother described potatoes as "*un poco malo* [a bit bad]" and cited pesticide treatments as the reason for this. Aurelia also expressed this mentality. Speaking about the *gente de antes* [people of the past], she explained,

> *Antes, las papas, los alimentos, para cultivar no fumigaban mucho. Eran más sanos. En cambio ahora le ponen un montón de remedios y parece que eso hace daño a la salud.* [Before, the potatoes, the foods, to grow them they didn't spray much. They were healthier. In contrast now they throw a bunch of pesticides on and it seems like that harms the health.]

Damaris showed a similar attitude about the effects of pesticides on health, specifically referring to cancer several times during our conversations. In her interview, she did not connect cancer directly with pesticides, but alluded to the increased incidence of cancer nowadays and the apparent ease with which it infects people. She described her reaction to family members getting cancer:

> *Han tenido cáncer, debido a así, a las situaciones del sol, a veces a cualquier medicamento, o cualquier más que sea golpe, han tenido cáncer. Entonces, algo medio complicado, porque ahora todo el mundo muere de cáncer más que otra enfermedad. Entonces, es medio grave ponerse a analizar eso.* [They've had cancer, due to such, to situations with the sun, sometimes to some medication, or anything, even a little bump, they've had cancer. So, it's kind of complicated, because now the whole world dies of cancer more than other illnesses. So, it's kind of serious to make yourself analyze that.]

This mother's rather sweeping generalizations about the threat of cancer can be understood as a reflection of deeply rooted uncertainties toward modernity. In this case, she identifies chronic disease as a key element of the differences between now and *antes,* rhetorically tossing fragments of people's lived experiences—the sun, medicines, injuries—into the same risk-laden present reality. Some might argue that this distrust of the world around her is rooted in the Andean cosmovision of a wild, threatening landscape (Larme 1998), but it may also stem from myriad other influences that have coalesced in her life to create a sense of vulnerability in the face of external forces (Oths 1998). She is, in this sense, like many other rural women

who assert what little power they have to navigate a rapidly changing healthscape (Gold and Clapp 2011; Schoenfeld and Juarbe 2005).

Many participants expressed a similar sense of unease about the health effects of pesticides, but some showed a greater acknowledgement of the complexity of the issue. They see that, despite the negative health effects of pesticides in this region (as described in Cole et al. 2011, for example), agricultural modernization and market integration have offered opportunities to earn steady cash income and therefore greater access to foods: the conundrum of commoditization described by Dewey (1989). For example, Penelope explained how chemical pesticides increase production and livelihood for the household, but they are not as good for actually eating:

> *Antes las papas no las fumigaban tanto. No les ponían mucho abono, o les ponían abono, pero orgánico. El abono de los cuyes, la caca de los cuyes, esa es el abono, la caca de los caballos, les sabían poner. Pero un cambio ahora, eso es puro abono, fertilizante no más. (Químico.) Químico. (Por qué?) Porque dicen que da mejor producción. (Qué piensa usted, es mejor ahora que antes?) O sea, mejor ahora por la producción y por lo que se las vende. Antes como no han sabido vender mucho, solo era para comer. Entonces, antes han sido más sanos. En cambio ahora son, solo viene a los remedios.* [Before they didn't spray potatoes much. They didn't put much fertilizer on them, or they did put fertilizer, but organic. Guinea pig manure, guinea pig poop, that was the fertilizer, horse manure, they would apply. But now on the other hand, it's pure fertilizer, just chemical fertilizer. (Chemical.) Chemical. (Why?) Because they say it makes for better production. (What you do think, is it better now than before?) Well, better now for production and for what you sell. Before, since they wouldn't sell much, it was just to eat. So before they were healthier. But now they're, it all comes from pesticides.]

Cristina described this paradoxical relationship between chemical agriculture and human health in a slightly different way, emphasizing how modern agricultural practices have made the crops themselves less resilient:

> *Ahora bien diferente a los de antes. Por eso de trenta años para adelante lo siga doliendo todo. Siga doliendo todo ya. Ya de trenta años para adelante, nos sigan atacando las enfermedades que se quedan a los ancianos. Porque así me dice la doctora que esas enfermedades son de los viejitos. Será por la alimentación? Que será. Creo que debe ser así porque dice mi suegra que antes han sabido comer todo de habas, que sabían tener habas y papas sin fumigar. Que las papas antes le han sabido salir al año. ¡No ahora a los cinco meses que cosechan! Dice cada año, no más. Y las papas que duraban de cosecha a cosecha. Ahora que pudre todas.* [Now it's very different from before. That's why from 30 years on everything starts to hurt. Everything already starts hurting. From just 30 years and older, illnesses that keep to the elderly start attacking us. Because the doctor tells me that those illnesses are for old people. Is it because of diet? Who knows. I think it must be because my mother-in-law says that before they would eat only fava beans, that they would have fava beans and potatoes that weren't sprayed. That before potatoes would be ready to harvest in a year. Not like now that they harvest at five months! She says every year, no more. And the potatoes lasted from harvest to harvest. Now they all rot.]

This weighing of the pros and cons of chemical agriculture involves an integration of multiple, often conflicting knowledges and practices within families. Men that practice chemical agriculture may be disconnected from the effects these practices have on the quality of foods they produce, which are intimately noticed by women.

Mothers expressed a preference for the "natural" in response to the serious negative health and environmental effects of chemical agriculture (Cole et al. 2011; Sherwood 2009). This affinity for what mothers consider more natural is connected with their ideas that *antes* was a healthier time, before shifts in diet from local, traditional foods to more commercial, processed foods as well as the use of

chemicals to produce food. For example, when I asked Aurelia why she thinks traditional foods like barley gruel and toasted corn are healthier, she replied,

> *Porque es algo natural de la tierra que nace. No es como nosotros comemos un chito, o unas galletas. En cambio eso era algo que no tenía ni mucha azúcar ni mucha grasa, no es cierto? Entonces era sano, mi parece a mí.* [Because it's something natural that's born from the earth. It's not like how we eat a chip or some cookies: instead, that was something that didn't have much sugar or much fat, right? So it was healthy, it seems to me.]

Her desire for food to come directly from the earth echoes Monteiro and colleagues' (2013) approach to classifying foods: the less recognizable they are as whole foods that come from plants or animals, the more processed and thus less healthy they are thought to be. This can be problematic, since unprocessed and traditional foods that they consider "natural" can be produced in ways that contradict their categorizations of natural. For example, potatoes, peas, and fava beans are traditional, locally produced whole foods but they are commonly sprayed with synthetic chemicals. It would be useful to understand mothers' conceptual domains of "natural" and "unnatural" more fully.

Mothers' perceptions matter regardless of how they distinguish the natural from the unnatural. Because of the idea that fumigated crops are less healthy, food practices may work in tension with families' agricultural production practices that provide a livelihood. They believe their husbands must spray to create a profitable harvest, yet they consider exposure to pesticides detrimental to their family's health. In addition, market integration has made commercial foods more available, which likewise stands in tension with mothers' desire for traditional foods produced in the

nearby countryside that they consider more natural. These tensions, at least in part, stem from the messiness of how modernity is experienced at the local and family level: visions of an idealized past motivate residents to selectively resist changes by maintaining or re-inventing certain practices that represent the *antes* of healthier food and people. There are countless examples and counter-examples of these everyday acts of resistance, but two areas stand out as particularly relevant to this discussion. The first encompasses various aspects of maternal diets, and the second surrounds infant and young child feeding practices. As I discuss below, women consider these areas of health to be clearly linked.

Maternal care

> *"Los de más antes sabían comer borrego! Eso que comían toda la dieta. Pero nosotros no, por eso matan muchos pollos. Más antes, por eso son hasta ahora ellos bien duros. Así cuenta mi suegra. Ella tiene 78 años. Y tiene once hijos! Ya hasta ahora está dura. Es que ella se sabía alimentar bien. Durante el embarazo y durante, después de lo que daba la luz.* [People in the past would eat lamb! That's what they ate during the whole postpartum period. But we don't—that's why they kill a lot of chickens. That's why, before, people are still good and hardy even now. That's what my mother-in-law says. She's 78 years old. And she has 11 children! And even now she's hardy. It's that she ate well, during her pregnancy and after she gave birth.] -*Cristina*

During pregnancy there are several traditional practices that mothers consider healthy. Women are discouraged from hard work during pregnancy to avoid harming the baby. For example, Penelope's baby was born with a hernia and other women blamed her for working too hard and riding a motorcycle during her

pregnancy. Women are also supported in eating whatever they wish and whenever they are hungry during pregnancy. Some women ate anything, while others had very specific cravings or aversions. For example, Damaris said she craved sour things and would throw up if she ate anything else. She was sent to the doctors, who gave her anti-nausea medication, but she said that she would even throw this up. She insisted that she only tolerated the sour food she craved. Similarly, Luz said she constantly sucked on *ovos*, a small sour fruit, and concluded, "*entonces mi cuerpo me pedía bastante vitamina C* [so my body was asking for a lot of vitamin C]." As with some home remedies I describe in the next chapter, this is an example of food medicines valued for general nutritional benefits, or what Pieroni and Quave (2006) term "functional foods". Mothers also cited several foods and beverages to avoid during pregnancy, such as alcohol, coffee, additives, and fatty foods. However, diets for pregnant women are generally not strict; rather, women are simply encouraged to eat whatever they can and want in sufficient quantity.

Although all but one participating mother gave birth in the hospital in El Ángel, pregnant women normally also visit a midwife to "*acomodar la barriga* [adjust the belly]" before birth. This practice was widespread among mothers, though some chose not to visit a midwife because they thought the massage was too aggressive and uncomfortable, or in Luz's case, because the midwife she saw for her first daughter had passed away by the time she had her second daughter eleven years later. Midwives also give advice about herbal remedies to give to mothers during labor, and many mothers received teas to *"sacar el frío* [get out the cold]"

from their mothers as they began laboring. Unfortunately it is beyond the scope of this study to explore the roles of midwives and the loss of their knowledges and practices in the area, and the topic merits further research, interventions, and policy.

After giving birth, mothers here traditionally practice a forty-five day rest period known elsewhere in Latin America as *la cuarentena* (Cantor et al. 2013; Chan 2014) and locally as *la dieta*. During this time, mothers are traditionally kept in bed and cared for by their mothers, husband's mothers, and husbands. Ideally, they are not allowed to do any housework like sweeping or laundry, they wear gloves to avoid touching cold water, and they are kept from bathing for up to a month. These practices, similar to avoiding heavy labor during pregnancy, are thought to protect the mother's health and allow her to fully recover from labor. In conjunction with other care practices, diet takes center stage to help mothers regain their strength and vitality.

In general, mothers tend to talk about foods for new mothers as traditional and healthy, and their perceptions of *antes* are especially evident during the postpartum period. Foods are specially prepared for new mothers to help recover from labor, balance hot and cold humors that are thought to be disrupted by pregnancy and birth, and support lactation. The quintessential dish for a mother in *la dieta* is chicken soup—with two caveats, according to every mother I spoke with. First, the chicken must be male (*pollo*), not female (*gallina*), to avoid heating the body with too much fat. Cristina explained,

> *Solo sopa así, matando artos gallos. Y de gallina no, solo de pollos que sean macho, varones, gallos. Porque las gallinas dicen que queda*

> *temperatura. (Al cuerpo?) Al cuerpo. Entonces eso no dan. Solo de pollo. De pollo de campo.* [Only soup like, killing a bunch of roosters. Hens no, only roosters that are male, men, roosters. Because they say the hens keep up a temperature. (To the body?) To the body. So they don't give them. Only from roosters. Roosters from the countryside.]

This detail was self-evident to most mothers, and it presents an interesting counterbalance to the teas given during pregnancy and labor that are meant to *sacar el frío* or expel cold. If a mother builds up too much cold during pregnancy, her abdomen becomes bloated and painful, but if she builds up heat after birth, she could gain too much weight, as Cristina pointed out when explaining the chicken soup practice:

> *Para que endure más la persona porque durante el parto se pierde mucha energía y bastante sangrado y esto. Entonces que eso ayuda. Pero yo no creo que ayuda porque más solo se levanta gorda (risas).* [So that the person withstands more because during labor you lose a lot of energy and blood and such. So this is supposed to help. But I don't think it helps because more likely you just get fat (laughs).]

More importantly than being male, the chicken must be *runa* (home-grown) to be fully rejuvenating. Mothers tended to describe these *runa* chickens, which are left to roam and scratch in backyards and driveways, as more nutritive, hearty, and "natural" than industrially raised, store-bought chickens. This requirement reflects mothers' preference for the natural, as noted in the previous section, as well as the nature of home-based care during this period.

During *la dieta*, mothers also emphasize foods that are thought to increase breast milk production. These include *coladas* (thick warm beverages made with various flours), barley gruel, various herbal teas, juices, and all soups (in addition to chicken soup). In general, mothers would consume these foods insofar as they felt

either a lack in breast milk or strong pressure from their mothers to follow tradition. For example, Luz relayed that she was in school full time when she had her first daughter and was not producing very much breast milk anyway, so she raised her primarily on infant formula. When her second daughter was born eleven years later, however, she said,

> *Yo vi que era bien difícil criar casi con formula, entonces en [mi hija menor] ya a lo que la mama me aconsejaba. 'Debe comer colada'—¡A comer la colada! 'Debe comer avena'—¡A comer la avena!* [And I saw how hard it was to raise kids with just formula, so with [my second daughter] I went with what my mom told me. [She said,] 'you need to eat colada'—and I ate colada! 'You need to eat oatmeal'—and I ate oatmeal!]

She was quick to follow the confidently delivered advice of her mother during this time of uncertainty. In contrast, mothers that already have ample milk tend to avoid milk-enhancing foods and will even eat so-called "dry" or "heavy" foods, such as potatoes and rice, which are normally frowned upon during this time.

Another element of *la dieta* that mothers described was the need to purge the body and blood after birth. Penelope said that she drank orange juice with olive oil to achieve this purging: She explained, "*eso le saca la sangre, todo, que lo queda adentro. Entonces así se quede limpiecita* [that gets your blood out, everything that's stuck inside. So that way you end up nice and clean]." In a similar way, Cristina explained that her mother made her eat a lot of *zanahoria blanca*, a root vegetable from this region, to help her purge after birth:

> *Eso para que purgue, que bote todo lo del cuerpo, de lo del dentro. Entonces eso que limpia todo, y que es una cosa natural. Entonces eso acostumbran a dar.* [It's to purge, to get rid of everything in the body,

> of what's inside. It's so it cleans everything, and it's a natural thing. So they're accustomed to giving that.]

These purgative home remedies are examples of how everyday foods take on a more therapeutic role during the postpartum period. As with many home and food remedies discussed in Chapter Five, the foods prepared to strengthen a new mother, increase lactation, or "clean out" her bodily systems have much value beyond their nutritional components. Not only do they have perceived health benefits, but they also reinforce elders' local knowledges through transmission and practice during a time of widespread cultural change and potential loss of traditional knowledge (Giovannini et al. 2011; Mathez-Stiefel et al. 2012; Sillitoe 2007). Mothers frequently described deferring to their mothers during this critical period in their lives, which may serve to strengthen their trust and interdependence on the older generation.

In addition to the postpartum diet's short-term impacts on health and social relations, mothers recognize its long-term health effects. As Aurelia relayed,

> *Yo pienso que sí puede ser cierto… pero con el tiempo, con los años, con el vejez como decimos nosotros, ¿no? Puede venir las consecuencias de las enfermedades por no haberse cuidado cuando se dio la luz. Después.* [I think that yes it might be true… with time, with the passing of years—with aging as we say here, no?—the consequences of illnesses can come for not having taken care of oneself after giving birth. Later on.]

From this perspective, pregnancy and birth are seen as critical stages in a woman's life that must be carefully tended, and the practices surrounding them are endogenous ways of supporting women's short and long-term health. Considering that grandmothers' knowledge and practice are valued and relied upon more during

this period, *la dieta* can be seen as a vital practice that not only ensures physical and nutritional care for new mothers, but also may strengthen interfamilial bonds, cultural identity, and a sense of self-efficacy and value in the face of expert-driven development policies in Ecuador. These benefits also suggest that *la dieta* is a potential salutogenic factor (Lindstrom and Eriksson 2011).

This is not the sole area where these opportunities are realized. The next section describes how women connect maternal diets with child health as well as how various stages of infant and young child feeding exemplify mothers' maintenance of family health through food practices.

Child diets

> *…para quitar el biberón, así mismo, sufrió bastante porque quería el biberón… Teniéndole paciencia, bastante hasta poco, poco vaya comiendo de su jarrito.* […to wean him off the bottle, same thing, he suffered a lot because he wanted the bottle…. Having a lot of patience with him until little by little he goes ahead eating from his little glass.] *-Ana*

Breastfeeding, the introduction of complementary foods, and weaning are each part of the process of preparing children to eat independently from their mothers. In Jesús del Gran Poder, mothers' practices during this period vary with life circumstances, knowledges and attitudes about health, and past experiences with their older children. In this section, I highlight some of the broad commonalities across families in infant and young child feeding practices. Against

these widespread practices, I attempt to show how variations and inconsistencies emerge from women's distinct economic and socio-cultural realities.

Beyond concern for their own health, women carefully choose foods during *la dieta* based on their understanding that what they eat will be transmitted to the baby. Penelope explained this well, saying in regard to potatoes,

> *Papas también no mucho porque dicen que son pesadas. Las papas son pesadas y embotan el estómago. O sea, lo infla el estómago, y eso le hace mal a la mamá, y como toma el pecho de ella, les hace mal a ellos… durante la dieta, se está el estómago… bien sensible, entonces no puede comer cosas pesadas, cosas que embotan, porque les hacen mal a los chiquitos también.* [Potatoes not much either because they say they're heavy. Potatoes are heavy and bloat the stomach. Well, they bloat the stomach, and that harms the mother, and since they nurse from her, it harms them… during *la dieta* the stomach is very sensitive, so you can't eat heavy things, or bloating things, because they harm the little ones, too.]

In addition to an awareness of how maternal diets affect breastfeeding infants, this quotation alludes to mothers' ideas about infant and young children's stomach health. As I explain in more depth in the next chapter, mothers know that promoting stomach health helps prevent common illnesses such as diarrheal infections. From a salutogenic perspective, maintaining healthy gastrointestinal tracts in infants and young children ensures they continue absorbing nutrients and growing normally. From their experiences, mothers know that babies will be less likely to be fussy, have diarrhea, or lose weight if their stomachs are in balance. This concern contributes to one practice that is biomedically ambiguous.

Mothers said they are aware that they should practice exclusive breastfeeding until their child is six months old, in line with international standards

(WHO 2003). However, ten of the eleven participating mothers showed me or spoke of other liquids that they introduced to their infants at an earlier age. Infant formula was prominent among these, and mothers used it in various ways. For example, Ana was producing breast milk but was attending school full time, so her mother cared for her infant son and fed him formula during the day. At night, Ana would return and breastfeed, but this schedule did not last long before her son rejected the breast all together. Luz was also in school when her first daughter was born and she recounted that her breast milk was never abundant, so she relied more heavily on formula. Across the street, her sister-in-law Estefanía was still breastfeeding her youngest daughter at the time and would occasionally wet-nurse Luz's baby when she was caring for her.

Some mothers had trouble supplying breast milk and cited complications during labor as a cause. For example, Elsa noted that she had to bottle-feed for the first week because she had a Cesarean section and her milk did not let down. Rosa also implicated her labor process in her lack of breast milk, saying that the anesthesia she was given prevented her from producing enough milk. These diverse experiences with breastfeeding and the effects of biomedical interventions in the labor process deserve more attention in future research. It is significant here that four out of the eleven women who participated in the study (36 percent) gave birth via Cesarean section. There was an attitude among these women that this procedure and the medications administered during labor affected their ability to breastfeed.

In addition to formula, women introduced a limited number of other liquids before their infants reached six months of age. They gave herbal teas such as chamomile, *sunfo* (*Clinopodium nubigenum*, a small plant that grows locally), and eucalyptus sweetened with honey or sugar in order to maintain stomach health, as noted above. Some mothers also gave bland soups and coladas in order to supplement breast milk or formula, and they explained that their mothers would encourage them to introduce these liquids earlier in life in order to get the stomach ready for foods. Ana, whose daughter was five months old at the time, expressed this in her interview when I asked when she would start introducing foods:

> *Cuándo voy a empezar? Cuando cumpla seis meses. Pero mi mami estaba, es que fui y me decía que ya le de así, sopita o agüita, que ya le vaya dando ya. Que para que vaya acostumbrando el estómago porque cuando ya, cuando cambian de comida siempre les da infección en el estómago. Es nueva comida para el estómago. Por eso me decía que, para que vaya asimilando, ya no tenga problemas.* [When will I start? When she's six months old. But my mom was, it's that I went and she said that I should give something, like soup or tea, that I start already. That it's so she starts getting her stomach used to it because when, when they change foods they always get a stomach infection. It's new food for the stomach. So that's why she told me that, so she gets used to it, so she won't have problems.]

Her mother was gently pressing for her to begin introducing light foods before six months, contrary to biomedical recommendations (WHO 2003). This practice is not uncommon in Ecuador. Freire and colleagues (2013) found that only 58.9 percent of rural mothers and 41 percent of *mestiza* mothers nationwide practice exclusive breastfeeding for the first six months.

Practices like this introduce two important questions that mothers confront when navigating their young children's health. First, how strictly should they follow

the doctors' age guidelines for introducing foods? Second, what exactly satisfies an infant's dietary needs? On the one hand, doctors tell them that breast milk is the best nutrition for infants, but on the other, some mothers expressed the belief that breast milk is akin to water after six months, and that there is no benefit to continuing to nurse past one year. I will discuss how such discrepancies affect mothers practices in more detail in Chapter Six.

Not surprisingly given these tensions and uncertainties, many mothers struggled both mentally and physically with the introduction of solid foods after this period of near-exclusive breastfeeding. First foods usually consisted of simple, unseasoned versions of what the family normally ate: mashed potatoes, instant oatmeal, *coladas*, plain rice soup, juices, and mashed fruits. The mothers that were actively introducing these foods when I visited were investing extra time and energy into preparing and feeding them to their children. For example, Elsa would prepare a warm *colada* after every lunch and dinner to bottle-feed to her one-year-old son in addition to breastfeeding. As well as preparing a complete lunch of *sopa* or *seco* for her older daughters, parents, and husband, Rosa began making a separate small pot of rice soup with minimal seasoning and ingredients for her son when he turned six months. They have a gas stove in a separate room from their wood stove, so with her son in tow she would hurry back and forth between the two to keep everything from burning. Mothers also described spoon-feeding mashed bananas and scraped apples to their youngest children as first foods. They tend to gradually introduce more and more foods over the weeks and months of late infancy, adding more

ingredients, mashing less, and painstakingly exposing the child to foods such as fats, sweets, and seasonings that they think might disrupt their stomachs.

The age of weaning among participating mothers ranged from nine months to two years and two months, but the majority reported weaning completely when their child was between twelve and eighteen months. Although there was not a strong gender bias in the actual age of weaning, several mothers mentioned that tradition calls for weaning girls earlier than boys (12 to 16 months rather than 20 to 24 months), and that children will become too attached and spoiled if they're allowed to breastfeed beyond these ages.

In practice, mothers did not strictly follow these traditions and showed marked heterogeneity in their practices. Some weaned early on so they could work, or simply because they wanted to sleep through the night. Both Estefanía and Luz transitioned their daughters to small plastic sacks of yogurt in the middle of the night, which they later "weaned" them from to save money and force the girls to "grow up". Mothers mentioned applying distasteful substances to their nipples to counteract children's continued desire to nurse: chili pepper sauce, coffee, nail polish, and an astringent latex from a local flower were common. Mothers had a variety of reasons for weaning. Penelope, for example, noted that breastfeeding for longer can actually be harmful. When I asked when she was planning to wean her daughter, who was just three weeks old at the time, she replied,

> *A ella más breve, voy a quitarle. A un añito no más. (¿Por qué?) Porque, o sea, ya pasando un año el seno ya no hace nada porque, como le digo, ella ya puede comer, entonces el seno ya le sirve sólo como líquido no más. Nada más. Dicen que ya es dañino también. Es dañino ya.*

> *(¿Cómo?) … Nos duele la barriga, así, entonces ya para ella ya es malo. No le hace nada.* [Sooner for her, I'm going to wean her. At just a year. (Why?) Because, well, over a year nursing doesn't do anything because, how can I say it, she can already eat, so nursing just serves as liquid only. Nothing more. They say that it's damaging too. By then it's harmful. (How?) Our stomach hurts, so it's bad for her. It doesn't do anything for her.]

As mentioned earlier, this attitude that breast milk is essentially useless after six months deserves further research. It would be beneficial to develop a more nuanced understanding of how biomedical recommendations and traditional beliefs surrounding breastfeeding are being interpreted and enacted by mothers.

Not all mothers tried to wean their children as early as possible. In contrast to most mothers, for example, Damaris prolonged the transition from breast milk to foods, making no special effort to wean her son. She breastfed for over two years and said she would have breastfed even longer:

> *La lactancia, entonces, más que todo yo le iba a dar hasta más tiempo, porque sí tenía leche bastante. Y pasa que ya del, él ya no quería el pecho, y le interesaba más la comida*. [Nursing, well, really I was going to give him for more time, because yes, I had a lot of milk. And what happened was that he didn't want the breast anymore, and he was more interested in food.]

Regardless of the exact age, weaning when it is convenient and continuing to nurse past the socially accepted timeframe can be seen as acts of mothers' agency.

Once children grow past the stage of breastfeeding and complementary feeding and are considered "adapted" to most foods, mothers tend to maintain special feeding efforts. Damaris resorted to spoon-feeding her four-year-old son when he was too distracted by the television to focus on feeding himself. Marcia gave her four-year-old daughter some change to buy herself a pack of cookies to

snack on during a long afternoon milking trip. Ana made a special soup full of many types of vegetables and a bit of meat every morning for her two-year-old son. And at every mealtime, Estefanía asked her four-year-old daughter what she wanted to eat rather than giving her a plate of food she might reject. These examples provide evidence that mothers satisfy their young children's hunger and nutritional needs in diverse, creative ways.

Restoring maternal strength after birth as part of *la dieta* and maintaining stomach health throughout infancy and childhood are but two cases illustrating how diet is deliberately used to maintain health. These varied practices embody a wealth of knowledge about child and maternal health that reaches beyond the macro- and micro-nutrient contents of foods as emphasized by nutrition science (Monteiro et al. 2012). Mothers' use of food for health spans a much broader spectrum in which foods are used to intentionally prevent and treat specific illnesses. It is this end of the spectrum—the malleable area in which foods are medicines and medicines are foods—to which I now turn.

Chapter Five: Home Health Care

In addition to maintaining health, foods are used apart from their normal dietary roles to prevent and treat illness. In addition to what Pieroni and Quave (2006) term "food medicines", the kaleidoscope of mothers' home remedies encompasses a wide variety of plants, animals, and commercial products related to heterogeneous knowledges and practices across time and space. The facts that no two mothers have identical practices, and that each individual mothers' practices change dramatically over time, are testament to the dynamic, contingent, and sometimes contradictory nature of home health care.

In combination with extensive participant observation, mothers' responses to successive free listing exercises provided a wealth of information about knowledges and practices of food medicines and other home remedies. Before describing these in detail, it should be noted that although many mothers mentioned their knowledge of certain food remedies, I did not systematically discriminate between knowledge and regular practice in my methodology. I did observe mothers' use of home remedies in several houses and heard reports from some mothers about their recent or regular use of them. Most mothers listed home remedies that their mothers had either given them during pregnancy or l*a dieta*, or that they had observed their mothers give to siblings or children. Quinlan and Quinlan note that free-listing "does not tap total knowledge, but it gauges active knowledge or vocabulary by eliciting items that are so familiar that informants can recall them

immediately by name" (2007:185-6). Therefore, despite occasional confirmations of home remedies in practice, mothers' free listing does not necessarily indicate that they use them regularly, and there may also be remedies that mothers do not list because they prefer other remedies or use them too rarely to recall on short notice (de Albuquerque 2011; Mathez-Stiefel and Vandebroek 2012).

The potential discordance between knowledge (as indicated in free listing) and practice (as observed or reported first-hand) may indicate that knowledge is being eroded, but it may also be a reflection of methodological limitations, mothers' accumulation of knowledge over time, or a difference between what de Albuquerque (2011) calls "mass" and "stock" knowledge. The former includes all plants known to be useful, while the latter refers to plants that become part of practice (de Albuquerque 2011). Mothers that do not currently put their knowledge of home remedies into practice may do so in the future. In emphasizing how knowledge and practice are dynamic, iterative processes, I argue that the participating mothers, all relatively young (17-41 years old), are currently and will continue to be learning and adapting their practices to a changing, messy healthscape in which knowledge may be lost if not enacted or transmitted (de Albuquerque 2011).

Child illnesses

Understanding mothers' family health care practices begins with familiarity of the ailments they and their children face. From free listing data, the most salient child illnesses among participating families could be grouped into three categories:

respiratory illnesses (including cough, cold, sore throat, bronchitis, and pneumonia), gastrointestinal disorders (including diarrheal infections, stomachaches, constipation, and rotovirus), and *espanto* or *malaire*. Other illnesses, including an eye infection, a skin rash, allergies, a chronic blood disease, and an inflammation, are categorized separately because they represent isolated incidents and were not cited more than twice. These are included in the following analysis only to illustrate unique ways in which food medicines contribute to home health care practices. The grouping and salience of all child illnesses is detailed more fully in Appendix C.

The number of home remedies used to treat each of these illnesses and illness categories are indicated in Table 3. Number of substances, defined below, and number of mentions of each remedy are shown to illustrate the comparitive salience of each illness category in mothers' pharmacopeias. Remedies for women's health (pregnancy, childbirth, breast milk production, *la dieta*, etc.) and general adult health issues (cholesterol, diabetes, urinary tract, blood health, general tonics, etc.) are shown in Table 4 for comparison. Although it seems that child illnesses account for the bulk of home and food remedy knowledge, this bias is most likely due to the nature of the free listing exercise, which asked specifically about child illnesses. Although mothers have ample knowledge about how to care for their children, they may have just as much knowledge about adolescent, adult, and elderly care that was simply left out of these interviews. Mothers' knowledges and practices of home remedies may therefore be much more ample than is evident from this study.

Table 3. Total substances and frequency of mention of home remedies and food medicines used to treat categories of child illnesses.

Illness Category	Illness mentions in category	Total home remedy substances	Percent of substances that are foods	Total home remedy mentions	Percent of mentions that are foods
Respiratory	16	36	69.4	102	69.6
Gastrointestinal	15	45	53.3	117	52.1
Espanto/Malaire	9	17	35.3	47	21.3
Other	6	23	73.9	63	85.7
Total	48	121	59.5	329	59.6

Table 4. Total substances and frequency of mention of home remedies and food medicines used to treat women's and adult's illnesses.

	Total home remedy substances	Percent of substances that are foods	Total home remedy mentions	Percent of mentions that are foods
Women's health	64	70.3	146	76.7
Adult health	36	44.4	52	57.7
Total	100	61.0	198	71.7

I use "substances" to reflect how mothers talk about ingredients in home remedies in normal conversation. For example, "egg" and "chicken," as well as "pork blood" and "pork fat," are considered separate substances even though they come from the same biological species of animal. Likewise, if mothers cited generic "juice" as a remedy, it is counted as one substance regardless of its ingredients, but a remedy like "papaya juice" is counted separately from generic juice because a central ingredient is specified. Whenever a substance consisted of one biological species, I identified it by cross-referencing Spanish common names with Aguilar et al. (2009), Hanelt and Institute of Plant Genetics and Crop Plant Research (2001), Ortega Perez (1988), and White (1985). Substances of home remedies that don't

correspond exclusively to one biological species (for example, generic soups, commercial products, or salt) were identified as "n/a" rather than a Latin name. Each substance can be used in multiple remedies, which I define as different preparations or uses of substances to treat a distinct illnesses. See Appendix B for a complete list of substances used to treat the most common child illnesses.

Another distinction is the separation of "food remedies" from other home remedies. Although I asked specifically about food remedies in the free-listing exercise, mothers often mixed foods with non-foods in their answers. Therefore, I made this distinction independently based on my observations and conversations with residents throughout my fieldwork. If a home remedy substance was ever consumed as part of a meal or snack, including as a condiment, herb, or spice, I categorized it as a "food medicine" regardless of whether its use as a medicine coincides with its use as a food (Ceuterick et al. 2007; Pieroni & Quave 2006). In this sense, the "food medicines" in this section span both "functional foods" and "food medicines" as defined by Pieroni and Quave (2006). Although I included coffee as a food since it is a central part of many snacks, I excluded sugar cane alcohol from this group because it is normally consumed only by adults outside of mealtimes.

Respiratory illnesses

The common cold, known as *la gripe* in Carchi, plays a leading role in mothers' experiences with child illness. Children often have runny noses or minor

coughs that don't always keep them from school or play, but still create a need for home treatment. Mothers tended to group *la gripe* with *tos* (cough) when describing this category of illness, although some home remedies are more specifically for one or the other. For example, two mothers that are sisters-in-law both shared a recipe for a remedy to treat coughs, but not colds: heat fresh milk to a boil and grate in some block chocolate for the child to sip on. Their older daughters both swore by this remedy, smiling sweetly at the thought of hot chocolate. Regardless of the pharmacological effects of milk and chocolate on an irritated respiratory tract, these girls clearly felt the psychological benefits of receiving a soothing, sweet remedy.

Mothers cited two main causes of *la gripe*: coldness and germs. These were used almost interchangeably at times, much as they are in the United States with phrases such as "catch a cold". The casual explanation for children's colds was invariably similar to Damaris' comment, "*lo más breve por aquí, por el frío, es la gripe* [the most common around here, because of the cold, is *la gripe*]," which reflects the year-round chill that residents feel from their environment. Mothers spoke of the cold as a constant discomfort, and they regularly tried to warm up around the wood stove or even over the blue flames of a gas stove or pot of boiling water. For children, playing outside in the chilly, damp weather was seen as cause for catching *la gripe*. Attitudes about the pervasive coldness of their environment may reflect a sense of vulnerability to a hostile landscape observed by Larme (1998) and Greenway (1998) in other areas of the Andes. This "cold" etiology may also be the

result of careful observation and repeated experience showing that people left in the elements for too long often fall ill.

In addition to this etiology, mothers also referred to people passing germs as a primary cause of the common cold. This was evident in Rosa's family when I visited, since both she and her infant son had cold symptoms. She had been struggling for weeks to cure her son and did not want him to catch something new, so she wore a scarf around her mouth as much as possible to avoid passing her germs to him. This approach even compelled her to wave his spoonfuls of oatmeal around in the air instead of blowing on them directly to cool them off, and she would admonish her older daughter to cover her mouth with her elbow when she coughed to keep the germs from spreading. These types of prevention were practiced in many other households and indicate that many mothers have a biomedical understanding of illness transmission.

Prevention of *la gripe* takes two main forms: first, mothers try to avoid the perceived causes of respiratory illnesses by protecting children from the cold (layering with clothes, keeping a fire lit) and germs (covering coughs, washing hands, keeping physical distance). Second, giving citrus—especially orange—was cited by ten mothers as the first-line defense against *la gripe*. Seven mothers said that they know to give fresh-squeezed, unsweetened orange juice to a child that shows early, minor symptoms. In a variation of this remedy, four mothers described boiling orange juice with cinnamon and sugar to make a thick syrup (one mother cited both). Three of these mothers also said they would use lemon juice or

mandarins instead of oranges. These variations show how mothers group citrus fruits together as good sources of immune-enhancing properties. If a cold is slow to set in, they will administer these remedies to try to prevent it from worsening.

Once a child shows full symptoms of *la gripe*—any combination of runny nose, sore throat, cough, and low fever—mothers employ a variety of treatments in the home. Table 5 includes remedies that were mentioned at least four times, and all remedies addressing respiratory illnesses are listed in Appendix B.

Table 5. Most common home remedies for respiratory illnesses**.** Numbers represent number of total mentions or observations for each indication.

Latin Name	Name in Spanish	Name in English	Prevent colds	*La Gripe* (general)	Cough (only)	Pneumonia
Allium sativum	Ajo	Garlic*		4		
From *Apis mellifera*	Miel de abeja	Honey*		4		
From *Bos taurus*	Leche	Milk*	1	7	1	
Citrus limonum	Limon	Lemon*	3	4		
Citrus sinensis	Naranja	Orange*	11	1		
Eucalypto globulus	Eucalipto	Eucalyptus		9		
Matricaria chamonilla	Manzanilla	Chamomile	1	2	1	1
n/a	Sopitas	Soups*		4		
Sambucus nigra	Tilo	Elder flower		4		1
Total substances**			**12**	**29**	**5**	**2**
Total mentions**			**25**	**66**	**7**	**2**
% food substances***			**83.3**	**62.1**	**80**	**0**
% food mentions***			**92.0**	**60.1**	**85.7**	**0**

*Food remedy
**Totals include the less common remedies listed in Appendix B.
***Percent of total home remedy substances and mentions that are foods

Some mothers use garlic to fight colds and coughs by chopping it raw into warm milk to drink. This is not a popular remedy due to the pungency of the garlic, but those that had tried it seemed to have faith in it. For example, Penelope had never heard of this remedy when she began coming down with a cold. Her husband, who said he had grown up being given this by his mother, prepared a cup of garlic in hot milk without telling her what it was. When she tried it she recoiled, but with his assurance that it was effective, she drank the whole cup and the next day reported to me that it seemed to have helped. This is a rare, though certainly not unique, case of a husband passing on a home health care practice to his wife. Normally, when a young mother is living with or near her mother or mother-in-law, the husband would not necessarily enter the exchange since the women would speak and observe directly. However, Penelope and her family live high up on a hill on the outskirts of town. Although her mother, Marcia, visited her almost daily on her way home from milking, Penelope did not have frequent opportunities to interact with her mother-in-law or observe either of these older women in their homes.

Milk is another important remedy in this collection, in part because of its availability and versatility. Eight of the eleven families participating in the study kept dairy cows and had access to fresh milk on a daily basis. In her interview, Marisol described how milk serves as a base for many remedies:

> *Para la gripe es la agüita de capulí, o con la leche es. Todo con la leche es aquí. Capulí. (¿Cómo es la leche?) La leche hervida. ¡La leche de las vacas! La leche con la cáscara de la mandarina también. (¿Y que más?) Oi, ¡hay artas cosas! La leche he dado con la miel de abeja también. Para la gripe. La miel de abeja. El vapor mentol, todo así les he puesto.*
> [For colds it's *capulí* tea, or it's with milk. Everything with milk here.

> *Capulí*. (What's the milk like?) Boiled milk. Milk from cows! Milk with mandarin peel too. (What else?) Oh, there's a ton of things! I've given milk with honey too, for colds. Honey. Menthol vapor, I've given everything like that.]

Her comments suggest that availability and accessibility are important characteristics of home remedies. As I argue in the following chapter, this is partly a response to poverty and limited access to resources. At the same time, it can also be considered salutogenic by creating resilience (Eriksson and Lindström 2010). In other words, when the most effective or desired remedies are unavailable, mothers that have diversified practices and remedies may be less likely to experience hardship because they have alternatives. In this way, food remedies like milk can be seen as salutogenic factors in addition to economically significant aspects of family livelihoods.

Eucalyptus and chamomile are salient home remedies as well, not only because mothers perceive them to be effective, but also because of their availability. Eucalyptus grows along the streams running through and around the town, and mothers can pluck leaves or large branches along roadsides. It is used to make infusions for drinking with a bit of sugar, and is also left in rooms to "clear out" the air. Children who are getting over colds may also be bathed in eucalyptus-infused water, but as Ana and her mother-in-law related as they bathed Ana's infant daughter, they must be careful to wait until the cold is already subsiding or else getting the child wet could prolong the illness.

Likewise, chamomile is easily grown around doorsteps and many mothers have small plants to pick from around their houses. This plant is a versatile and

common element in many home remedies, which may not be evident from its modest contribution to the table above. I will describe its most common uses below, in part because the majority of mentions about its use for respiratory illnesses (four out of five) came from just one mother, Cristina. Her enthusiasm for chamomile is a good example of how some mothers rely disproportionately on plants or remedies with which they have first-hand experience. The trust they develop in home remedies, often through particular remedies like chamomile, reflects the ease and effectiveness of these treatments for minor health problems like *la gripe* and, perhaps even more so, gastrointestinal issues.

Gastrointestinal illnesses

> *Cuando están con diarrea… agüita de hierba buena, también de una hierba que se llama hierba de perro. Es una hierbita que hay. Bueno, para la diarrea es bueno para el estómago también. Sí, le sabía hacer bien a él. Esas hierbitas que hay por aquí, por el campo.* [When they have diarrhea… mint tea, and also an herb that's called "dog's herb". It's a little plant that's around. Well, for diarrhea it's good and for the stomach too. Yeah, it would make her better. Those little herbs that are around here, in the countryside.] –*Aurelia*

In addition to minor respiratory problems, children most commonly face a range of gastrointestinal ailments ranging in severity from mild stomach discomfort to diarrheal infections to chronic stomach diseases. As for *la gripe*, mothers have a wide range of home remedies to treat these illnesses in the home. In total, mothers cited 45 different substances in 117 distinct mentions of remedies for gastrointestinal complaints, which is significantly more than the 36 substances in

102 mentions of respiratory remedies. Although many of these remedies are intended to soothe the stomach and keep digestion robust, foods were proportionately less prevalent as remedies for this group of illnesses (about half) than for *la gripe* (over two thirds; see Table 3). One possible explanation is that mothers prevent stomachaches with foods but may prefer to cure them with herbs.

How do mothers differentiate between different forms of digestive discomfort and illness? Mothers described stomachaches as harbingers of more serious illnesses, and emphasized the need to prevent conditions from worsening by using daily medicinal teas. The lines between these are often blurred, both in discourse and in practice, since internal processes are difficult to discern until the condition has progressed enough to cause either pain or irregular stools. When I asked about the difference is between a stomachache and a diarrheal infection, Penelope explained,

> *O sea, que el dolor de la barriga… avisa que ya está descomponiendo el estómago, que ya va a venir la infección… Si no le previene le da diarrea y ya, ya le duele la cabecita, todo les duele. Hay que prevenirla no más. Cuando le duele la barriguita ya darle las agüitas, antes de que les de la diarrea* [Well, it's that a tummy ache… alerts you that the stomach is already breaking down, that an infection is going to come on…. If you don't prevent it, she gets diarrhea and so, so her little head hurts, everything hurts. You just have to prevent it. When her little belly hurts just give her the teas before she gets diarrhea.]

This comment illustrates how attention to children's digestive complaints is key for preventing illnesses from progressing. Responding to minor discomforts by giving medicinal teas will keep the stomach from *descomponiendo* (breaking down) or

getting out of balance. This practice is best suited for when the child has already eaten or been exposed to something that caused an ache.

To prevent stomachaches all together, mothers consider several etiologies that lead to gastrointestinal problems. First, as with *la gripe*, most mothers understand hygiene to be paramount in preventing diarrhea. Some mothers clearly described how washing hands and foods keeps germs from entering the body. For example, Luz explained,

> *La prevención para una infección es el aseo, parece. (El aseo.) O sea, en lavar la mano del niño. En que la comida está aseada, que no le de la infección. Por ejemplo, la infección puede ser por la teta, que era sucia, cuando al niño toca tenerlo*. [The prevention for an infection is hygiene, it seems. (Hygiene.) Well, by washing the kid's hands. That the food is clean, that it doesn't give an infection. For example, an infection can be from a bottle that was dirty when the kid had to use it.]

She later re-emphasized that bottle nipples need to be clean and that this type of hygiene is central to preventing diarrhea in children. Elsa was practicing this when I visited by submerging her baby bottles in a large bowl of recently boiled water for several minutes every afternoon. Likewise, Rosa was constantly attentive to keeping her son from handling toys or spoons that had touched the floor. She would try to set them aside and rinse them off before handing them back to him, but the demands of her children and household sometimes made it impossible to be fastidious about germs. Her attempts to practice hygiene show how mothers must balance the risks of occasional exposure to dirt and pathogens with the myriad other time and energy demands they face.

Mothers described two other etiologies that are linked with hygiene. First, they explained that giving re-heated or badly prepared foods can cause negative stomach reactions. When I asked what causes her son to get diarrhea, for example, Damaris replied,

> *Cuando se come comida mal cocinada. Sí, cuando no está bien cocinada. Cuando come frutas también sin lavarse, así. Así eso depende también sea el aseo de las cosas. Entonces de repente como así se va a algún restaurante, dan un arroz frío y entonces les cae mal y entonces como tiene un estómago chiquito, ya le hace daño la comida.* [When he eats badly cooked food. Yeah, when it's not well cooked. When he eats fruits without washing them, like that. It also depends on the hygiene of things. So every once and a while like when you go to some restaurant, they give cold rice and so it makes you sick and so since he has a small stomach, the food easily causes him harm.]

Mothers who discussed this cause did not verbally connect cold food or re-heated food with bacteria or viruses that can grow at room temperature. Instead, their connections between poorly prepared foods and diarrheal illness show a practical approach to prevention. For Rosa, this meant not giving foods that have been saved overnight and reheated:

> *Para la infección, no darles comidas grasosas calentadas. No darles las comidas que ya estén por ejemplo ya empezándose a dañar. No darles eso. Yo no acostumbro a darles a mis hijas las comidas que estén guardadas. O que ya han estado destapadas así, que estén muchas moscas, mucho, no les doy yo eso. Por eso le doy al perro. Porque eso les puede dar una infección.* [For an infection, don't give them fatty reheated foods. Don't give them foods that are already, for example, starting to go bad. Don't give them that. I don't make a habit of giving my daughters foods that have been saved. Or that have been uncovered like that, that there are a lot of flies, I don't give them that much. For that, I give it to the dog. Because that can give them an infection.]

She took this further by withholding leftover foods from her six-month-old son altogether, evenly if they were properly reheated. Since she linked leftovers to a risk of diarrhea, she opted to peel and cook fresh potatoes for him instead of serving him the potatoes from the night before that she fried for her older daughters.

Second, as noted in the Chapter Four, mothers considered the introduction of new foods to be a primary cause of diarrhea in infants and young children. This is congruent with scientific understandings of child malnutrition: complementary feeding increases children's exposure not only to new foods that might affect their digestions differently than breast milk, but also to new microorganisms that reside on and in those foods (Stinson 2012). Ana described this in her interview:

> *Una infección le dio cuando empezó ya a comer. Ya las comidas, eso le dio infección… Dijo el doctor era por lo que… no era sólo la leche de tarro. Sino que ya venía comida ya de granos, todo eso.* [She got an infection when she started to eat. The foods, that gave her the infection… The doctor said it was because… it wasn't just formula anymore. It was that food was coming, grains, all that.]

When considered in conjunction with learning to crawl and grab, these elements of early childhood inevitably increase exposure to pathogenic bacteria (Stinson 2012), and mothers with children in this stage often struggled and talked about trying to keep things out of their mouths.

Once children are older, mothers have less control over what they eat. Although not new to their bodies, some women see sweets and fats as having a negative effect on children's sensitive digestions. Rosa's second daughter was often asking for sweet treats from the household store that her grandmother ran, and Rosa attributed her frequent bouts of diarrhea to her sweet tooth:

> *[Ella] era la que más siempre está con la diarrea, de vez en cuando, pero cuando parece que fuera que come muchas golosinas. Allí le vienen dolores de estómago, le vienen diarreas.* [She was the one who's always with diarrhea, every once and a while, but it seems like it's when she eats a lot of sweets. That's when she gets stomachaches, she gets diarrheas.]

Estefanía's cited too much sugar as the main cause of older daughter's frequent diarrhea as a young child:

> *Que se les da mucho dulce, les da la infección… Mucha golosina. Eso saben decir, que las causa la infección más.* [When you give them lots of sugar, they get an infection… Lots of sweets. That's what they say, that it causes infection for them more.]

In addition to its perceived effectiveness in preventing diarrhea, the practice of limiting sugary foods may benefit children nutritionally if they have adequate calories from more nutrient-dense foods (Leatherman and Goodman 2005; Monteiro et al. 2012).

Mothers also associated diarrhea with dehydration. Several mothers listed liquid foods that they give to help prevent and treat diarrheal infections, such as soups, barley gruel, and juices. Keeping children hydrated with water and liquid foods is a relatively simple, accessible, easy way for mothers to avoid gastrointestinal illnesses. Rosa explained that she gives water to sick children to keep them hydrated:

> *Cuando están con la diarrea, el doctor lo que siempre me recomienda es que, no los deshidratan. Si es tan diarreando ahorita, un vaso de agua. Otra vez diarrea, un vaso de agua. Para que no se deshidraten.* [When they have diarrhea, what the doctor always recommends to me is to not get them dehydrated. If it's really bad diarrhea now, a glass of water. Diarrhea again, a glass of water. So that they don't get dehydrated.]

As in many other households, Rosa takes the doctor's advice seriously and incorporates it into her home practices. I will discuss the roles of doctors in mothers' home health care practices in more depth in the next chapter.

The preventative measures described above begin to blur the lines between health maintenance and illness prevention. Mothers recognize how their children's diets both help and harm the digestion, and the aforementioned causes point to various ways in which single food categories are blamed for illness. At the same time, these practices illustrate how foods themselves—what we term "diet"—are not the sole or even primary cause of gastrointestinal complaints. Mothers' practices involving food (how it is washed and prepared, when it is introduced, in what quantities it is given) matter just as much because the pharmacological, nutritional, and humoral effects of foods are primarily manifested through them.

Table 6 lists the most common remedies that mothers cited for the common gastrointestinal problems of diarrhea, constipation, and stomachaches. The range of remedies here and in Appendix B is very wide and includes many substances that are not used as food. Many of the items on this list, and many home remedies in general, are used in combination with others. For example, whereas barley gruel is generally consumed by itself, some herbs like *chilca* (*Baccharis sp.*; see Appendix B) were always described as part of a recipe including other substances. Other items, such as cumin or oregano, might be used exclusively in a tea or included in a blend. Even substances that are used singularly in tea, such as anis, are still combined with a bit of sugar. This study is not aimed at determining the interactive

pharmacological effects of these medicines, but it is worth noting that combinations of different pharmacological agents can add up to more than the sum of their parts (Etkin 2006). This synergistic effect can be harmful or neutral as well as positive. Regardless of the net physiological response, the socio-cultural impacts of combining herbs and foods (for example, on feelings of self-efficacy and agency) deserve further study.

Table 6. Most common home remedies for gastrointestinal illnesses. Numbers represent number of total mentions or observations for each indication.

Latin Name	Name in Spanish	Name in English	Diarrhea	Constipation	Stomach Ache
Allium cepa	Cebolla	Onion*	1	1	4
Cuminum cyminum	Comino	Cumin*	1	1	2
Hordeum vulgare L.	Arroz de cebada	Barley gruel*	5		
Matricaria chamonilla	Manzanilla	Chamomile	4		8
Mentha piperita	Hierba Buena	Mint	1		5
n/a	Sopitas	Soups*	5		2
Origanum vulgare	Orégano	Oregano*			6
Passiflora eduli	Granadilla	Granadilla*	4		
Pimpinella anisum	Anis	Anise			7
Psidium guajava	Guayaba	Guava*	6		
Thymus vulgaris	Tomillo	Thyme			4
Total substances**			**23**	**12**	**21**
Total mentions**			**46**	**14**	**55**
% food substances***			**56.5**	**75**	**38.1**
% food mentions***			**65.2**	**78.6**	**36.4**

*Food remedy
**Totals include the less common remedies listed in Appendix B.
***Percent of total home remedy substances and mentions that are foods

As with any culinary spice or herb, the examples above are also added to foods for flavor and may even be included specifically for their medicinal properties. For example, Ana's mother-in-law adds oregano to every soup and explained that she does this to aid the digestion. Rosa also used oregano as a culinary herb with intended medicinal purposes. Here, she describes why she decided to add it to one of her infant son's first foods:

> *El orégano es bueno para el dolor del estómago, no? Como estaba empezando recién a darle la avenita, entonces yo le puse hojitas de orégano para que, si el poroto quiere doler, le va ya con el orégano, que no le haga daño.* [Oregano is good for a stomachache, right? Since I was recently starting to give him a little oatmeal, I put some oregano leaves in so that, if his little tummy wants to hurt, it already comes with the oregano, so it doesn't hurt him.]

In addition to using oregano for flavoring, these examples illustrate how some mothers also intentionally include it in meals because they consider it an herbal digestive.

Onions, which are used occasionally with cumin in a digestive tea, are similarly used with a dual purpose. For example, Damaris placed a long onion in every pot of rice she cooked, removing it before serving, noting its flavor and explaining that it helped with digestion. Her comments point to how mothers may mentally separate their knowledge of a food's culinary uses from that of its medicinal uses, but in practice, these uses are often indistinguishable. Other research has also identified this tendency (Etkin and Ross 1982; Etkin 2006; Pieroni and Quave 2006; Volpato and Godínez 2006). Damaris just puts in the onion in the pot every morning. Ana's mother-in-law just adds oregano to every soup.

Regardless of mothers' perceptions of these medicinal food practices, they become normalized as daily habits, melding seamlessly into the mundane.

Beyond those already mentioned, several of these common home remedies deserve more attention. Granadilla is noteworthy because of its specificity: besides being a delicious fruit to snack on, every mother that mentioned it knew it as a treatment for diarrhea. They referred specifically to its ability to encourage beneficial intestinal flora, which is significant because mothers do not commonly use this type of language when discussing gastrointestinal health. For this reason, it may be an indication that knowledge of this remedy has come from outside the community.

Guava is also known beyond its role as a flavorful fruit: it is widely considered as a drying, constipating food, which lends itself as a diarrheal treatment. Mothers employed this fruit in a variety of preparations, including raw juice, a colada with banana and cinnamon or green plantain, and an infusion of the leaves with *pacunga* (*Bidens sp.*; see Appendix B). Estefanía related her story of finding this particular remedy from a woman at the market after trying multiple approaches that were not curing her daughter:

> *Ella sí, estaba bien malita. Y le dimos la colada y se sanó. Porque la llevamos allí donde el doctor, le daban jarabes, y nada, ¿no? Sí, le tocábamos hacer el espanto, y barríamos, pero nada. Amanecía toda la noche, hace el baño, hace el baño. Y no tenía ni que hacer el baño hasta sangre. Pero después ya me fui al hospital, me fui a los doctores, y no le pasaba. Y de allí había una licenciada allí en El Ángel, a comprar zapatos que me fui. Y ella nos dijo de donde vienen y le decimos que veníamos del doctor y que la nena estaba con infección. Y luego la señora nos dijo, 'vayan ahorita y llevan una 50 de guayaba, con plátano,' dijo, 'y licue con canelita y cocínele con dulce, y comen a costumbre sean*

> *a ustedes.' Dijo, 'a comer, eso sabe acomodar el estómago a todos. Y dele a la nena,' dijo. Y en verdad, venimos, hicimos, y con eso se sanó ella. Entonces, yo, teníamos fe a eso.* [Yes, she was really bad. And we gave her the colada and she got better. Because we took her to the doctor, they gave her syrups, and nothing, right? Yeah, we treated her for *espanto*, we cleaned her for it, but nothing. She would get up all night, go to the bathroom, go to the bathroom. And she didn't even have to go to the bathroom, even blood. But later I went to the hospital, I went to the doctors, and it didn't go away. And then there was a schoolteacher in El Ángel, where I went to buy shoes. And she asked us where we were coming from and we said we were coming from the doctor and that the baby had an infection. And then the woman told us, 'Go now and buy 50 cents worth of guava, with banana,' she said, 'and blend it with a little cinnamon and cook it with sugar, and eat like you normally do.' She said, 'Eating it, that will make everyone's stomach feel better. And give it to the baby,' she said. And honestly, we came, we made it, and with that she got better. So I, we have faith in that.]

Estefanía later said that after this first time, she always gives the guava colada before trying other healing avenues because she has seen it work well on many occasions. This story highlights a few important points. First, Estefanía tried going to the doctor and giving pharmaceutical medications to cure her daughter, as well as curing for *espanto*, but nothing worked. I discuss this type of pluralistic negotiation in more detail in the next chapter. Here, it is significant that once she found a home remedy that worked consistently, she did not feel the need to seek outside care anymore. The remedy proved accessible and effective, so she has faith in it.

Second, the way she learned about this remedy is significant. Estefanía's interaction with an acquaintance at the weekly market in town was coincidental and contingent on her daughter being sick at the time and her having exhausted other options. Since other women in the community also knew of this remedy, she may have eventually heard of it from another mother. While such a random source of

home remedy knowledge is not the most common, it is notable that mothers tend to learn about remedies as they have use for them. In other words, mothers may acquire more knowledge over time as their children suffer new illnesses, as observed in women's home gardens by Finerman and Sackett (2003) in an indigenous community in southern Ecuador.

The four most common herbs to treat stomachaches—chamomile, anise, oregano, and mint—were usually lumped together with other digestive herbs as "*las agüitas* [the herbal teas]" in conversation. These *agüitas* are understood to address a range of health issues and, most importantly, to keep the stomach well amidst potentially upsetting foods throughout the day. Among these, anise and mint are both prepared exclusively as infusions, while oregano has culinary uses as described earlier.

Chamomile, on the other hand, is remarkably versatile and widely used among all mothers that participated in the study. All eleven mothers mentioned it, five of them more than once, and while the average number of indications treated by each substance of home remedy was 1.9, chamomile was reported in treatments for 13 distinct ailments—more than twice as many as any other remedy. For example, in addition to an infusion for stomachaches and diarrhea for children, Elsa and her mother also described giving an infusion to pregnant women to *sacar el frío* (expel coldness) as well as a salve with beef tallow to rub on their bellies. This chamomile-infused beef tallow salve could also be applied to children with *espanto,* and they

had recently prepared it to ease Elsa's father's leg pain: it would be applied on the legs, covered with newspaper, and left overnight.

In other families, mothers described using chamomile as a disinfectant for the skin, eyes, and throat. Penelope applied a strong chamomile infusion to her newborn's diaper rash, and Ana described using a cooled infusion as an eye wash as well as a nightly gargle to treat coughs. Mothers' uses of chamomile for a diversity of health problems support their identities as home healers, much as Finerman and Sackett (2003) found. If a child comes to a mother with an ache or pain, she can soothe and reassure by saying she will harvest some chamomile from the back yard. On one occasion, Penelope's chamomile plant had died and she convinced her husband to uproot a plant from a neighbor's driveway in order to transplant it and assure they had this remedy nearby.

While probably not appreciated by the neighbors, Penelope's act is an example of the importance of free and locally available remedies to meet mothers' everyday health care needs. As I discuss in Chapter Six, mothers often seek outside health care in addition to using home remedies. For respiratory and gastrointestinal illnesses that are minor and progress gradually, however, home remedies are the first and often only line of treatment needed. This is even more evident for *espanto* and *malaire.*

<u>Espanto *and* malaire</u>

> *No, [los médicos] solo le mandan medicamentos. Y ya no le hacen nada, no le hacen nada entonces uno mismo toca*

> *curarlo de todo. Y así se hace bien.* [No, (the doctors) only prescribe medications. And it doesn't do a thing for them, it doesn't do a thing so it falls on oneself to cure for everything. And that's how they get better.]
>
> *-Damaris*

Espanto, *malaire*, and related illnesses such as soul loss and *mal de ojo* hold a unique place within mothers' home health care practices for many reasons. (From here forward I use E&M as a proxy for this diverse group of illnesses.) As ailments without purely natural causes, children's experiences with them lie outside the domain of biomedicine. Their perceived causes are very different from other illnesses, which affects how mothers prevent and treat them. The repertoire of remedies to treat them is also much smaller than for other illnesses. After describing these elements of E&M, I conclude by discussing the role of folk healers in mothers' healing practices. This introduction to outside specialists serves as a bridge to the final chapter of these findings, in which I discuss how mothers' home practices fit within their overall approaches to health care.

Although I group E&M together for the purposes of this discussion, the illnesses have distinct etiologies and symptoms. Mothers explained that *espanto* is caused by fright, surprise, shock, or a fall, and children that are *espantado* will cry throughout the night with fever, sleeplessness, lack of appetite, vomiting, stomachaches, and diarrhea. On the other hand, mothers consider *malaire* (also referred to as *pasmo*) a result of interactions with bad spirits that reside in clouds, rocks, or other features of the landscape. Affected children were described as sleepy and listless, with bodily aches and pains, and sometimes with swelled body parts or

irritated skin. While these causes and symptoms are common across households, there is some variation between mothers' descriptions, as well as variations from similar explanatory models in other areas of Ecuador (McKee 2003; Trostle et al. 2010) and the Andes (Larme 1998; Greenway 1998). Coupled with descriptions of soul loss in the countryside and *espanto del agua* (water fright), which can both be fatal, these variations and idiosyncrasies made it difficult to distinguish the illnesses within this group without a more systematic methodology for establishing explanatory models. Therefore, while I will refer to them individually when appropriate, in general they remain rather clumsily lumped for the purposes of discussing home health care.

The distinctions between *espanto, malaire,* and related illnesses belie some fundamental commonalities. First, mothers differentiate between illnesses that can be treated by the doctor, such as *la gripe* and diarrheal infection, and illnesses that cannot. E&M fit squarely into the latter category. Mothers repeatedly pointed out that doctors don't believe in or recognize E&M, and medical professionals therefore do not have treatments for them. Aurelia described how this exclusion from biomedicine affects her treatment options:

> *Sí, me espantan. Aquí, caseramente se les cura porque los médicos no creen en eso. Nosotros nos curamos con trago, tabaco… Para ellos eso no existe. Y cuando están con esos malos así del campo y se les lleva al médico, se les endura. Se apeoran.* [Yes, they get *espanto*. Here, in the home they're cured because the doctors don't believe in it. We cure ourselves with sugar cane alcohol, tobacco… For them it doesn't exist. And when they have ills like that from the countryside and you bring them to the doctor, it lasts longer. It gets worse.]

These comments suggest that women must treat these illnesses themselves since they are outside doctors' expertise, belief, and practice. This will be important to keep in mind for the discussion that follows.

Second, women consider E&M in light of the surrounding landscape. This is evident in Aurelia's comment above that "ills of the countryside" are made worse when a doctor tries to treat them, which Trostle and colleagues (2010) also found on the Ecuadorian coast. People in Jesús del Gran Poder spoke of how *el campo* offers clean air and water, but they indicated that the coldness causes many illnesses, bad spirits reside in the clouds and wild areas, and entities like rocks and water can capture the souls of vulnerable people. Other research has found that women, children and babies are considered especially vulnerable and delicate in the face of this animate landscape (Larme 1998; McKee 2003; Trostle et al. 2010). Mothers explained that children's souls are not fully fixed to their bodies, so they can easily leave them behind if they've settled into a spot in the country. Death can even result when children "*se quedan*"—a term mothers used to describe children's souls being left in the countryside—and people that mistakenly take their soul-lost children to the doctor for healing make the risk of death even greater, since time is of the essence. For example, Ana's mother emphasized the need to act quickly if someone falls asleep in the countryside or near rocks, sticks, or water, because their spirits can leave them and stay in that place. She emphasized the importance of hugging babies, calling children by name, and greeting them right away to prevent bad energies from taking hold of them.

The fact that these illnesses are intimately tied to the landscape seems to foster a sense of identity with country life among mothers. Some mothers referred to common beliefs and practices surrounding the spiritual illnesses as "*del campo* [country]" and contrasted them with what they thought people from the cities believe. This identification with the country as a contrast to the city characterizes many aspects of life, perceptions, and practices. Cristina summarized this as a matter of antiquated beliefs:

> *Así saben las personas como aquí en el campo, se curan como ellos han podido. Como los antiguos, los mayores se han enseñado, entonces. Algunos hasta ahora las creenzas.* [That's how people know, like here in the country, they cure themselves however they've been able to. Like the old folks, the elders have gotten used to, you know. Some even now have those beliefs.]

My presence as an outsider may have influenced Cristina distancing herself from what she considers antiquated beliefs. That said, she acknowledges how traditional beliefs have served people during their time, even though they may now seem outdated. She also suggests that rural people seem to have more faith in these beliefs. When I asked what she thinks about *espanto*, Cristina laughed as she replied,

> *No sé! Parece que ha sido más, o la fe, ¿no es? La fe no es, más todo la distilación, como mamá que se tiene, que se cuide a todo. Con tal de que se sane. Y no sé si habrá, pero mhm se cura. No sé qué es que aquí la gente del campo cree en eso, ¿y en la cuidad creerán? No sé…. como nosotros somos medios creyentes…* [I don't know! It seems like it's more, or faith, isn't it? It isn't faith, more than anything distillation, like how a mother who has it, who cares for everyone. Provided that it heals. And I don't know if it's true, but mhm it cures. I don't know what it is, that here people in the country believe in that, and in the city do they believe? I don't know… how we're kind of believers…]

The so-called "country beliefs" alluded to here seemed questionable or superstitious to some mothers. Despite this, they appear to be persisting and affecting mothers' identification with *el campo* as well as their everyday practices surrounding E&M.

As with respiratory and gastrointestinal illnesses, mothers' first line of defense against E&M is to avoid the perceived causes of the illnesses. They try to keep children from being startled or shocked by keeping them in sight when visiting the countryside. They also explained the tradition of calling their children by name when leaving a place in the country where the children have been playing or resting, which is thought to keep their souls from separating from their bodies and staying in that place. Outside of explanatory models for E&M, these practices function to maintain close care of small children and ensure that they are not neglected or left behind in the cold, wet outdoors. Greenway (2003) also noted this tendency for mothers to keep a close eye on their children in potentially risky settings, which serves a positive function regardless of its implications within the model of E&M.

When preventative measures fail and a child becomes *espantado* or catches *malaire*, there are a number of ways that mothers treat them in the home. Table 7 lists the most common home remedies, which are much fewer than other illness categories because of the relatively prescribed treatments for E&M.

Table 7. Most common home remedies for *espanto* and *malaire*. Numbers represent number of total mentions or observations for each indication.

Latin Name	Name in Spanish	Name in English	Espanto and/or Malaire
Brugmansia sanguinea	Huanto	Trumpet flower	3
Capsicum spp.	Ají	Chili pepper*	4
Franseria spp.	Marco	Marco	3
Nocotiana tabacum	Tabaco	Tobacco	9
Ruta graveolens	Ruda	Rue	4
Saccharum spp.	Trago	Sugar cane alcohol	11
Total substances**			**17**
Total mentions**			**47**
% food substances***			**35.3**
% food mentions***			**21.3**

*Food remedy
**Totals include the less common remedies listed in Appendix B.
***Percent of total home remedy substances and mentions that are foods

The most common way to treat E&M is through a *limpia* or ritual cleansing. While traditional *limpias* have been described as relatively standardized in the folk sector (McKee 2003), it is interesting to note that mothers practice them with wide variations in the home. Some mothers follow a more ritualized, fixed pattern of practices, while others take a more informal, quickly executed approach. For example, this excerpt from my field notes (August 5, 2013) describes a relatively complete, ritualized healing:

> We arrived at Ana's mother's house… after the stars had already come out in the thousands. Ana carried her daughter in a bundle and her sister-in-law had the two-year-old boy in her arms in a bright blue poncho and hood. We entered into a large salon with a couch against one wall… She explained that they need to be cured three times, three

> days in a row, and that this is the last one. They gathered supplies and made their way into a bedroom just off this main room… Ana's tall teenage brother was playing videogames on the computer in the corner and her 10-year-old brother was back and forth from a bed to the kitchen, where the baby and Ana's husband were… Ana's mom took a chunk of cigarette in her mouth, then a swig of *trago*, and took his head in both her hands. She slowly blew this *trago* on the crown of his head, then one side above the ear, then the other. Then she moved to his stomach, pulling up his shirt to kiss and blow on his stomach and left tobacco leaves all over him from the cigarette. She pulled down his pants and underwear and blew *trago* on his upper legs and groin, lifting him from the knees. Last she blew on the soles of his feet, lifting them in one hand and carefully, slowly suctioning them with her mouth to release the *trago*. After this she sat him back up and Ana took a bit of *trago* in her mouth as well, and they simultaneously blew on his belly and back.
>
> Ana's mother then took him by the hips, pressing her thumbs into his hips and lifting him slightly off the bed. He began to cry and wail, and Ana kept assuring him that it was almost over and to calm down, that he's being cured. Her mother pulled him up by the feet, shaking him downward and saying "*veni veni veni*" and then "*shunga shunga*" while Ana helped to keep him calm. Then she took him in her arms like a baby and brought him to the middle of the room, commenting how this would have to do since they don't have a fireplace, and rocked him head-down back and forth a couple times in two different directions.
>
> After this her mother deliberately lit the last half of the cigarette, throwing the match on the floor, and followed the same pattern over his body with smoke, tapping the smoke down with her palm after each exhale close to his body: top of the head, sides of the head and neck, belly, groin, and feet. He seemed to like this part, smiling matter-of-factly as the smoke curled around his hair. She blew twice on his groin, covering it carefully with her hand afterwards. When the cigarette was out, she asked Ana's sister-in-law to hand her the plastic bag and pulled out a chili pepper. With this she rubbed his entire body once more and had him spit on the pepper three times, which he seemed to enjoy. Then she disappeared out the front door to throw the ají out. When I asked about this, she said that it's preferable to burn it, but since they don't have a fireplace she can't.

In this instance, Ana's mother used multiple home remedies to help her expel the illness from her grandson's body. This formalized ritual takes place in a very

informal setting, with relatives running about and a near-stranger looking on, which attests to the normalcy of E&M healing for mothers and children.

On the other end of the spectrum, Estefanía treated her youngest, four-year-old daughter for *espanto* with similar practices but in a faster, less prescribed way, as described in these field notes (July 3, 2013):

> Estefanía laid her daughter down on the bed, crying loudly and desperately, and started treating her for *espanto*. She pulled her pants and underwear down to her knees and poured a bit of *trago* into her palm, rubbing the whole area vigorously, handed me the bottle of alcohol, and then pressing into her hips with her thumbs while she shushed her… Her daughter was crying "*ai chai chai*" over and over, which means "burrrr it's so cold!" in Kichwa, but it's used by everyone here even if they don't speak Kichwa. Then Estefanía stood her up and pulled her shirt up to her chest, reassuring her and taking the bottle back and pouring a bit into her mouth. Then she quickly sprayed both her back and front with the *trago*, after which she pulled all her clothes back on and wrapped her in a blanket. Then she rubbed some menthol salve on her ear. She sat there rocking her for a while.

This healing was conducted quickly and without as many remedies as the one above, but it contained the essential elements of *trago* (which Marisol refered to as "infallible" in regards to E&M treatment) and pressure on different points of the body. These examples illustrate the spectrum of mothers' commitment to an idealized form of ritual treatment, which allows them to practice healing in an informal, context-appropriate manner.

A sense of self-reliance was also evident in many mothers' descriptions of E&M. For example, when Estefanía's index finger swelled up and ached after milking one morning, she diagnosed herself with *malaire* and treated it at home with *trago*. Mothers characterized curing in this way as simple, easy, and

convenient compared to visiting a medical doctor or buying syrups or pills. Aurelia's comment, "*nosotros mismos, con ramitas no más* [we ourselves, just with little branches]" shows how many mothers talk about healing at home. The use of "*no más*" after describing home remedies is common and implies simplicity and ease: "it's *just* this" or "*only* that thing."

The ease of learning how to cure E&M is also significant for mothers. Many seemed to have been surprised by how simple and easy it was to turn observations in practice. For example, when I asked Estefanía how she learned to treat E&M, she replied,

> *Yo, solo viendo no más. Porque sabía ir cuando antes yo no sabía, me sabía ir donde mi abuelito. Y ya viéndolo a él como hacía aprendí. Y yo en seguida… a los niños. Yo mismo, para no ir a buscar quien.* [I, just watching is all. Because I would go, before when I didn't know, I would go to my grandfather's. And just watching how he did it, I learned. And soon after I [could treat] the kids. I myself, so as not to have to go look for someone.]

As a creative, motivated woman, Estefanía saw the need to be self-reliant in the curing of *espanto*, so she just started doing it after watching her grandfather cure. Aurelia also describes how learning to cure was not only easy, but also helped her gain independence from her mother and mother-in-law:

> *Si, yo mismo sé hacer. Es que a veces no están ellas [mamá y suegra], entonces toca uno. Así barriéndole no más. Simplemente se les barre y ya!* [Yes, I know how to do it myself. It's that sometimes they [mom and mother-in-law] aren't around, so it's up to oneself. Just cleansing them is all. You simply cleanse them and that's it!]

Marcia echoed this sentiment of ease:

> *Eso se cura con tragüito, soplándoles, y ya. (¿Usted lo cura?) Si, yo mismo. (¿Con trago no más?) Si, con tragüito y un ajicito se los barre y*

> *¡ya!... Eso no más yo les hago. Eso no más.* [That's cured with a little cane alcohol, spraying them, and that's all. (Do you cure it?) Yes, I do myself. (Just with cane alcohol?) Yeah, with a little alcohol and a little chili pepper you cleanse them and that's it! That's all I do to them. That's all.]

This accessibility of healing—all they need is a little alcohol and a little chili pepper to do the cleansing—makes healing for E&M an integral part of mothers' home health care practices. At the same time, Marcia later said that she learned out of curiosity, and asserted that she didn't *really* know what she was doing:

> *Yo en cambio no sé curar. No, si no que a los míos, yo se curarles sino que a los míos por curiosidad no más. Yo no puedo eso.* [I, on the other hand, don't know how to cure. No, just that for my kids, I know how to cure them but for my kids out of curiosity is all. I can't do that.]

Despite this feeling that she is not qualified or proficient in healing, Marcia said she cures her children whenever they show signs of E&M. This tension between feeling empowered by their abilities and feeling unsure about the efficacy of their practices was present for many mothers.

One reason for this tension is that these practices lie at the interface between mothers' home practices and those of outside specialists. In the case of E&M, mothers receive no validation or acknowledgement of their practices from biomedical experts. As discussed earlier, some mothers see their traditional "country" beliefs as backward or obsolete in comparison with modern medical knowledge, but they retain faith in E&M treatments because they often work even when doctors' remedies fail, similar to what Wayland (2001) found among peri-urban women in the Amazon. In addition to this dynamic, mothers also contend

with the idealized versions of their ritual cleansings that are carried out by indigenous folk healers in the area.

Indigenous folk healers sometimes take the role of "expert" healers, which can lead to an ambiguous sense of self-efficacy among mothers (Gold and Clapp 2011). On the one hand, mothers can choose to heal at home by themselves and face both uncertainty about their abilities and confidence from seeing the effectiveness of their practices. On the other, mothers like Marcia and Penelope seemed to feel compelled to take their children to a folk healer who has more experience and remedies to treat their children. By doing this, they still exert their power in choosing to treat with means they deem effective and appropriate for the illness, but they also relinquish the power of healing at home, as Gold and Clapp (2011) found among women in the Peruvian Andes.

Many of the participating mothers had taken their children to an indigenous folk healer at some point, even if they normally preferred to cure at home. These interactions allowed them to observe indigenous practices that they could then replicate in the home, such as "sweeping" the body with bouquets of various dried plants and blowing tobacco over the body. Other techniques that mothers described having seen, such as rubbing an egg or guinea pig over the body or using hot stones to invoke the spirits, remained outside their practices with an air of mystery. In one example of this, Cristina described her visits to the indigenous healer with awe:

> *Y sabe invocar a los cerros. Es muy interesante oírlo, porque habla como en otro idioma, entonces sabe hablar. Nosotros no entendemos. Y después, no los hace, ni los toca él. ¡No! Con lo mismo así con el trago sabe curar. Eso lo mismo les sopla. Y luego sabe estar con una piedra*

> *así santándose, "Y esto" sabe decir. ¡Y ya! Y se cura.* [And he knows how to invoke the hills. It's very interesting to hear him, because he speaks like in another language, so that's how he speaks. We don't understand. And later, he doesn't do them, or touch them. No! With the same, he'll cure with sugar cane alcohol. And the same, he blows on them. And later he'll be with a rock like this, blessing, "And this" he'll say, and that's it! And it cures.]

She was impressed by the mystery of the healing ceremony itself: invoking the hills, speaking in an unknown tongue, but then using simple remedies that mothers also use in the home. Further research on mothers' perceptions and experiences of indigenous healers' practices like these could help elucidate the origins and evolutions of their home practices surrounding E&M.

Indigenous healers also give food prohibitions to observe after a healing. Children are to avoid eggs and dairy products for three days, after which they can eat normally. Mothers said that rather than giving children with E&M particular foods, they usually struggle to feed them anything since they are either nauseous and cranky or sleepy and achy: either way, they have no appetite. Viewing ways that food is used for health, therefore, loses traction within this illness category. Instead, mothers' experiences with E&M can be viewed through a different lens that diverts our focus from food and home remedies to the broader area of healthscapes. Mothers' navigations of healing opportunities outside the home help to not only contextualize the role of home practices within the wider swath of health care choices, but also highlight the dynamic interactions of knowledge, power, and practice that family health care entails for these women.

Chapter Six: Navigating Healthscapes

The home remedies and health care practices discussed in the previous chapter are not mothers' only methods for healing. While locally available foods, plants, and animal products are cost effective and readily accessible, they represent just one of many domains of health care that mothers have at their disposal. As was evident in the discussion above about the role of indigenous healers in mothers' healing repertoires, mothers address family illnesses in a pluralistic "healthscape" that spans the "biophysical, social, and psychological" spaces of multiple, overlapping medical systems (Gold and Clapp 2011:96). Navigating this health landscape involves not only locating the most effective and desirable remedies; it also entails interactions, interrelationships, and power dynamics between different sectors of health care.

Mothers' home practices surrounding food and health care continue to exert influence even when mothers seek professional help. In fact, the distinction between "home" and "outside" is problematic, considering mothers' constant contact with people in their families and social networks. A mother may gain new knowledge from her neighbor, but that neighbor may have heard it from a doctor, who in turn might be responding to common statements from patients in the clinic. The messiness of these knowledge interactions points to how global power dynamics are played out at the local level. While I make a distinction between health care practices that employ home remedies and outside resources, this should

not be considered a dichotomy. As well as knowledges interacting in this blurry interface, the combinations and creative adaptations of different healing practices will become clear in the following sections. After describing some health-seeking tendencies among mothers, I discuss how their decisions continue to be mediated by limited access to resources. I then explore in more depth the issues of knowledge dynamics and their iterative effects on health care practices.

Navigations

Mothers clearly have a wealth of home practices that they can use without ever visiting a doctor. However, it is rare that mothers rely exclusively on one practice or remedy. In addition to combining multiple home remedies to treat an illness, mothers also frequently bring their children to see doctors and nurses at the local health clinic. The first navigation they must take, therefore, involves the decision to visit any kind of outside specialist.

In general, mothers prefer to use what they consider natural home remedies before seeking professional care. This may be due to a general preference for the natural, as discussed earlier, but it is also a consequence of limited resources for some mothers, which I address below. Regardless of these drivers, mothers tended to treat at home for a number of days, waiting to see if the condition worsened and trying E&M healings before visiting a doctor. According to Schwartz's (1969) original model of the hierarchy of resort, this generally follows the "counter-acculturative" hierarchy because mothers use home and folk remedies before

resorting to biomedicine. This also reflects Rao's (2006) finding that the counter-acculturative hierarchy is used for minor illnesses like colds by Indian immigrants to the United States. As I explain later, however, the simultaneous uses of home remedies, *limpias* for *espanto*, and doctor visits complicate this model.

One of the ways mothers approach this first navigation is by assessing the severity of the illness. For example, after affirming that home remedies from her grandmother and mother-in-law do a good job, Aurelia elaborated on when home remedies are appropriate and when doctors' remedies are needed:

> *Y sí, sí ha hecho bien. Cuando es leve así hace bien los remedios caseros pero cuando ya está bien dura la gripe, no, toca antibiótico. Cuando está la gargantita bien inflamada toca el antibiótico, toca el médico, así. Allí no les quita con nada.* [And yeah, it's done a good job. When it's mild like that home remedies do a good job, but when a cold gets really bad, no, you need antibiotics. When the little throat's really inflamed you need antibiotics, you need the doctor, you know. At that point nothing makes it go away.]

Mothers described a number of ways that they tell when a cold or cough is "*bien dura* [really bad]" enough to invest the time and money to visit a doctor. Rosa explains that her children need to have progressed symptoms in order to take them to the doctor—otherwise she uses her own remedies:

> *Cuando están duro, duro las gripes, pero con dolor de la garganta, de la cabeza, lo llevo al doctor. Al subcentro en La Libertad. Si no, no les he dado nada. Agüitas, por ejemplo, de tilo, con madreselva. Cuando tiene mucha tos, ajo con leche le daba.* [When the colds are bad, bad, but with sore throat, head ache, I take him to the doctor. To the (health) subcenter in La Libertad. If not, I haven't given them anything. Teas, for example, of elderflower with honeysuckle. When she has a bad cough, I gave her garlic with milk.]

Ana also described giving elderflower tea, specifically with a bit of sugar for three nights, and if after that it doesn't have an effect, "*se va al doctor* [you go to the doctor]." Most mothers described this similar pattern: treat at home, wait to see if symptoms persist, and only visit a doctor if and when the illness becomes severe. Every mother seems to have a different threshold for taking their children to the doctor, which may depend on available resources, past experience, the child's past illness experiences, and the mother's confidence and trust in her home practices. It also depends on how much confidence and trust she has in the medical professionals with whom she has interacted.

Once the decision is made to visit a doctor, mothers must then navigate the range of options available for medical care. This second point of navigation seems to rely heavily on the amount of trust that mothers have in doctors, which appears to vary greatly within the community. Some mothers, for example, never mentioned problems with finding a doctor and spoke rather matter-of-factly about their experiences at health centers. Others described a more difficult process. For example, Elsa's mother needed eye surgery after a car accident and felt at the mercy of the doctors she had seen in the nearby city of Ibarra, who had not offered her other options and would not promise a successful outcome. Once her daughter started working at a clinic, she was able to get a personal recommendation for a good eye surgeon in Quito, who she said did a good job. Personal recommendations like this were a common way that mothers find *médicos* that they can trust.

Some mothers described visits to many different doctors in search of one they trust. In these cases they often received conflicting advice or prescriptions, leading mothers to feel frustrated and distrustful. Rosa's struggle with her infant son's cough offers a good example of this dynamic. After weeks of treating him under the care of a doctor in El Ángel, she visited a pediatrician in Ibarra that she had once seen years prior for her daughter. The pediatrician expressed frustration that the local doctor in El Ángel had given Rosa's son overly strong medications (small doses of adult medicines rather than infant medications). Rosa had faith that this pediatrician knew what she was doing because her son was getting better since starting the infant penicillin she prescribed, and her past experience with her daughter added to this trust.

Cristina told another frustrating story of receiving inaccurate diagnoses, overly strong medications, and finally running across a doctor in training that pointed her to practices that worked. She recounted,

> *Nos fuimos donde un doctor acá en El Ángel y dijo que ha sido infección de la piel. Entonces para curarlo con esas fuertes, unos remedios fuertes... Y nada, no le pasaba. No. Fuimos a una dermatóloga en una clínica de especialistas en Ibarra, y dijo que ha sido un virus… ese doctor me dio unos remedios fuertísimos…. La carita partía así, como hace secarse se le hizo partiendo. Porque era de los medicamentos que le ha dado el dermatólogo… [Pero] lo que ha tenido es alergia. Entonces que tratado con los medicamentos equivocados. Entonces eso vino a provocar la alergia al sol. Ni le ha gotado casi todas las defensas que ha tenido.* [We went to the doctor here in El Ángel and he said that it was a skin infection. So to cure him, with those strong ones, some strong remedies… And nothing, it didn't go away. No. We went to a dermatologist in a clinic of specialists in Ibarra, and he said it was a virus… that doctor gave me some really strong remedies… (My son's) little face would split like that, since it makes it dry out it made it split. Because it was from those medications that the dermatologist gave

> him… (But) what he had was allergies. So, that it was treated with the wrong medications. And so that came to provoke the sun allergy. And it used up almost all the defenses that he had.]

Many issues arise from this story, from the difficulty of trusting a specialist but losing trust when the specialist is wrong, to different doctors giving different diagnoses and advice, to medications being seen as the source of immune dysfunction and thus too strong. This experience contributed to Cristina's attitude that the best healing comes from simple solutions such as diet, and that improper treatment can lead to a disastrous chain of negative effects. This story illustrates how difficult it can be for mothers to build trust with medical professionals, and how putting their recommendations into practice is not straightforward.

Once a mother visits a doctor and receives a diagnosis and prescription for treatment, her third point of navigation involves how to implement the doctors' recommendations and prescriptions. One key finding that has implications for the medical community is that mothers often continue to administer home remedies in conjunction with pharmaceuticals. This practice has been found in other medically pluralistic contexts as well (Giovannini et al. 2011; Mathez-Steifel et al. 2012) and complicates Schwartz's (1969) hierarchy of resort framework. Biomedicine and home remedies are not mutually exclusive for these mothers, and medical pluralism often involves the complementary and simultaneous use of both pharmaceuticals and plant or food medicines. This is especially true when mothers perceive doctors' medications to be too strong for their children. Aurelia elaborated on how she practices this simultaneous use:

> *El doctor me sabía dar bastante antibiótico. El doctor. Pero yo igual, en la casa le sabía dar coladitas de guayaba, que ayuda bastante en la infección. Para la diarrea.* [The doctor would give me a lot of antibiotics. The doctor. But at the same time I, in the home I would give her a little guava *colada*, which helps a lot for infections. For diarrhea.]

Regardless of what the doctors advise or give her, she and many other mothers continue to apply the home remedies that they have seen to be effective. In these cases, mothers take advantage of biomedical treatment as a safety net in case their home remedies are not enough to cure.

Damaris echoed this practice of combining biomedicine with lay healing practices. Here she described more than one food medicine to give to children in addition to visiting the doctor for prescriptions:

> *Para la infección así mismo lo llevo al médico, les mandan medicamentos. Pero así mismo les puede dar jugo de guayaba con plátano verde. Eso es para que se hidrata un poco. Una sopita de arroz de cebada.* [For an infection, likewise I take him to the doctor, they prescribe him medications. But at the same time you can give them guava juice with green plantain. That's to hydrate a little. A bit of barley gruel soup.]

This inevitable combination of biomedicine and home health care practices makes it difficult to separate them into distinct sectors. I saw mothers go directly to the pharmacy to buy medicines that doctors had previously prescribed to them (most pharmacies in Ecuador sell all pharmaceuticals over the counter) and make decisions to give more or less than a prescribed dose in the home. When mothers thought their home remedies and foods would be just as effective as pharmaceuticals, they generally chose to use them. However, many mothers also expressed a reluctance to visit the doctor or administer medicines that reaches

beyond lack of trust or preference for natural remedies. Invariably, this reluctance was explicitly or implicitly tied to lack of resources.

Access to resources

Every mother that I spoke with in Jesús del Gran Poder faced some degree of financial hardship, whether on a daily basis or in times past. Although elaborating on the livelihood options and economic strategies of families is regrettably beyond the scope of this thesis, it would be woefully incomplete without briefly exploring how consistent poverty affects mothers' health care and food practices. Here I draw from critical medical anthropological theory to emphasize how political-economic forces shape the ways that human biology and culture interact, and in particular how poverty limits opportunities to maintain health (Bogin 2012; Goodman and Leatherman 2001; Schoenfeld and Juarbe 2005).

In addition to the type and severity of illness determining mothers' choice to seek outside care, as noted above, family finances also mediate this decision. If money were not an issue, some of the participating mothers indicated that they would take children to the doctor more readily. For example, soon after Aurelia described her home treatments for coughs, she noted that she uses these home remedies "*cuando no hay la plata para comprar medicamentos* [when there's not enough money to buy medications]." She takes her children to the doctor only if their illnesses are too strong or persistent, *because it costs money*. For mild cases and when they lack cash, she treats at home. This approach was relatively

consistent among mothers, who explained that it changed over time as their financial situations improved or worsened. In this way, mothers adapt their practices to socioeconomic constraints, within which they make choices based on a variety of other factors described above. Money is, in many ways, the bottom line.

Money also mediates what foods mothers can buy, which affects their abilities to provide the foods they know to be healthy. One limitation is availability. Local stores do not carry a variety of fresh foods (see Figure 8), and the market in El Ángel runs only once a week. This means that when mothers run out of produce in the middle of a week they usually endure a more monotonous diet for several days or more. In addition to these basic restrictions, some mothers also pointed out that some foods are simply absent from the region. Luz described this difficulty in finding nutritious and desirable foods:

> *Yo por ejemplo de mi parte sé cual es una buena alimentación, sino que, aquí en el sector, … no hay donde comprar … aquí incluso hasta el pollo a veces sabe estar dañado… Sea, a falta de no hay donde comprar. Eso, ¡a veces se acaba la plata! (Risas). ¡No hay! Entonces, digo, es solamente tener el dinero y uno sabe cómo alimentarse, que es lo que necesita el cuerpo.* [For example, for my part, I know what's a good diet, it's just that here in the area, there's nowhere to buy it… here including even chicken sometimes will be spoiled… Well, it's because there's nowhere to buy. That, and sometimes the money runs out! (laughs) There isn't any! So, I'm saying it's only having the money and one knows how to feed oneself, what it is that the body needs.]

This mother verbalized what many others experienced on a daily or weekly basis: accessing foods that they know are healthy is sometimes impossible due to lack of availability or, when foods are available, lack of money. She points out that people

know what foods are healthy, but that poverty is keeping them from realizing their ideal diets.

Figure 8. Foods available at one of the stores in Jesús del Gran Poder. This store had the most fresh foods (at left) of any of the four small *viveres* shops.

The ways that mothers use food to promote health described throughout this study are thus limited to some degree by what they can afford. The most poignant illustration of how poverty restricts mothers' health care practices was in Marcia's family. Her teenage son has a chronic disease that makes his stomach hurt, and it can only be treated through diet, according to Marcia. She can rarely afford the fruits and vegetables that keep his pain in check, however, so he normally goes untreated. She relayed,

> *El otro año como tuve la platica, un poquito (de comidas frescas) le di, y sí, ha cambiado. Pero este año, como ya no tengo, le está vuelta de vez en cuando, le duele le duele el estómago.* [The other year since I had a little money I gave him a little (fresh foods), and yes, it changed. But

> this year, since I don't have any anymore, he's got it again every once and a while, his stomach hurts him, hurts him.]

The difficult situation that Marcia faces shows that money limits not only medicines, doctor visits, and transportation, but also their ability buy foods that they use to maintain health and prevent or treat diseases.

It is important to note the historical basis of poverty for many families in this area. In Marcia's case, her mother and father had not received any land during the era of land redistribution in the 1960s and 1970s that Sherwood (2009) describes. Lack of land inhibits her ability to produce for her family as well as to earn cash from selling agricultural products. Coupled with disabilities throughout the extended family, this has contributed to poverty for them, for her sister Marisol, and now for her daughter Penelope as well. In constrast, some families have larger landholdings. Estefanía and her husband, for example, have access to his father's lands that he has accumulated over time since the land reforms. They explained that they have built up their herd of dairy cows with income generated from sharing these lands for potato production, as well as from access to credit and a successive upgrading of vehicles and housing. At the same time that many mothers (and particularly fathers) expressed stress from going into debt, this pattern also appears to have catalyzed economic opportunities that are allowing some families to "get ahead" in an area with few jobs. These historical variations in the distribution of land and wealth seem to be manifested as unequal capacities to access foods, health care, and many other resources.

These issues surrounding poverty and access to resources raise important questions: if mothers had limitless financial resources, would they completely abandon home remedies? What foods would they purchase, and how would their diet change? The answers are difficult to predict. Based on the practices and attitudes detailed in Chapter Five, as well as findings from other studies (Giovannini et al. 2011; Mathez-Steifel et al. 2012), it appears that many mothers would access biomedicine more frequently but continue to use home remedies to some degree. Future research on the direct and indirect effects of poverty, integration into the market economy, and contact with globalized culture on health and the maintenance of local knowledges and practices would help to illuminate the trade-offs of these processes.

Knowledge dynamics

> *Los remedios caseros, mi mamá, y así viene de varias personas que conversan. Y también los médicos ya dicen, hablando así, también.* [Home remedies, my mom, and it also comes from various people that make conversation. And also the doctors say, talking like that too.] -*Damaris*

Within the diverse array of practices described throughout this thesis, there are ambiguities surrounding what nutritional and biomedical sciences assert is healthy and how local people put their knowledges—regardless of their origin—into practice. One example is the contentious consumption of pork, which is today the central element of any feast. Most families have received a prohibition of pork from doctors, which poses a unique challenge since pork and pork lard have been an

important source of home-grown protein and fat for generations. As noted in Chapter Four, *antes* people kept vats of pork lard to use in small amounts, whereas today it is common to employ relatively large amounts of inexpensive hydrogenated palm oil on a daily basis. The question arises: is the problem fundamentally pork lard as relayed by doctors, or is it more rooted in the relatively new practice of regularly frying foods? The diverse ways that mothers enact this tension between their traditional food practices and experts' advice in a constantly changing food landscape demonstrates the dynamic nature and contingency of knowledge and practice. To illustrate these conclusions, I first describe the various avenues through which mothers receive knowledge, and then discuss some of the ways these various knowledges interact. I argue that the dichotomies between global and local science or expert and lay knowledge are false, and that knowledge exists for mothers as dynamic processes and practices.

Mothers' local knowledge of nutrition and health incorporates traditional practices from elders, nutrition science from doctors, and information from media and peers, among other sources. Female elders are a primary source of knowledge and experience, especially for young mothers. All the mothers I spoke with either lived with their mother or mother-in-law or saw one of them on a daily basis. This regular contact with *las mayores* (the elders) ensures that traditional food and health care practices are instilled in young mothers and to some extent continue to be practiced between and within households. As noted regarding *la dieta* and maternal care, mothers receive large amounts of information during this time about

how to care for not only themselves, but also their infants. Another way that mothers learn substantially from their female elders is through healing for *espanto* and *malaire*. Women indicated that they have observed cleansing rituals throughout their lives, and when their children began to be afflicted by these illnesses they put what they had seen into direct practice.

Grandmothers' influences were generally taken for granted by mothers, and they seemed to consider it obvious that they would learn by direct observation and experience. Penelope's comment about how she learned to give a home remedy to her own daughter makes this attitude apparent: *"Mi mami, ella nos daba. Entonces, como ya nos daba a nosotros por eso yo le doy a ella.* [My mom, she gave it to us. So, since she gave it to us that's why I give it to her]." She learned by receiving the treatment from her mother when she was a child, so she has adopted the practice now that she is a mother. Cristina explained that when she was twenty years old, she was an "*enemiga de las aguas* [enemy of teas]" and didn't know much about their use, but over time her mother-in-law taught her many remedies that have become invaluable to her. This gradual learning during motherhood has been observed in other settings (Finerman and Sackett 2003, for example), and it is significant because it underscores the importance of having female elders with more experience and knowledge to pass on to the subsequent generation of mothers. As other avenues of knowledge grow in these women's lives, this informal, everyday transmission may be changing in a similar way to what Cantor and colleagues (2013) observed among Costa Rican mothers.

In conjunction with female elders, outside health experts also impart a substantial amount of knowledge to mothers. As discussed in more detail in Chapter Five, indigenous healers are one important source of traditional knowledge, particularly surrounding culturally-bound illnesses. With the expansion of the public health system since the 1990s (Lopez-Cevallos and Chi 2010; Lucio et al. 2011), mothers also have regular contact with doctors and nurses who they say give dietary advice in addition to standard biomedical diagnoses and treatments. These health professionals are consistently referred to in conversations about food and health. Mothers commonly supported their health explanations with phrases like *"los médicos dicen…* [the doctors say…]," suggesting that the knowledge they impart holds high status among women as being generally reliable and objective.

Another avenue for knowledge transmission is through peers. Like Damaris in the excerpt at the beginning of this section, mothers often spoke of "making conversation" with other mothers, neighbors, and extended family members about foods and home remedies. This was sometimes the default answer when I asked how mothers learned a particular remedy, which demonstrates how mothers do not necessarily keep track of where they get information—they might hear the same thing from multiple people or have been putting it into practice for so long that it blends with other practices. In this way, mothers' "lay referral networks" (Gold and Clapp 2011) are highly interactive and malleable.

Although these sources of knowledge appeared to be the most direct for the mothers in Jesús del Gran Poder, there are many other ways that women

incorporate new knowledge. The media offers mothers new recipes, home remedies, body images, and much more through television shows and commercials as well as advertisements in stores and at events in the nearby towns. Cantor and colleagues (2013) found television to be a very prominent source of food knowledge for mothers in a Costa Rican tourist town, and it would be useful to know more about television's influence on Carchian mothers. Children also sometimes relayed what they were learning in school, which could be significant for many mothers that did not attend beyond primary school. Employment can also be a source of knowledge, as was evident in Rosa's family. Her mother regularly went into town to cook and clean for her *patrona*, and she often commented how much she enjoyed learning the new recipes she was asked to prepare there.

At times, the direct sources of particular pieces of knowledge seem clear, as in the case of Rosa's diabetic mother learning to avoid refined carbohydrates from the nurse, or Ana echoing her mother's beliefs during an *espanto* healing. However, these relatively clear-cut cases belie the fact that knowledge is not a static object that is passed from person to person. It morphs in the process of transmission and within the person processing it, leading to a rather messy combination of various types and sources of knowledge (Law 2004). The interactions between and among the sources described above play out in diverse ways and contribute to the richness of knowledge surrounding food and health.

Inconsistencies between different knowledges are one critical element of how these interactions take place. One area where elders' advice and doctors'

recommendations often do not line up cleanly is during *la dieta*. For example, Aurelia pointed out the difference in beliefs regarding bathing after birth:

> *Según la creencia de las mayorcitas no nos saben hacer bañar el rato del parto. Los médicos saben decir que sí se puede bañarse y todo pero las mayorcitas dicen que no, aquí.* [According to the beliefs of the elder women they won't make you bathe after the birth. The doctors say that yes, you can bathe and everything, but the old ladies here say no.]

As noted in Chapter Four, because grandmothers care for their daughters after they give birth, their influence is strong during this period.

This is also evident in Rosa's wondering why she lost a lot of hair when her son turned three months old. She received different explanations from the nurse (pregnancy and breastfeeding pulls calcium from the body), her mother (just a matter of timing), and a friend in El Ángel (it was the anesthesia during the Cesarean section, which Rosa says she's allergic to). Because of these inconsistencies between the various explanations, Rosa was confused and did not know whom to believe. On one hand, her mother has offered appropriate advice throughout her life, and her friend seems trustworthy because she works at a pharmacy and often gives recommendations. On the other, the nurse has status as a professionally trained health expert. How Rosa reconciles the differences between explanations for her hair loss therefore reflects her relationships with these individuals in addition to a logical assessment of the information.

In this way, mothers' interpretations of these inconsistencies often depend on their trust and direct experience with the avenues involved. Trust in any avenue or practice often develops through direct experience, and seems to be able to

override the unequal statuses that professional, folk, and home healing generally enjoy. In other words, women tend to trust whatever has worked for them, even if it means ignoring or altering the advice of people with specialized knowledge. For example, Cristina expressed doubts about *espanto*, reflecting doctors' dismissal of the illness, but concluded with amazement that healings seem to work. She mused in regards to E&M cleansings, "*Será cierto? Será mentira? Porque sabían curarse. Si, saben curarse*. [Is it true? Is it a lie? Because they would get better. Yes, they get better]." Seeing is believing for her and many other mothers who question whether or not there is validity in illnesses unrecognized by biomedicine. Cristina was surprised that a healing she saw as far-fetched (her extended family spraying pig blood on her son's back) seemed to work, but the fact that her son never got *espanto* again led her to place more faith in this otherwise unbelievable practice.

There is a difference between how home healing knowledges interact with biomedicine and folk healing. As other studies have found (Gold and Clapp 2011; McKee 2003), the latter is more accessible for women. They can observe an indigenous healer's or midwife's traditional medical practices and put many of them into practice in their own homes. In contrast, biomedicine relies on highly trained doctors with expert knowledge and industrially produced pharmaceuticals that are absent from the local landscape. Mothers cannot make pharmaceuticals at home from locally available materials, but they can make folk healing tools such as a broom of herbs for cleansings. This is parallel to Monteiro and colleagues' (2012) characterization of unprocessed and minimally processed versus ultra-processed

foods: the former are reproducible at home, while the latter rely on industrial processes generally inaccessible to lay people.

Just as past experiences help establish trust and faith for mothers, new experiences and knowledge can change past perceptions. Multiple knowledges, though sometimes contradictory, coexist and circulate within the community, families, and mothers themselves. Mothers often demonstrated this type of interaction with the use of the ambiguous term "*dicen* [they say]": they usually did not specify whether "they" are female elders in the community, medical professionals, or any number of other people that may be relaying knowledge. "*Dicen*" can therefore be seen as a proxy for mothers' syncretic knowledges from outside the home.

Health care and diet as iterative processes

In Chapter Four, I discussed how ideas of a healthier past, *antes,* contribute to what foods mothers consider nutritious. The knowledge dynamics outlined above make the enactment of this memory much more complex, however. Mothers' ideas of what it means to "*comer bien* [eat well]" or "*comer sanamente* [eat healthily]" were full of tension and contradiction between traditional practices and science-based nutritional knowledge.

When asked what it means to eat well, some mothers pointed out specific foods to avoid like salt and sugar, while others cited diversity in the diet as a central

component of eating well. Aurelia, like others, used both these criteria to describe a good diet:

> *No comer golosinas. Comer solo comidita, por ejemplo un arrocito de cebada con leche, o una ensaladita de lechuga. Unas papitas con algun otra cosa acompañada. Eso más sanamente, parece, ¿no?* [Don't eat sweets. Eat just a little food, for example a little barley gruel with milk, or a little lettuce salad. Some little potatoes with some other thing to accompany. That's most healthy, it seems, no?]

Cristina more explicitly expressed the importance of variety in a good diet. When I asked what eating healthy meant for her, she replied,

> *Comer variado. Así, algunas menestras y algo, ensaladas, con carne, así variado. Pero aquí somos ya enseñados, más paperos (risas).* [To eat varied. Like, some soups or something, salads, with meat, varied like that. But here we're already used to it, more potato people (laughs).]

She knows that a varied diet is healthiest, but admits with some embarrassment that people here tend to prefer potatoes even though they are not seen as particularly nutritious.

In general, mothers described good nutrition as the basis of lifelong health. This comes in the form of maintaining the immune system, as Cristina asserted when describing how to prevent illnesses. After noting the importance of protecting children from the cold, she said,

> *Creo que alimentándose bien, mismo ya se hacen resistentes a toda enfermedad… Y si no se alimente bien, les da más, de todo se enferman.* [I think that feeding oneself well, same thing, it makes them resistant to every illness… And if you don't feed them well, they get it more, they get sick from everything.]

She believes that eating well leads to immunity and resistance to disease. Damaris also equated eating well with staying healthy. When I asked whether she worries

about her son's health, she immediately spoke of the threat of cancer nowadays, and then noted how giving him good foods is one way she can contribute to his lifelong health:

> *…de doy una buena comida, me parece a mí que le doy algo bueno, para que él sea sano, para adelante, así Dios lo tenga bien. Eso me imagino.* [...to give a good food, it seems to me that I give him something good, so that he can be healthy, to press on, so God keeps him well. That's what I imagine.]

Like many other participants, Damaris perceives "good nutrition" to be vital to her family's health and considered providing it to be an important role for her as mother. Furthermore, she and other mothers admitted that their diets are not perfect, but that they try to provide the best diet they can. Damaris expressed this in her interview:

> *Todo parece que comemos un poco saludable, aunque no todo la totalidad pero sí comemos saludable (risas). Entonces, todo eso bien, todos comen… así mismo queríamos que haya unas personas que no saben comer, que aprenden a comer un poquito de que sea más saludable.* [Everything seems like we eat pretty healthy, although not all in the entirety, but yes we eat healthy (laughs). So all that's good, everyone eats… likewise we'd like if there are people that don't know how to eat, that they learn to eat a little of what's most healthy.]

These reflections raise the question: how do people that "don't know how to eat" learn what good nutrition is?

As with medical knowledge, nutritional knowledge comes from a variety of sources. These have been noted throughout these findings: elders talking about their past diets, family members talking and sharing recipes, and grandmothers feeding new mothers during *la dieta* are just a few examples. Most notably, doctors appear to have a relatively novel and strong influence on perceptions of healthy

diets through their nutritional prescriptions. Mothers noted that doctors might prescribe foods when medications are not effective. For example, Damaris mentioned that doctors sometimes prescribe juices in addition to or instead of medicines, and as noted earlier, Marcia was told that a diet rich in fruits and vegetables was the only way to treat her son's stomach issues.

In addition to complementing or replacing medications, nutritional knowledge from health professionals contributes to mothers' ideas about how specific nutrients like calcium, iron, or vitamin C are good for particular functions in the body. It also appears to be informing mothers' opinions about the need to avoid excessive salt, sugar, and fat, since mothers refer to doctors when explaining why they think they should limit their intake. For example, Estefanía explained that she had a bad headache after eating several fried tortillas, which led to a doctor visit and lab tests. She tested high for triglycerides and cholesterol, so the doctor urged her to eat less fatty foods. Her brother-in-law with gastritis echoed this, saying that in contrast to how most people eat—and he indicated a plate overflowing with white rice, potatoes, and fried meat—doctors advise him to fill his plate with half vegetables, a small potato, and maybe one small piece of meat.

This influence also affects food practices through advice about hygiene. For example, Ana's mother-in-law said that when she had gastritis when she was pregnant with her daughter, the doctor told her to boil all their water because there could be bacteria in it. Since then, they boil a large pot every morning to use in the kitchen. When mothers spoke of their hygiene practices, the use of scientific words

such as “microbes” or “microorganisms” pointed to how some of them were incorporating outside experts’ language and advice in home practices.

The relationship between illness and diet seems to be cyclical, since people will visit doctors for symptoms of diet-related diseases such as gastritis or diabetes, receive nutritional prescriptions, and in turn pass these on to the rest of the family, who then gradually incorporate this new knowledge into daily dietary practices. When their now-altered diet fails to maintain health sufficiently and someone falls ill, the cycle is repeated and doctors’ knowledge continues to influence family diet. In particular, elderly members of the family that have diet-related chronic diseases often act as conduits of nutritional knowledge to the rest of the family.

Luz explained part of this process in her interview. She described her mother’s struggle with gastritis and noted that because her mother had to make changes, the illness has changed the whole family’s diet:

> *Estamos en que la amenaza del colesterol, los triglicéridos, la glucosa, entonces queremos alimentarnos bien porque, pues, mi mamá ya tuvo una enfermedad bastante grave, y entonces cuidarnos en la alimentación, a cuidarse ella entonces cuidarse a toditos.* [We’re under the threat of cholesterol, triglycerides, glucose, so we want to eat well because, well, my mom already had a pretty serious illness, so to take care of ourselves through diet, for her to take care of herself is to take care of everyone.]

She expressed what people in many other families had experienced: a major illness in the family compels people to pay more attention to the effects of foods on their health.

Rosa’s family also experienced a shift in diet after her mother was diagnosed with diabetes. Rosa’s mother said that she got diabetes because she used to eat a lot

of sugar, cookies, and other sweet foods. After treating the disease with medications for three and a half years, she proudly said that she was able to go off them because of the ways she changed her diet. In particular, she explained that the local nurse had gone to a meeting in Quito where they taught her to advise people with diabetes and high cholesterol to avoid salt, sugar, pork, rice, potatoes, and bread. The nurse recommended instead that she eat *melloco*, *oca*, broccoli, cauliflower, chard, spinach, and toasted tortillas (not fried). Although no one else in the family suffers from the same condition, Rosas's mother's dietary knowledge gained from outside health care providers is now part of the entire family's awareness and practice around food.

These examples show how illnesses lead to regular contact with biomedical professionals, who give diet and lifestyle advice in addition to nutritional and pharmaceutical prescriptions to treat specific illnesses. In this way, seeking health care outside the home has profound effects on how mothers understand "*comer sanamente"* and put their ideas of good nutrition into practice.

The processes and practices described in this section are integral to understanding mothers' home health care and food practices. Because home care is never the sole approach to maintaining health, mothers must navigate a range of outside options. In the process, they encounter the power dynamics inherent in pluralistic healthscapes. They also contend with dynamic and syncretic knowledges surrounding food and health. Ultimately, their experiences with biomedicine appear to be significantly affecting their ideas of good nutrition and health. Doctors' diet-related recommendations may empower mothers to make informed decisions about

food and health. At the same time, mothers' abilities to provide healthy diets for their families may continue to be limited by larger forces such as poverty, lack of availability, and the production demands of agricultural markets. In these interactions, mothers also continue to face the unequal power dynamics between rural residents and outside experts. As part of these dynamics, mothers' food and health care practices have potential to assert the practical and theoretical value of ways of being and doing that have emerged outside the purview of global science.

Chapter Seven: Discussion

Health as practice

What began with a simple glimpse of an ordinary mealtime discussion of potato skins has ended with a grandmother's equally ordinary attempt to replace potatoes with *mellocos*. However, in the process of exploring the meanings and movements of the webs of relations that were enacted in those ordinary practices (peel the potato, chop the *melloco*), this simple glimpse multiplies to capture more of the complexities and contingencies that color mothers' realities in Jesús del Gran Poder. There are unresolved tensions and contradictions that have arisen in the process, and my intention in this discussion is not to dissolve them. Rather, I attempt to gather them up as they continue to shift and interact in the real world, organizing them in Law's (1999) sense of "holding things together that are not strongly consistent" (113). In so doing I hope to condense and clarify the implications of how these meanings of health, practices of health care, and ambiguous manifestations of modernization take shape in Ecuador's current social landscape.

Much as Graham (2003) and Weismantel (1988) noted in other Andean communities, mothers' perception of a healthier past, *antes*, contribute to contradictory and complex food practices by shaping relationships with crop production methods and traditional and processed foods. They also underscore a widespread preference for things considered "natural", which affects mothers' trust

in both biomedicine and home health care. A preference for remedies considered more natural than pharmaceuticals echoes similar findings from Gold and Clapp (2011) and Wayland (2001; 2004). Mothers in Jesús del Gran Poder do not limit themselves to these remedies, however, and take a highly pluralistic approach to health care. This pluralism entails knowledge and power dynamics between global science and local practice, reflecting ambiguous and complex relationships with modernity that many studies have found surrounding both food (Cantor et al. 2013; Graham 2003; Weismantal 1988) and health care (Price 2003; Wayland 2004).

These findings support Antonovsky's (1996) salutogenic orientation that views health as a practice rather than a fixed state of being. Although the extended reach of biomedicine has created hegemony over what health means—largely limited to the physical body—there are many other enactments possible (Mathez-Steifel et al. 2012). Health can be considered an embodiment of knowledges and past practices that create an evolving, ever-imperfect sense of Being Well or, in Ecuador's national imagination, *sumak kawsay*. These findings highlight the fact that well-being also involves the integration of mental, spiritual, social, and emotional health. This is manifested, for example, in *espanto* and *malaire* and their treatment, mothers' stress over child illnesses and debt, and social support for new mothers.

This perspective of health as a dynamic, multifaceted practice is applicable across contexts, borders, and disciplines. Within the current Ecuadorian context, however, it has particular meanings and implications. In the remainder of this discussion, I take a moment away from my findings to revisit in greater depth how

the Ecuadorian development paradigm has been manifested in the health care system. With this more detailed understanding of the approach to public health care at the national level, I consider how this study might contribute to a more holistic, effective facilitation of *sumak kawsay*. This is followed by implications for policy makers, health care practitioners, and future research.

Sumak kawsay *in public health*

As noted in the literature review, there has been a recent shift toward a rights-based development paradigm in Ecuador based on the ideals of *sumak kawsay* (Radcliffe 2011). It remains unclear, however, whether this new paradigm is creating any shifts in practice away from extraction and technification to foster an accessible, democratic form of collective well-being (de la Torre 2013; Sherwood et al. 2013). For health and health care in particular, there is much unrealized potential to pursue *sumak kawsay* in current policies.

According to the Integral Health Services Model manual published by the Ecuadorian Ministry of Public Health (Ministerio de Salud Pública 2012), the hegemony of western biomedicine in the national health system and resultant neglect of ancestral wisdom and traditional medicine have contributed to profound disparities in health access across ethnic lines. Incorporating a truly complementary intercultural health approach, according to this manual,

> *[I]mplica fundamentalmente un posicionamiento ético y político de reconocimiento y respeto a la diversidad que permita una interacción horizontal y sinérgica, sustentada en el conocimiento, el dialogo y el irrestricto respeto a los derechos de las personas.* [implies a

> fundamental ethical and political re-positioning toward recognition and respect of diversity that allows a horizontal and synergistic interaction, sustained by knowledge, dialogue, and full respect of the rights of people.] [Ministerio de Salud Pública 2012:40]

This vision is impressive, especially because it is being promoted by the national government. It presents a profound challenge to the current health system: interculturality and human rights are politically appealing buzzwords, but how can they be truly valued and enacted in health care?

The recent infusion of *sumak kawsay* into the health system is promising. The new constitution includes health as a human right guaranteed by the state (Lucio et al. 2011). This foundation has led to not only a focus on infrastructure and access throughout the Ministry of Public Health, but also the establishment of a National Directorate of Interculturality, Rights, and Social Participation in Health (*Direccion Nacional de Interculturalidad, Derechos, y Participacion Social en Salud*) within the National sub-secretariat of Health Prevention, Promotion, and Equality (Flores and Castillo 2012). Some intercultural health care programs have been developed, but they are few (Mignone et al. 2007; Vivar 2007). These initiatives present opportunities for exchanging knowledge between traditional and biomedical practitioners, increasing trust in the health system, improving communication with indigenous communities, and fostering cultural pride, among many other potential benefits. They also face many challenges such as lack of both support from biomedical professionals and regulations regarding how public health can and should interact with traditional healers (Mignone et al. 2007). These reflect some of the issues that Ecuador faces at the national level in promoting

interculturality (Radcliffe 2011). They suggest that realizing the goals of *sumak kawsay* through intercultural health will require greater inclusion of alternative forms of medical practice and knowledge in the expansion of universal health care.

Home practices in context

Intercultural health initiatives in Ecuador have relied predominantly on the integration of biomedicine with indigenous medicine. While this has many benefits, this research shows that it may not be enough. Seeking outside health care is just one option among many for mothers, and "local" knowledge involves much more than indigenous traditional medicine, especially for *mestiza* mothers who consider indigenous healing separate from their own practices. Despite their diverse practices and knowledges as primary caregivers, mothers are usually silenced and devalued alongside forms of medicine that unfailingly carry higher status (Gold and Clapp 2011; Schoenfeld and Juarbe 2005; Wayland 2001). True recognition and incorporation of intercultural health care practices, in addition to establishing more equal footing between traditional medicine and biomedicine in the public health system, must therefore acknowledge and support women's local knowledge and practices as complementary and fundamental in maintaining family health (Vandebroek 2013). In other words, challenging the hegemony of biomedicine and respecting diversity in health care requires inclusion of not only traditional medicine and other forms of specialized health care, but also women's informal home healing practices.

Many practices described in this thesis could serve as bases for creating partnerships with mothers as home healers. I will highlight three opportunities here. First, "healthy eating" is an area in which mothers are already incorporating a large amount of nutritional knowledge from doctors, but it is unclear to what extent the biomedical community is integrating and encouraging traditional food practices from local mothers. On one hand, local people will continue to practice some food ways that they deem healthy or valuable regardless of doctor input. On the other, because food has symbolic value as well as nutritional benefits, the loss or maintenance of traditional food practices has consequences beyond physical health and deserves attention from health authorities. As described in the "*Antes*" section in Chapter Four, some traditional foods like *máchica*, *morocho,* and *nabos* carry cultural value because they help residents recall the past and make sense of how diets have changed over time. This conclusion is supported by other research as well (Graham 2003; Weismantel 1988). These meanings make doctors' promotion or prohibition of certain foods of particular concern. For example, the impacts the prohibition of pork and pork fat on cultural identity and food sovereignty remain unclear. Ambiguities like these could be more purposefully addressed if mothers' concerns and practices surrounding traditional foods had more equal status with biomedicine.

Postpartum care practices also present an opportunity for equal partnerships. *La dieta* serves mothers not only by ensuring quality care and nutrition during the postpartum period, but also by reinforcing familial bonds, local

traditions, and authority of female elders as caregivers. The plant remedies that are used to recover from childbirth during *la dieta* also attest to the importance of local knowledge as described by Bodeker (2007) and Vandebroek and colleagues (2011). Furthermore, it is important to consider *la dieta* in the context of these mothers' conceptions of health, which include heat and cold as bodily humors that affect recovery. Because these conceptions play a role in how mothers practice health care, they merit recognition from doctors even though they have been excluded from modern biomedical science (Etkin 2006).

A third area where mothers' practices would be especially valuable in partnership with other sectors of health care is in the treatment of *espanto* and *malaire*. As I described in Chapter Five, these illnesses are not recognized by doctors and, though some mothers visit indigenous healers, are primarily healed in the home. Since they often co-occur with other illnesses and are a very common perceived cause of illness, it would be valuable for mothers, folk healers, and doctors to have open dialogue about their etiology and treatment. Such dialogue could be seen as opportunity for doctors to educate mothers about the biomedical explanations for these illnesses. Some women may welcome this, but others may find it disempowering (Gold and Clapp 2011; Wayland 2001). This could be avoided by acknowledging women's potential contributions to medical science's knowledge of psychosomatic stress. In addition, their experiences with these illnesses could help doctors better understand rural identities, conceptions of the

body, local interactions with landscapes, and the role of self-efficacy in health promotion.

These examples exist among countless others that represent the value, appropriateness, and practicality of mothers' knowledges and practices surrounding food and health. As critical elements in salutogenesis, practices such as these have potential to overcome some of the health issues that Ecuador faces today. Elevating the status of mothers and their practices is not simply a theoretical exercise. Fostering complementarity between scientific research and womens' local knowledge "may represent a significant step forward in achieving better applied results" (Vandebroek et al. 2011:6). President Correa's so-called "citizen's revolution" calls for active participation and engagement of the populace (de la Torre 2013; Flores and Castillo 2012), so public health officials, medical practitioners, and training programs have much to gain by proactively engaging local people and their embodied knowledges.

Creating more equal partnerships between home health care practices and other forms of healing also supports an alternative approach to confronting modernity. These mothers simultaneously embrace and resist chemical agriculture, pharmaceuticals, outmigration, and other outcomes of modernization. If modernity means a loss of their children to the cities in search of jobs and technology, a disappearance of livelihoods based in crafts that can be produced more cheaply abroad, or the steady input of toxic chemicals in their fields and foods, it also means advanced communication with their faraway children, affordable clothing and

freedom from subsistence, and access to medical services. If mothers are pleased with some of these phenomena and frustrated by others, do they have no opportunity to pick and choose between the false promises and bona fide benefits of these sea changes collectively referred to as "modernization"? Or can and do they already enact these shifting ambiguities through diverse practices that simultaneously accept, tolerate, resist, and ignore particular manifestations of modernity?

These practices are certainly examples of Latour's (1993:42) bizarre monsters: hybrids of nature and culture that the modern lens both denies and allows to proliferate through that very denial. For mothers, they are simply meals, medicines, and healings. Through these mundane acts, however, mothers interact with and are interdependent on the networks that link them with scientists, doctors, elders, and children well beyond Jesús del Gran Poder. In this way, the reaches of global science and the policies enacted from it extend to the local, the mother, the ordinary home practice. How might mothers' ordinary home practices be better translated along these same channels to reach science and policy?

Policy implications

Public health care is already intimately tied with mothers' practices. However, these links carry power disparities between mothers, doctors, and other healers that ultimately affect practice (Bodeker 2007; Gold and Clapp 2011; Sillitoe 2007; Wayland 2001; Wayland 2004). This study is very limited in size and scope,

and its findings are not intended to be generalizable. However, its coherence with much of the literature from studies of women's roles in medically pluralistic settings supports the following policy implications.

First, the expansion of universal public health care in rural settings is beneficial and utilized often by residents. Rural populations in Ecuador have need for family medicine and preventative care (Schoenfeld and Juarbe 2005), which could be enhanced by more training and incentives for professionals to work in the rural and public sectors (Candib 2004; Lopez-Cevallos and Chi 2010).

Second, laywomen are already employing a range of realistic, accessible, and culturally appropriate practices in the home. It is important to ensure that women maintain authority over their health care practices and knowledges (Wayland 2004). Respectful dialogue and mutual education and accommodation between mothers, traditional healers, and biomedical professionals can benefit all sectors of health care. This could be achieved through community meetings, conferences, health initiatives, and workshops at the national, regional, and local levels. Incorporating local and traditional knowledge promotion and integration into every Ministry of Public Health Directorate's mission (rather than limiting them to the National Directorate of Interculturality, Rights, and Social Participation in Health) could also help elevate the status of traditional and home health care.

Third, mothers' perceptions of chemical agriculture and biomedicine indicate that expert-based development schemes associated with modernization have been received ambiguously. This has implications for the design and implementation of

future rural development interventions. To ensure that development projects are supported by and beneficial for local people, it will be useful to more fully understand women's perceptions and experiences of what they consider modern, expert-based, and specialized.

Future research

This study was designed to inform the larger WOTRO project, which remains ongoing at the time of writing, in two ways. First, it provides one of three community ethnographies surrounding family food practices for the nutritional sub-project. The analysis of these combined ethnographic findings will be submitted for publication in the next year. Concurrently, we are supporting a series of nutrition intervention programs that I describe in the conclusion. Second, this thesis is part of a collection of publications and sub-projects that will inform a final meta-analysis of heterogeneity in practice as a potential driver of positive change in rural communities in the northern Ecuadorian Andes. I will continue to collaborate with the research team and contribute relevant findings as this final analysis progresses.

Notwithstanding these contributions to the WOTRO project, this study remains a small, brief exploration of this topic and has left many areas open for future research. In addition to several suggestions mentioned in the findings, there are two major avenues that future research could pursue. One avenue would be to continue working with Jesús del Gran Poder and surrounding areas to investigate in more detail the relationships that mothers have with professional folk healers and

biomedical practitioners. Understanding these in more depth would add immeasurably to the effort to create a more equitable, accessible health care system. Another topic that deserves further attention in this particular locality is the availability and access of diverse foods, which is likely to remain a barrier in women's health care practices into the future. Working with women to understand how they conceptualize and integrate nutritional knowledge and traditional food practices may help foster positive change through research and interventions.

An alternative avenue for future research would be to apply a similar methodology to investigate home food and health care practices among other groups of people. Comparing rural *mestiza* women in this study with women from urban areas, different socio-economic circumstances, other ethnic groups, and various regions of Ecuador would create a much richer picture of the role of home health practices as a whole in this country. This would help support policy formation that is nationally practical and locally appropriate to various populations. Likewise, forming a more complete, complex picture of the heterogeneity of mother's health care roles would be useful in the development of applicable cross-cultural theory. Future research that emphasizes the diversity of how people enact their relationships with other actors through practice will help create a more complete understanding of how complexity is manifested in human experiences.

Chapter Eight: Conclusion

The various levels of health production are interactive and interdependent, from a mother picking a sprig of chamomile to make tea for her family to health administrators organizing a community meeting to involve local people in designing programs. At the individual level, the embodiment of health along a continuum reflects changing physical, emotional, mental, and social influences. In this thesis, I have attempted to illustrate the role of laywomen in these processes: maintaining health with daily diet, treating illness with home health care practices, and seeking outside care as needed. The distinctions between food practices and health care practices break down as mothers maintain overall health as well as prevent and treat illnesses with everyday foods. They are not confined to the use of foods to produce family health, however, and their practices also involve hygiene, humoral regulation, spiritual cleansings, social interaction, and a range of home remedies that are not consumed as foods. Outside health care is also dependent on mothers' navigations, interpretations, and implementations of it. I have argued that these salutogenic practices can be sources of power and self-efficacy for mothers in a medically pluralistic healthscape.

I have also attempted to embrace and analyze complexity by illustrating heterogeneity in practice using some of the tools of actor-network theory. Rather than clarifying elements of these findings through concrete distinctions, I have tried to dissolve categorizations and dichotomies wherever possible. On the one hand,

this was useful in considering knowledge dynamics, home remedies, and health as a continuum to which mothers contribute at every point. On the other, Latour (1993) may have been right that the proliferation of hybrids co-occurs with the formation of mythical pure forms: separating illnesses into categories, distinguishing foods from non-foods, and considering "home" healing in contrast to folk or professional healing were all useful in clarifying and simplifying the process by which these categories inevitably hybridize. By recognizing that the categories themselves are and always have been hybrids—in other words, that pure forms such as these do not exist in practice—it has been my intention to better understand not only how these women act and embed themselves in modernity, but also some of the dilemmas of modernity itself.

To conclude, I return to the present. Since we completed the research phase of the WOTRO nutrition project, Ekorural staff and volunteers have been organizing and convening a number of nutrition trainings and workshops in Jesús del Gran Poder and the other two communities involved in the project. These are intended to train several interested people from each town to lead meetings and workshops on their own accord, so that they can not only feel empowered to lead in their communities, but also to avoid creating dependency on outside resources. Ekorural recognizes that dependency on government agencies and development organizations in this region has had negative effects in the past, and therefore aims to catalyze change by supporting endogenous potential. In other words, their goal is to identify creative ways that people are succeeding with the resources they have

and within the circumstances they face, and then support the growth and diffusion of those practices.

The goal of the nutrition project has similarly been to highlight the positive nutrition practices we identified as potentially useful approaches for others to adopt. Staff and volunteers are currently organizing a sixth and final workshop, open to anyone from any of the three study communities, in which they will distribute a book of nutritious recipes from women in the communities and a guide for facilitating future trainings and workshops. This guide has been developed in collaboration with the entire research team and Ekorural project staff, and will be available for people from other towns and regions that wish to initiate similar programs. Ekorural plans to eventually withdraw from the communities with the hope that the research process and interventions have sparked some interest and positive changes in practice.

From my position here in Oregon, I can no longer tell first-hand what impacts the research and interventions are having in Jesús del Gran Poder. While I was conducting fieldwork over the summer and again briefly in December, it was difficult to tell how the project as a whole was affecting people's practices or health. Instead, I saw the immediate effects of my personal interactions as a researcher, student, and friend: after some initial skepticism, I was eventually invited into homes and out to pastures to milk alongside mothers, fathers, children, and grandparents. My presence and interests sparked conversations about healthy foods and prompted people to recall and reflect on how their lives, families, and

community as a whole have changed over the generations. The process of learning was mutual as I shared bits and pieces of my own experiences with people as we gradually developed friendships. I have no illusions that these short interactions inspired lasting changes in practice, but I do believe they and others like them offer small opportunities for fostering *sumak kawsay*. By engaging in the research process—talking and listening, practicing daily life, and reflecting consistently—ethnographers and participants both emerge from it changed. In addition to the policy and research implications outlined above, I therefore conclude with the suggestion that anthropological research itself, as a collection of face-to-face interactions between people, has profound potential to catalyze change. It is my hope that this change contributes to long-lasting, equitable approaches to living well.

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APPENDICES

Appendix A: Semi-structured interview guide

Semi Structured Interview Guide (Spanish)

1) Embarazo: Por favor, cuénteme cómo fue su embarazo.
    a. ¿Qué alimentos le gustaban comer durante el embarazo? ¿Por qué?
    b. ¿Habían comidas especiales que comía durante el embarazo? ¿Qué quería comer pero que no pudo?
    c. ¿Qué problemas o preocupaciones ha tenido durante el embarazo?
    d. ¿Quién le ayudó durante el parto? ¿Antes de ir al hospital?
    e. ¿Cómo fue la dieta para usted? ¿Cuáles comidas le dieron?
2) Lactancia: ¿Y cómo fue la lactancia para usted?
    a. ¿Tuvo alguna dificultad para la lactancia materna? ¿Quién le ayudó o enseñó?
    b. ¿Comía alimentos especiales o diferentes durante la lactancia?
    c. ¿Cuándo empezó a amamantar a cada de sus hijos? ¿Y cuándo terminó?
    d. ¿Cuáles fueron las primeras comidas que ha dado a sus bebes? ¿A qué edades les dieron estas primeras comidas? ¿Cómo las preparaba?
3) Preguntas sobre el recordatorio de 24 horas y el carnet de crecimiento
    a. Si puede recordar el día del recordatorio de 24 horas, ¿podría describir este día? ¿Fue un día normal o había algunas actividades o comidas fuera del normal?
4) Seguridad

a. ¿Hay alimentos que no le gustan y que usted come solo para no tener hambre?
b. ¿Algunas veces suele saltarse las comidas? ¿Por qué lo hace? ¿Con qué frecuencia?

5) Gastos
   a. Aproximadamente, ¿Cuánto dinero gasta la familia por semana en la comida?
   b. ¿Recibe el bono? ¿Cómo suele utilizar este dinero?
   c. ¿Qué preocupaciones tiene sobre los gastos de la familia?
6) Cambios
   a. ¿Cuáles alimentos son producidos por su familia ahorita?
   b. ¿Cómo han cambiado los alimentos que producen para la casa? ¿Por qué han cambiado?
   c. ¿Cómo era antes, la comida aquí?
   d. ¿Son diferentes, las comidas que producen y las que compran? ¿Cómo?
   e. ¿Hay alguna cosa relacionada con la comida de su familia que quería cambiar ahora? ¿Por qué?
7) Movimientos
   a. ¿Ha escuchado la frase 'soberanía alimentaria'? ¿Qué significa para usted?
   b. ¿Y la frase 'sumak kawsay'? ¿Qué significa 'buen vivir' para usted?

8) Salud de niños
    a. ¿Tiene alguna preocupación sobre la salud de sus hijos? Por favor, explique.
    b. ¿Qué enfermedades y malestares han tenido sus hijos antes de cumplir los 6 años? ¿Qué edades tenían cuando se enfermaron?
        i. ¿Qué otras enfermedades y malestares le pasan a los niños pequeños?
    c. ¿Cómo trata _____?
        i. ¿Cuáles son otras opciones para tratar _____?
    d. ¿Quién le enseñó esos remedios y tratamientos?
    e. ¿Cuáles son las causas de _____?
    f. ¿Qué comidas le da a un niño pequeño que tiene _____?
        i. ¿Por qué?
        ii. ¿Hay comidas que serían ideales para un niño con _____?
        iii. ¿Qué otros alimentos, aguitas, o plantas medicinales daría a un niño que tiene _____? ¿Por qué?
        iv. ¿Hay comidas que le da a un niño para prevenir _____?
    g. ¿Qué comidas nunca debe dar a un niño que tiene _____?
    h. Repite c-g con todas las enfermedades que mencionan.

Semi-Structured Interview Guide (English)

1) Pregnancy: Please tell me about your pregnancy.

a. What foods did you like to eat during pregnancy? Why?
b. Were there special foods that you ate during pregnancy? What did you want to eat but couldn't?
c. What problems or worries did you have during pregnancy?
d. Who helped you during labor? Before going to the hospital?
e. How was *la dieta* for you? What foods did they give you?

2) Breastfeeding: How was breastfeeding for you?
   a. Did you have any difficult with your breast milk? Who helped you or taught you?
   b. Did you eat special or different foods during breastfeeding?
   c. When you did start breastfeeding each of your children? And when did you stop?
   d. What were the first foods you gave to your babies? At what age did you give them these first foods? How did you prepare them?
3) Questions about the 24 hour recall and the child growth chart
   a. If you can remember the day of the 24 hour recall, could you describe this day? Was it a normal day or were there any activities or foods outside the norm?
4) Food Security
   a. Are there foods you don't like but that you eat just to not be hungry?
   b. Do you ever skip meals? Why do you? How often?
5) Budget

a. Approximately how much money does the family spend weekly on food?
b. Do you receive *el bono* [federal financial support for mothers, disabled, and the poor]? How do you usually use that money?
c. What worries do you have about the family budget?

6) Changes
   a. What foods does your family produce these days?
   b. How have these foods that your family produces changed over time? Why have they changed?
   c. What was the food here like in the past?
   d. Are the foods that you buy and the foods that you produce different? How so?
   e. Is there anything related to your family's diet that you'd like to change now? Why?

7) Movements
   a. Have you heard the phrase 'food sovereignty'? What does it mean for you?
   b. And the phrase '*sumak kawsay'*? What does '*buen vivir'* [the way of good living/the good life] mean to you?

8) Child health (successive free-listing exercise)
   a. Do you have any worries about your children's health? Please explain.

b. What illnesses or ailments have your children had before turning six? How old were they when they got sick?
    i. What other illnesses do young children get?
c. How do you treat _____?
    i. What are some other options to treat _____?
d. Who taught you these remedies and treatments?
e. What are the causes of _____?
f. What foods do you give to a young child that has _____?
    i. Why?
    ii. Are there foods that would be ideal for a child with _____?
    iii. What other foods, teas, or medicinal plants would you give to a child with _____? Why?
    iv. Are there foods you give to a child to prevent _____?
g. What foods should you never give to a child with _____?
h. Repeat c-g with all illnesses they mention

Appendix B: Home remedies for child illnesses

Table 8. Home remedies used to treat the most common child illness categories. Numbers in right-hand columns represent total number of mentions of the substance of remedy to treat each illness category.

Latin name	Local name	English name	Culinary Use	Preparations	Respiratory	Gastrointestinal	Espanto and Malaire
unknown*	hierba de perro	unknown*		infusion		2	
unknown*	zoroquillo	unknown*		brush			1
unknown*	cebadilla	wild barley		infusion		2	
Allium cepa	cebolla	onion	x	infusion of root		6	
Allium sativum	ajo	garlic	x	infusion in milk	4		
Ananas comosus	piña	pineapple	x	infusion of skin, juice	2		
Anethum graveolens	eneldo	dill		infusion		1	
Honey of *Apis mellifera*	miel de abeja	honey	x	in infusions	4		
Avena sativa	avena	oats	x	oatmeal, colada		2	
*Baccharis spp.**	chilca	unknown*		infusion		3	
*Bidens spp.**	ñachag	unknown*		bath			1
*Bidens spp.**	pacunga	beggar ticks		infusion		2	
Borago officinalis	borraja	borage		infusion	2		
From *Bos spp.**	sebo de res	beef tallow		salve		1	2
From *Bos spp.**	calostro	colostrum (cow)	x	heated with cinnamon and sugar, raw		1	
From *Bos spp.**	leche	milk	x	boiled, any	9	1	
Brugmansia sanguinea	huanto	trumpet flower		bath, brush			3
Capra aegagrus	leche de cabra	milk (goat)	x	any	1		

hircus							
Capsicum spp.	aji	chile pepper	x	rub over body			4
Carica papaya	papaya	papaya	x	juice, raw		3	
Chenopodium ambrosioides	paico	Mexican tea plant		pure juice		1	
*Chuquiraga sp.**	chuquiragua	unknown*		infusion		1	
Citrus limonum	limon	lemon	x	juice, hot lemonade, in tea	7	2	
Citrus reticulata	mandarina	mandarin	x	any	3		
Citrus sinensis	naranja	orange	x	boiled, raw (juice or fruit)	12	1	
Citrus spp.	citricos	citrus fruits	x	juices	1		
Clinopodium nubigenum	sunfo	unknown*		infusion		1	
Cuminum cyminum	comino	cumin	x	infusion		4	
*Dalea spp.**	píspura	unknown*		infusion in milk	1		
Daucus carota subsp. sativus	zanahoria	carrots	x	any	1		
Eucalyptus spo.	eucalipto	eucalyptus		infusion, bath, around room, vapor	9		
*Franseria spp.**	marco	unknown*		infusion, vapor, bath, brush, heated pile to sit atop		1	3
From *Gallus gallus domesticus*	huevo	egg	x	rub over body			2
Hordeum vulgare L.	arroz de cebada	barley gruel	x	barley gruel and broth		5	
Linum usitatissimum	linaza	flaxseed		infusion		1	
Lonicera sp.	madreselva	honeysuckle		infusion	1		
Malus domestica	manzana	apple	x	raw	1		
Matricaria chamonilla	manzanilla	chamomile		infusion, bath, eye wash, salve, gargle	5	12	1

Mentha piperita	hierba buena	mint		infusion		7	
*Minthostachys spp.**	tipo	unknown*		infusion		3	
n/a*	aceite	oil	x	massage, taken with sugar		1	1
n/a*	agua	water or tea (general)	x	beverage	3	2	1
n/a*	bicarbonato	sodium bicarbonate	x	infusion, gargle	1	1	
n/a*	champinones	mushrooms	x	in soup	1		
n/a*	colada	colada	x	colada		1	
n/a*	colona	cologne		blown over body			1
n/a*	frutas	fruit	x	as food		2	
n/a*	Gator	Gatorade	x	beverage	1		
n/a*	gelatina	jello drinks	x	boiled with milk	1		
n/a*	jugos	juice (general)	x	beverage	3	1	
n/a*	manteca vegetal	vegetable lard	x	massage			1
n/a*	mentol	menthol rub		salve	2		
n/a*	sal	salt	x	gargle with tea	1		
n/a*	sopitas	soups	x	any	4	7	
n/a*	suero oral	oral rehydration drinks		purchased	1		
n/a*	verduras	vegetables	x	as food		1	
Nocotiana tabacum	tabaco	tobacco		spit with trago, blown over body			9
Origanum majorana	mejoranda	marjoram		infusion		2	
Origanum vulgare	oregano	oregano	x	infusion, in foods	2	6	
*Oxalis spp.**	chulco	wood sorrel		peel stem, dip in oil, heat, insert in anus		1	
Passiflora eduli	granadilla	granadilla	x	juice, infusion of leaves		4	
Passiflora	taxo	banana	x	infusion, juice		1	

tripartita var. mollissima		passionfruit					
Peperomia congona	congona	unknown*		infusion		2	
Pimpinella anisum	anis	anise		infusion	2	7	
Piper angustifolium	matico	matiko		infusion	1		
Padus serotina subsp. capuli	capulí	black cherry		infusion of leaves in milk	2		
Psidium guajava	guayaba	guava	x	infusion of leaves, juice, cooked juice		6	
Ruta graveolens	ruda, hierba de gallinaza	common rue		brush, bath, infusion			
Saccharum officinarum	azucar moreno	brown sugar	x	in drinks		1	4
Saccharum officinarum	panela/dulce	panela	x	in infusions, grated onto back, raw, spoonful in liquid fat	2	1	
From *Saccharum officinarum*	trago	sugar cane alcohol		blown over body			11
*Senna spp.**	sen	senna		infusion		1	
Solanum betaceum	tomate de arbol	tree tomato	x	juice	1		
From *Sus domesticus*	manteca de chancho	pork fat	x	spoonful with sugar, massage on lungs	2		
From *Sus domesticus*	sangre de chancho	pork blood		thrown on body			1
Theobroma cacao	chocolate	chocolate	x	hot in milk, salve of cacao butter	3		1
Thymus vulgaris	tomillo	thyme		infusion		4	
*Sambucus nigra**	tilo	elder flower*		infusion	5		
Vitis vinifera	uvas	grapes	x	raw, infusion of dried fruit	1	1	

Zea mays	morocho	cracked corn beverage	x	as beverage		1	

* Identification of species from Spanish common name was performed as accurately as possible by cross-referencing Aguilar et al. (2009), Hanelt and Institute of Plant Genetics and Crop Plant Research (2001), Ortega Perez (1988), and White (1985). Because local names vary and no voucher specimens were collected, some species could not be identified, some were only identified to genus, and some may not be accurately identified.

** n/a (not applicable) refers to substances of home remedy that do not correspond to a biological species of plant or animal because they are manufactured or consist of mixed, generic, or inorganic ingredients.

Appendix C: Salience and grouping of child illnesses

Table 9. Child illness mentions and groupings

Illness	Enfermedad (in Spanish)	Number of women that mentioned (N=11)	Total mentions in category
Respiratory:			**16**
Cold	Gripe	10	
Cough	Tos	4	
Bronchitis	Bronquitis	1	
Pneumonia	Neumonía	1	
Gastrointestinal:			**15**
Diarrheal infection/Diarrhea	Infección/Diarrea	10	
Stomach ache	Dolor de barriga/estómago	2	
Constipation	Estreñimiento	2	
Rotavirus	Rotavirus	1	
Espanto/Malaire			**9**
Espanto/malaire	Espanto/malaire	9	
Other:			**6**
Allergy	Alergia	2	
Inflammation	Gangueo (una bolita inflamada)	1	
Blood disease	Plaquetas enfermas	1	
Disability (can't talk)	Disabilidad (no puede hablar)	1	
Eye problems	Granitos en los ojos	1	

Table 10. Salience of child illness categories

Category	Percent of women that mentioned an illness in this category	Number of times that this category was mentioned…			
		…1st	…2nd	…3rd	…4th
Respiratory	100.0	5	5	0	1
Gastrointestinal	90.9	3	3	4	0
Espanto/Malaire	81.8	1	0	6	2
Other	36.4	2	2	0	0