

*Dynamics of Nutrition and Vulnerability: Ethnographic Insights from Cusco,
Peru.*

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Contents Page

Summary.....	p. 4
Introduction.....	p. 5
Theoretical Approach.....	p. 9
Methodology.....	p. 15
Chapter 1 – <i>La vida es mejor ahora</i> : Transformations and Ongoing Challenges.....	p. 21
Chapter 2 – <i>Tengo prisa. No puedo comer ahora</i> : Modernisation and Lifestyle.....	p. 33
Chapter 3 – <i>Yo sólo confío en mis propios productos</i> : Natural Food and the Fear of Disease.....	p.48
Chapter 4 – <i>Carne es malo para su cuerpo</i> : Nutritional Messages and Ethnomedical understandings	p. 65
Conclusion.....	p. 76
References.....	p. 79

Statement

This thesis is an original work and has not been previously submitted to another university or institution for assessment.

A handwritten signature in purple ink that reads "Freya Saich".

Freya Saich

Acknowledgements

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Summary

Over the past two decades, Peru has undergone rapid economic and social transformations producing significant declines in rates of chronic malnutrition. Although malnutrition continues to persist in some Andean regions, communities have nonetheless experienced a decline in overall hunger and are consuming a wider variety of foodstuffs. Despite this, anthropological attention to nutritional issues has lessened since the mid-1990s. Based on ethnographic research conducted in the Andean Department of Cusco, this thesis demonstrates that peasant communities and their diet are in a state of transition. Local perceptions indicate that the increased access to and consumption of a wider variety of foods is a result of the growing modernisation of communities. However, this transition is incomplete. Communities remain situated between the demands of a peasant lifestyle and the encroaching changes associated with modernisation. Peasants describe how these demands place different pressures on food selection and indicate how food allocation and consumption practices stand at the forefront of this disjuncture between the past and the present. This thesis offers a holistic understanding of the Andean diet and, in particular, the forces shaping malnutrition in school aged children. From an applied perspective, research findings will assist in developing culturally congruent and locally specific nutritional interventions for families in the region.

Introduction

In the Peruvian Andes located approximately an hour and a half from the city of Cusco, live Quechua-speaking semi-subsistence agriculturalists. This population reside in *comunidades campesinas* (peasant communities)¹. Such communities have undergone radical transformations in the past two decades resulting in significant alterations to the local diet and foodways; that is, the methods of food selection, preparation and consumption. Parents speak of their children not knowing what is to experience severe hunger, hardships and most of all suffering, despite high rates of child stunting and underweight. People value their diet, particularly when it is composed of products which they have grown themselves, with potato as one of their most high prized crops. The values which people hold stand in direct opposition to critiques of the nutritional inadequacy of the *campesino* (peasant) diet². Consequently, campesinos have participated in and continue to be subjected to many public health and development interventions by the state and nongovernmental organisations (NGOs). Despite heavy external involvement, when people speak of the transformations to their lives they speak of their own agentive efforts in securing employment opportunities to support their families, turning to religion to pull themselves out of a drunken stupor and doing whatever possible to ensure their children have an education. Previous representations of this region in the literature currently do not match the lived reality of campesinos. Hence these disjunctures call for a reconsideration of hunger, malnutrition, and the cultural and symbolic aspects to food consumption.

Reducing child malnutrition has been made a global health priority as a result of the Millennium Development Goals (Black et al. 2008). Combined with international assistance,

¹ Comunidades campesinas, previously known as *comunidades indigenas* (Indigenous communities), are formally recognised by the Peruvian Government as communities with collective rights to own and distribute land (Vincent 2012).

² Campesino is a term that many people living in comunidades campesinas prefer to use to describe themselves (see page 13 for more detailed discussion of this term).

Peru has achieved significant declines in the rates of chronic malnutrition in recent years (de Mola et al. 2014; INEI 2013). Despite this, between 2011 and 2012 at least 18% of children under the age of five were chronically malnourished (INEI 2013). However, Peru exhibits significant disparities between its three main ecological zones; the coast, the Andes and the Amazon (Urke et al. 2011). Hence in 2011 to 2012 chronic malnutrition in the Andean Department of Cusco was 6.2% higher than the Peruvian average (INEI 2013). Due to Peru's nutritional transition³ deaths resulting from malnutrition are in decline (de Mola et al. 2014). Nonetheless, chronic malnutrition increases the susceptibility of a child to illness and is a leading contributor to morbidity in later life (Alvarez et al. 2009; Horton 2008; Müller and Krawinkel 2005; Shrimpton et al. 2013).

Malnutrition is not singularly caused from a lack of nutritive components in a diet. Such perspectives, according to various nutritional anthropologists, ignores the broader socio-cultural context involved in the production of dietary choices and practices (Weismantel 1988; Yates-Doerr 2012). Since the 1970s malnutrition in the Andes has attracted significant scholarly attention. Various anthropologists have demonstrated that malnutrition is produced by a multiplicity of interconnecting and entangled factors. In the Andes such factors include the intra-household allocation of resources, the ability to purchase or produce one's food, government policies and the cultural value of consuming particular foods (Graham 2004; Leatherman 1998; Leonard and Thomas 1988; Weismantel 1988). As such research peaked in the mid-1990s there is limited contemporary research exploring local perceptions of diet, hunger and malnutrition especially in rural areas.

Contemporary understandings into malnutrition in the Andes are vital as the structures producing malnutrition are no longer the same. In the past two decades Peru's rapid economic

³ A nutritional transition is the way in which a population's dietary habits are altered by broader forces including but not limited to; national and global food industry/agricultural practices, economic growth, urbanisation and technology (de Mola et al 2014; Popkin 2011).

growth has resulted in dramatic transformations throughout the Peruvian Andes (de Mola et al. 2014). Between 2004 and 2012, the percentage of the rural population of the Andes living in poverty has declined from 86.7% to 58.8% (INEI 2013). Such communities have undergone a demographic transition resulting in increased child survival and lower birth rates (INEI 2013). Simultaneously, massive rural-urban migration, particularly to major cities such as Lima and Cusco are expanding the networks of many campesinos (Abbotts 2014; Buechler 1981).

In the context of these ongoing transformations this thesis offers a reconsideration of family decision-making and foodways based on ethnographic research conducted in three peasant communities in the Andean Department of Cusco. Specifically, this thesis illustrates the ways in which recent changes to campesino foodways and the transmission of food-related knowledge feature in the daily lives of adults and children within campesino households. Ethnographic insights will be made into the ways in which family dynamics and broader forces affect the nutritional world of children.

With a population of 12 million people, the Andes is not homogenous in language, diet nor health (INEI 2014; Oths 1998). The insights presented throughout this thesis seek to contribute to understandings of the inter-regional variation of health and illness evident throughout the Andes (Leatherman 1998; Oths 1998). In addition to contextualising the lives of four households this thesis seeks to 'give voice' to campesinos and allow their perspective of their diet in the twenty-first century to be heard. In this way, vignettes have been incorporated within the chapters to offer "human form" (Hamilton 1998, p. 3) to broader theories and discussions from the Andes. With a renewed perspective of malnutrition, this thesis also seeks to assist in the development of nutritional interventions that are culturally congruent and locally specific to the values, life-worlds and realities of campesinos.

This thesis is ordered into four chapters. The first chapter considers the various transformations that have occurred over the past two decades within comunidades campesinas. It is the intensifying engagement in wage labour propelled by global tourism, as well as the decline of alcoholism associated with the Protestantisation of the Andes which have increased peasants access and ability to consume a wider variety of foods.

The second chapter offers new insights into food allocation. Rather than considering food allocation as a conscious decision made by parents, this chapter demonstrates that there are a multiplicity of factors from cooking style to increased school attendance and development interventions skewed towards one age group, which contribute to a nutritional disadvantage for children.

Chapter three presents the value that peasants place on their 'natural' diet and the ways in which they view modernisation and the city as threats to themselves and their health. Pulled between discordant imaginings of their community and that of the 'city', peasants must balance their food selection choices in order to reflect their ideal construction what it is to be healthy.

Finally, chapter four addresses the various forms of nutrition education messages that campesino parents are subjected to. Whilst some messages are adopted easily amongst campesinos, others remain acknowledged and not adhered to in the same way. In this way, nutrition education should consider local concepts of wellbeing and diet as well as the difficulties or accessibility in acquiring certain foods.

Theoretical Approach

Perspectives within nutritional and medical anthropology and the anthropology of childhood closely shaped this research into the foodways in everyday campesino life. Nutritional anthropology, a sub-discipline of the field of medical anthropology, broadly seeks to understand the dynamics between diet and culture (Freedman 1977). This is achieved by applying "a biocultural paradigm to examine how social structures and actions interact with ecological and biological systems to determine food availability, use and nutritional health" (Chrzan 2013, p. 48). Nutritional anthropologists seek to understand food allocation amongst families and the customs which dictate food preparation and consumption and how together this impacts on human health (Chrzan 2013; Bentley et al. 1999; Graham 1997; Munro and McIntyre 2014).

Nutritional anthropologists also seek to understand the values and beliefs behind such practices. As many have noted, particularly in the Andes, food is not singularly a nutritive substance serving to fulfil biological needs. Rather, food is highly symbolic, imbued with cultural meanings and significance (Coleman 2011; Douglas 1984; Freedman 1977; Greene and Cramer 2011; Krögel 2011; Sutton 2001; Weismantel 1988). Whether a food is deemed edible or inedible, tasty or disgusting or designated to a particular class is culturally specific (Bourdieu 1984; Douglas 1984; Holtzman 2009). Understanding such beliefs can assist in developing culturally specific interventions for individuals or communities (Fitzgerald 1977).

As food is also a necessity for both ethnographers and their informants, Coleman states that food and eating is one of the "few areas of social life where the ethnographer's experience is more immediate and embodied, and where cultural learning requires more commitment, than eating" (2011, p.1). Ethnographers do not simply eat food with their

informants. Rather, by eating another's food, ethnographers enter into a lived world which is produced in a particular place, at a specific time and context (Forrest and Murphy 2013).

A vital feature of this research involves understanding the nutritional experience of children. Historically scholars have remarked that the childhood experience has often been an overlooked aspect of anthropological studies with attention directed towards how children feature in kinship systems (Attard 2008; Bluebond-Langner and Korbin 2007; Bock et al. 2008; Freidl 2002). According to Lancy (2008) understanding the childhood experience should be an integral component of anthropological research as such experiences are not universal. Furthermore culture is a powerful force in shaping the childhood experience, resulting in culturally-specific definitions of what it means to be a child, the value of children and the amount of agency each child is ascribed (Lancy 2008; Scheper-Hughes and Sargent 1998). Hence, the Western model of the childhood experience and development is not universally shared and anthropologists must seek to uncover the childhood experience relevant to their informants (Lancy 2008).

This research has also sought to contextualise campesino foodways within a broader lens of the political-ecological environment, rather than singularly, the cultural context. According to Leatherman (2005) it is the political-ecological environment which is implicated in creating an 'environment of vulnerability' in which child malnutrition occurs. This environment of vulnerability is not only the natural or physical environment, but includes social relations and inequalities, economic and political structures, as well as people's agentic capacity to live within a particular environment (Farmer 2004; Greenberg and Park 1994; Leatherman 1996). Furthermore, political-ecologists emphasise the multidimensional aspects of this approach as it also considers how governments, international

lending institutions, nongovernmental organisations (NGOs) and the church all "affect how human–environment relations are played out at the local level" (Leatherman 2005, p. 52).

Such a holistic approach is critical as chronic malnutrition is often not caused by a single factor alone (Dettwyler 1993). Rather, malnutrition can be seen as a breakdown of 'safety nets', such as maternal age and education, support networks, and social structures which produce "a minimal level of nutrition and health for children in the community" (Dettwyler 1993, p.19). It is the breakdown of such structures which enhances a child's vulnerability to malnutrition. Applying a vulnerability paradigm is critical as it demonstrates that there are multiple factors, beyond poverty, which produce malnutrition and that these factors are dynamic in the same way as the lived realities of our informants (Moser 1998, Leatherman 1998).

Overnutrition or obesity, although considered malnutrition, will not be a focus of this thesis. Obesity currently occurs most frequently amongst urban and higher socioeconomic populations of Peru (Álvarez-Dongo et al. 2012; de Mola et al. 2014). Whilst obesity and overnutrition do occur in rural regions, malnutrition is more likely to present in the form of stunting or anaemia (de Mola et al. 2014).

The Andean context

Within Latin America, Peru not only has the highest proportion of Indigenous people (40%) but is also a country with the largest ethnic diversity with approximately 76 different ethnic groups (INDEPA 2010; Nureña 2009). The Quechua people of the Andes are Peru's largest Indigenous population and in the 2007 census approximately 22.5% of the population identified as Quechua (INDEPA 2010; INEI 2007). Despite such a large population, Saroli argues that Quechuas have a limited voice in Peruvian society and "have rather been analysed and portrayed throughout the years by members of the mainstream Spanish-speaking society,

according to contemporary social currents and trends" (2011, p. 311). Such trends have often depicted Indigenous people as the root of "the principal social problems in Peruvian society" (García 2005, p. 66).

Not all depictions relegate Indigenous people and Quechuas, in particular, to the category of Peru's social problem. The two ideologies of *indigenismo* and *incanismo* celebrate Indigenous culture and practice. *Indigenismo* emerged within Peruvian scholarship in the nineteenth century and has since been deployed as a political tool (van den Berghe and Flores Ochoa 2000). Indigenismo "extols the virtues of indigenous civilizations, romanticizes them as living in harmony with nature, and pictures their political institutions as egalitarian, benevolent, redistributive, non-exploitative, communitarian and non-capitalist" (van den Berghe and Flores Ochoa 2000, p.10). Simultaneously this ideology condemns Spanish colonialism and the values of modern society (van den Berghe and Flores Ochoa 2000). In Cusco, a specific variant of indigenismo, known as *incanismo* emerged in the latter half of the twentieth century (Ypeij 2012). Incanismo, makes specific references to the Incan empire of which Quechuas are descended from. As Cusco was the former capital of the Incan empire, *incanismo* is celebrated throughout the city (van der Berghe and Flores Ochoa 2000; Ypeij 2012). It is important to note that neither of these ideologies have been constructed by the Quechua people themselves, and have instead been appropriated by the urban, Mestizo elite (van den Berghe and Flores Ochoa 2000).

Anthropologists have participated in a similar process when depicting the lives of Indigenous people (Starn 1991). According to Starn many anthropologists have fallen into the trap of Andeanism, that is, "to imagine the inhabitants of the highlands as an uncorrupted 'native' Other" (1991, p.19). Countless researchers have been fascinated by Andean traditions such the *allyu* (the community), *ayni* (reciprocity) and verticality as well as a multiplicity of

rituals and ceremonies (Bastien 1981; Starn et al. 1994; Starn 1991). In many respects, Indigenous people have been depicted as harmonious products of traditions, isolated to remote communities.

The violent war between the guerrilla Shining Path (*Sendero Luminoso*) movement and the government of the 1980s and 1990s has marked a turning point in Andean anthropology. As Starn argues many anthropologists failed to identify the beginnings of this rebellion due to their over-attention on the "continuity and non-Western 'otherness'" of their subjects (1991, p. 67). Although Shining Path was initiated in the name of oppressed peasants, many Indigenous people also fought alongside the government against the guerrillas (García 2005). In the wake of the violence that claimed the lives of 69,280 Peruvians – of which Indigenous people bore the burden – Andean anthropology no longer depicts *lo andino* (the Andean) as a passive non-agentic subject of tradition and instead points to the dynamism of Indigenous people's lives (García 2005; la Serna 2008).

Although this research was conducted in the 'traditional' fieldsite of comunidades campesinas in the Peruvian highlands, this work nonetheless seeks to contribute to the elimination of a conception of the *Andino*. In this way, this thesis offers a departure from the expansive literature on race and ethnicity in the Andes which has resulted in the classification of ethnicity in Peru as Mestizo (mixed-blood), Indian or in-between (Mitchell 2006; Núñez del Prado and Foote Whyte 1973; Weismantel and Eisenman 1998). Despite the many social inequalities that exist between Mestizos and those living in comunidades campesinas, I do not wish to relegate every facet of life to ethnicity. Furthermore, Mitchell states that discussing ethnic divisions can often be difficult to explain as "the terms used to describe them change meaning depending on context" (2006, p. 51). Ethnicity in Peru is less an issue of race, and rather how one identifies themselves in comparison to another, based on education, lifestyle,

clothing or language. It is more common to hear people identify themselves as *campesinos* (peasants) rather than as *indigenas* (Indigenous people), *indios* (Indians) or Quechuas. Additionally, Hall (2013) argues that 'Quechua' is increasingly a term singularly used to describe the language which many campesinos of the Cusco Department speak (in addition to Spanish) rather than as a form of ethnic identification. Other scholars have also stated how the terms indio or indigenas often indicate a backward or uncivilised status in society (Allen 2002; Orr 2013). Throughout this text I will apply the term campesino when referring to my informants.

Methodology

Between December 2014 and March 2015, multi-sited research was conducted in three peasant communities within the Department of Cusco. Two communities are located in the highland region of the District of Pisac, northeast of the Departmental Capital of Cusco. Sacaca is located at an altitude of approximately 3,500 metres with 190 families recorded in 2009 (Ministerio de Cultura 2015). The other, Paru Paru has an average altitude of 4000 metres and in 2009 had 184 families residing in this community (Ministerio de Cultura 2015). All inhabitants of these communities are of the Indigenous Quechua speaking population. Research was also undertaken in a lowland town in the District of Calca. Hauran is located on the main highway which stretches for 40 kilometres between Pisac and the bustling hub of Urubamba. At an altitude of approximately 2900 metres, the 63 families of this town include; mestizos, campesinos as well as foreigners (Ministerio de Cultura 2015). Within this town my research was directed towards the Quechua-speaking population, of which, many have moved within the last 15 years from highland communities to live in this town for better life opportunities.

Site selection criteria required all sites to be recipients of assistance provided by a Peruvian NGO (deemed PN) who facilitated my research⁴. Approval was sought from community leaders to undertake research. Research was undertaken in these three communities due to differences in education, employment and relative accessibility to the city. In this way, this research departs from the ethnographic archetype of deeply studying one community for an extended period of time (Gupta and Fergusson 1997). Multi-sited ethnography promotes an understanding of difference not just between the ethnographer's own conception of 'home' and 'the field', but also to subtle differences between fields (Gupta

⁴ For anonymity purposes the NGO and informant names have not been used and have been replaced with pseudonyms.

and Fergusson 1997). To this end, this prevents essentialising a culture to a specific locality, and attunes the ethnographer to wider forces acting upon a people group.

Multi-sited ethnography is similarly critiqued for its inability to obtain a complete and thorough understanding of a single locale (Hannerz 2003). Understanding campesino culture to its entirety was not my intention. Instead, I sought to explore campesino foodways and the factors which result in their ongoing transformations. However, this research is limited to the wet season in which research was conducted. Future research should also be conducted during the dry season to determine whether there are seasonal differences in foodways.

In order to explore campesino foodways a mixed-method approach involving; participant observation, interviews and focus groups was employed. Various anthropologists support a mixed-method approach due to the discrepancies that often exist between what is voiced about food habits and what is actually practiced and observed through participant observation (Bentley et al. 1999; Good 1989; Wilson 1977).

The primary and most effective method of this fieldwork was participant observation. Participant observation is considered to be the participation in the daily life of community members and is frequently used in nutritional anthropology to observe the allocation of food and intra-household dynamics (Graham 2003a; Lemke and Bellows 2013; Wilson 1977).

Throughout my fieldwork I lived with four families of the three communities. These families differed in various factors from the ages and numbers of children, the type of labour they were involved in and the amount of food they cultivate. Table 1 offers a comparison of these families. Two families had extended family members (such as grandparents) who resided in their home. Another family had relatives who frequently visited for dinner and then later returned to their place of residence in another part of the community. Only one family had *compadres* (godparents) who often visited, bringing gifts of food and other items.

Not only did this method involve eating and sleeping in their homes, but also participating in the daily activities of family members. I visited chacras (plots of land), helped harvest vegetables as well as locally grown fruits. I accompanied family members to attend to their animals or collect plants that are used as natural dyes. On Sundays we would travel into Pisac to purchase fresh fruit and vegetables from the markets. Within the home, I sat with family members as they made their *artisanía* (handcrafts) as well as observed and helped in the preparation of meals such as peeling *habas* (broadbeans) or maize. I also attended church services in the community and was occasionally permitted to attend special events such as birthdays and a *Corte Cabello* (first hair-cutting of a child's life) ceremony.

Table 1: Characteristics of families observed during fieldwork

Family	Residence	Number of children	Average age of children	Form of Labour (husband)	Form of labour (woman)	Amount of food cultivated
1	Paru Paru	2	3	Inca Trail	Weaving	Majority
2	Paru Paru	3	10	Agriculture	Weaving	Half
3	Sacaca	3	11.5	Weaving	Weaving	Majority
4	Hauran	3	11	Inca Trail	Shop Keeper	Minimal

As a form of reciprocity for each visit to a family I would offer foods such as a bag of *pansitos* (bread) or fruits knowing that these were foods that were difficult for families to have regular access to. At the end of my fieldwork I also assisted families by purchasing clothes and other personal care items as a gift for the families for their hospitality.

Although participant observation was primarily conducted amongst the community members, this method also involved participant observation in the activities of PN throughout this time. I participated in the December delivery of food to two schools as well as measuring the body mass index (BMI) of the children of these schools in both December and March. Similarly, I participated in the *chocolatadas* (the giving of hot chocolate and *panattone*, to children and women) which PN carried out in four communities in December, prior to

Christmas. I also accompanied PN's nurse as she conducted regular house visits to families with disabled children as well as the two education seminars in the months of February and March.

In total 35 interviews were conducted with women or families as well as PN staff. Most interviews were conducted within people's homes. Interview questions explored a range of topics such as messages about healthy eating, eating habits and hunger, the importance of natural food, and the changes that have occurred during their lifetime in the types and access to food. Most interviews were conducted in Quechua and with the help of a local, female research assistant were translated into Spanish⁵. The remaining interviews were conducted without the need of a research assistant in Spanish. Additionally two focus groups were held, one with ten mothers and another with six mothers. Focus groups addressed the same issues as those raised in the interviews. Focus groups were particularly beneficial for women as it enabled them to have a collective voice and supportive environment to share their perspectives. Selection criteria for participants in focus groups and interviews required that they be permanent residents of their respective communities with children. However, some extended family members and PN staff were also interviewed.

As this research was conducted with the assistance of PN all participants were made aware of this fact during the consent process. To many people this was a reassurance especially as many community members fear strangers. PN's assistance over the past six years has developed significant rapport amongst these communities. This does not mean that people felt pressured to participate and at times people declined to participate for various reasons. Interview questions did not specifically explore PN's role in people's lives. In this way, people were not required to align themselves in support or against PN.

⁵ My research assistant was recruited with the assistance of PN as a person who is respected throughout the communities having worked on various health projects over the years.

Participant observation enabled me to develop rapport with community members more effectively than with interviews. I found that people were generally uncomfortable by the interview situation particularly as many women are poorly educated and illiterate. Many worried whether they would deliver the 'correct' answer as they felt as though they were being tested. This was navigated by explaining prior to the interview that there are no correct answers and that we (myself and my research assistant) were only interested in learning about their life. Nevertheless I do not believe it was the most appropriate method for these communities and informal conversations with family members with whom I lived, yielded far greater insights into their lives. Although, people trusted my research assistant, I found that on my own I was able to ask further questions in regards to alcoholism and hardships to a deeper extent than when accompanied by my research assistant. This can be attributed to the fact that I had developed significant rapport with these families, who understood fully well the purpose of me living with them and enjoyed my company.

It is also important to state that I was observing and living in homes which either had an additional room separate from the family or a separate bed. Although there are a diversity of households amongst the communities, with some households that have separate beds for each child, to others where the entire family shares the same bed, it is imperative to recognise the relative wealth of these households. Therefore the food that I was served may be a different quantity or a different type of meal compared to other households. For example, in Hauran during interviews women frequently spoke of only being able to consume a *mate* (hot drink) for dinner. However, within this community I was served soup and a pansito or *choclo* (corn on the cob) on most nights with the family that I was observing.

One family also altered the dishes prepared due to my presence. This family always cooked an additional dish for me and would serve me two pansitos while other family

members were only served one. These became important observations to ensure that I observed the meals that the family and not just myself were consuming.

During fieldwork, data was recorded as fieldnotes using the *OneNote* software and was exported into *NVivo* for data analysis. Fieldnotes and the transcripts from the audio recordings were analysed according to codes. Such codes were developed from the pre-existing codes used to guide this research such as the value of children, messages of healthy eating, eating habits, hunger and parental decision making. However, additional codes were also generated using an inductive approach after the data collection stage through latent coding (Ryan and Bernard 2003). Ethical approval to conduct such research was obtained from the Macquarie University Human Research Ethics Committee (protocol number 5201400966).

Chapter 1

La vida es mejor ahora: Transformations and Ongoing Challenges

HAURAN

Carlos, Andrea, and Yulissa, aged between 8 and 15 wake in the morning to their father, Jose Antonio calling from outside their room. Normally it would be their mother, Florella, waking the children, however, she had left early this morning to purchase vegetables in Urubamba, about 20 minutes from Hauran down the main highway. After snoozing for another 10 minutes, Jose Antonio becomes more forceful, encouraging the children to get ready in time for school and head to the kitchen, a separate building from their two storey house. Although these types of homes line the main street of Hauran, most of the families who have moved from the highlands tend to live in a single adobe building which serves as a kitchen, bedroom and place to rear their animals.

The children's bedroom is located on the second floor of the two storey house, while the lower level is the family's shop and the parent's bedroom. Adjacent to their house is a muddy pen where their three sheep and six chickens live. An aluminium gate from the pen opens to their small garden with peach trees and *calabaza* (a type of pumpkin) as well as their makeshift pit toilet. Unlike Paru Paru or Sacaca, Hauran has not received the government installed (and internationally funded) outhouses consisting of a toilet, shower and basin.

Within a few minutes the children have quickly changed and arrive at the kitchen in a panic. I sit on the wooden chair at the end of the table trying to avoid getting in the way of the family's frantic morning routine. Andrea and Yulissa rush around packing their school bags, combing their long, thick hair into a single plait and placing bananas and grapes to take to eat at school. They do not have time to chat with me nor play with their puppy like they do in the afternoon. They have to be at school by 8am and it will take them about 20 minutes to walk there. They cannot be late.

Jose Antonio takes a large pot off the gas stove, frequently used by men or when a meal needs to be cooked quickly. The gas stove sits on the dirt floor next to their ceramic stove known as a *q'oncha*. Normally breakfast would be made using the *q'oncha*, however as Florella is out this morning, it is Jose Antonio's responsibility to cook their breakfast of *mate de avena* (a hot drink made of oats, sugar, evaporated milk and water). Using a cup, Jose Antonio pours the mate into each person's individual cup then places it on the table. He places mine in front of me first saying *servirte* (lit. you are served), however, as I had embarrassingly learnt, you do not begin eating until each person's cup is placed in front of them and we had prayed thanks to God as part of fervent adherence to their faith, *Evangelical Peruanita* (Peruvian Evangelical Church).

A plate of pansitos, small, round, flat pieces of bread commonly served with a mate sits in the middle of the table. Each person takes a pansito, alternating between drinking their mate and dipping their pansito in their cup to flavour the bread. Once the children had eaten their mates and had one pansito each, they collected their backpacks and were headed out of the door on their way to school, Carlos and Andrea to the secondary school and Yulissa to the primary school located on the main highway.

Florella returned from her shopping trip in Urubamba carrying vegetables and meat which she had purchased at the markets. We remained in the kitchen as there was still one dish yet to cook until our breakfast was complete as most breakfasts are composed of at least two courses, a mate and a soup or *segundo* (second dish). Immediately Florella got to work, placing firewood in the *q'oncha* to begin cooking our soup. As we were chatting Florella began cutting calabaza while I helped peel habas. The skins of the habas could be scooped off the table onto the ground to be eaten by the family's 20 *cuy* (guinea pigs). Florella frequently complained that she does not want *cuy* in her kitchen anymore and is keen to build a *casita*

(little house) for them to live in. This would stop the many flies which bother her daily to which she has developed a fine skill of killing with a plastic fly swat.

Intermittently she would stop chopping vegetables at the sound of '*Tia*' from outside, indicating that a customer was wishing to purchase an item from their small shop selling pansitos, sweets, chocolates and toiletries at the front room of the house. The family has only had their shop for a year. Profits from the shop supplement Jose Antonio's income from the Inca Trail to pay for schooling supplies.

After half an hour the soup was ready and together we ate. Had the children not been at school, like the in the school holidays, we would be eating this meal together. Jose Antonio, after finishing his soup apologised that he now needed to head off to his job working as a cook and porter on the Inca Trail. Florella then went about her chores, preparing *chicha blanca* (a non-alcoholic sweetened beverage made of purple corn and flavoured with spices) to sell to customers as well as washing the cups from breakfast and attending to her store.

Community transformations

The life of Jose-Antonio and Florella's family today, stands in sharp contrast to their childhood experiences. Jose-Antonio and Florella are not alone, with numerous people of their generation describing similar childhoods. For many Quechua-speaking highlanders, childhoods of the 1980s and 1990s were frequently described as sad characterised by a multiplicity of sufferings. When there was food, most ate nothing more than dehydrated potato (*chuño*) and virtually never consumed fruits or vegetables. Others described the state of homes that were poorly ventilated, covering people's clothes and food with a thick layer of soot. The poverty in which people lived resulted in many seeking work outside of the

communities. Mistreatment, exploitation and theft were common. As a result, the resounding sentiment expressed was: "I know what it is to suffer".

Such images closely reflect how anthropologists of this era described life for Andean people (Allen 2002; Graham 2004; Koss-Chioino et al. 2003; Leatherman 2005; Oths 1999; Paponnet-Cantat 1995). However, in 1988 Allen recognised that in one community in the Province of Paucartambo (also located in the Cusco Department) people had been "standing on the brink of" radical social and economic transformations (2002, p. 21). By the time she returned in 1995, she found a community transformed. This chapter speaks to such ongoing transformations occurring in the lives of Quechua-speaking highlanders of the Cusco Department.

For many community members, life today is no longer the same as it was two decades ago. Hunger is not a daily feature of life, with one woman stating "I live in this place, satisfied, full and what I produce I eat, I don't have lots but I have what I need to eat". Living situations have changed. Rather than living in homes made of shale, adobe mud bricks are used instead, offering more warmth during the cold nights of the dry season. With modernisation, people have access to electricity and many own a mobile phone. Jose Antonio stated, "Now we are comfortable, we have a house, there's light and water". There was an agreement amongst the communities that "Life is better now" due to a multiplicity of factors which will be detailed in the following sections of this chapter.

The improvements seen in campesino living standards can be attributed to Peru's macroeconomic growth resulting in poverty reduction, improved social policies and continued developments of health and education infrastructure. However, it is enhanced employment opportunities and the decline of alcoholism which campesinos agree has resulted in the most dramatic transformations to their life-worlds. These domains have also had a

direct impact on the foodways and nutritional status of these people and their children. I will now discuss each in detail.

Employment

Ayni is a system of reciprocity which traditionally involves the mutual exchange of goods or labour between networks of kin, friends or *compadres*, a form of "spiritual kinship" (Allen 2002, p. 68). Recent decades have seen an overall reduction of *ayni* due to campesinos' increased involvement in wage labour (Jones et al. 2012; Larme and Leatherman 2003; Leatherman 1998; Mitchell 2006; Weismantel 1988). Indeed, community members recognise their own preoccupation with money (see Allen 2002). Consequently, the value of *ayni* has declined as people turn to wage labour to earn an income to acquire a range of foods, clothing, schooling and building supplies external from the community.

The types of wage labour people engage in differ across the Andes. Amongst these three communities the Inca Trail (*el camino inca*) is the most common form of employment that families rely on for an income. Other families have also found work as artisans, animal traders (*negocios*), seasonal labourers, construction workers, taxi drivers or gold miners (in Porto Maldonado in the Amazonian region of Cusco). However, it is common to find that people either currently or have previously worked on the Inca Trail as *porteadores* (porters).

Jose Antonio is a typical *porteadore*, a Quechua speaking man from the highland regions of Cusco. As a *portedore* Jose Antonio must cook as well as carry the packs and other equipment required by the tourists who undertake the Inca Trail and other treks within the Cusco Department. However, the Inca Trail remains the most popular.

The Inca Trail begins in the tourist town of Ollantaytambo and generally requires four days of trekking before the group reaches Machu Picchu, listed as a World Heritage Site by

UNESCO since 1983 (Arellano 2011; Maxwell 2012). Although tourists have been trekking the Inca Trail since the 1980s (Arellano 2011) it was in the mid-1990s that saw the explosion of Cusco's tourism industry and ultimately the Inca Trail (Maxwell 2012). Within just 10 years the numbers of tourists on the Inca Trail has grown from 133,906 international and Peruvian tourists in 2004 to 139,604 in 2013, with numbers peaking in 2012 with 143,455 tourists (MINCETUR 2015). Concurrently the number of porteadores has also increased due to the 2000 Inca Trail regulations which enforced tourists to hike with agencies and the prohibition of animals due to environmental concerns on the trail (Arellano 2011; Maxwell 2012). As a result, the Inca Trail Industry is controlled by agencies all vying for the tourist dollar; providing modern comforts of gourmet food and toilets for such tourists, all of which must be carried by porteadores (Maxwell 2012).

Limited research exists on the benefits that work on the Inca Trail has offered porteadores, like Jose Antonio and their families. Instead, current research considers porteadores as an exploited group of people who lack agency due to their marginal position in society, and are offered little choice but to participate in this growing tourist industry (Arellano 2011). Although Arellano admits that there has been some living improvements as a result of this form of employment, she pointedly states that their "dignity remains constantly under attack" (2011, p.116) in addition to the myriad of health problems that result from this form of labour (Bauer 2008). However, for most campesinos, had they not worked on the Inca Trail, "Life wouldn't be like this now".

Prior to the Inca Trail there were limited employment opportunities available to campesinos with most working in seasonal labour (Graham 2004; Paponnet-Cantat 1995). Many spoke of how often the only form of labour was to work on the haciendas of the Sacred Valley or in the Amazonian region of Quillabamba. The pay was little with men earning no

more than the equivalent to US\$2, while women would earn just half that amount. As a result, people were only able to afford small amounts of salt, sugar and kerosene.

The Inca Trail has presented many opportunities to community members. A single trek on the Inca Trail often provides between 100 soles (US\$32) and 200 soles (US\$63), significantly higher than other forms of employment. Jose Antonio also stated that the pay is guaranteed after four days work on the Inca Trail; while in construction, it may take a week, month or longer to receive your pay. Similarly, the artisan family with whom I lived frequently shared their fears of tourists not purchasing their textiles and constantly expressed concerns about being able to afford food or pay for their son's schooling in Cusco. While some families were dependent, others stated that they often work on the Inca Trail when they need the money. The flexibility of employment on the Inca Trail allows people to work and rest when they need.

People were also very proud to show me the most tangible benefit of working on the Inca Trail as displayed in their now tiled roofs which replaced roofs made of straw from oats or barley. As roof tiles have to be purchased in town, it has become an important symbol of a family and a community's modernisation and participation in the market-based economy. People would frequently point to homes with thatched roofs, commenting on their poverty and the fact that they obviously do not work on the Inca Trail. Not only are people able to afford roof tiles, but also basic necessities such as fresh food and occasionally meat as well as clothing and schooling supplies. Today people purchase a wider variety of foodstuffs from the Sunday Pisac or Calca markets or from small family-run shops, such as Florella's, including fruits and vegetables as well as bread, quick oats, rice, pasta, sugar, salt and vegetable oil.

I do not wish to romanticise work on the Inca Trail as Jose Antonio and many others spoke of the difficult labour this can be and the frequent back pain and tiredness from their job, contributing to the already high incidence of musculoskeletal injuries amongst Quechuas (Oths 2003). Recently, work on the Inca Trail has been more heavily regulated due to the Porters Law which was enforced after porteadores in the early 2000s petitioned against exploitation, meagre pay and being made to carry upwards of 30kg (Arellano 2011). As a result, most portedores that I spoke with said that they do not carry more than 29kg on the first day and by the final day this is reduced to 21kg. Similarly, many agencies in seeking to achieve 'ecotourism' have provided back supports to porteadores to reduce the back pain which results from their job.

Despite the frequent oppositional critiques of tourism, it is undeniably clear that tourism has offered community members, people like Jose Antonio, opportunities which are otherwise not afforded through other forms of employment. People are aware of the benefits of tourism and the tangible effects in their lives. People did not speak of a demoralising nature to this job and attacks to their dignity. Rather, men were proud to say that they can cook 'western food', build beautiful homes and most importantly afford to purchase food for their family. Furthermore, global tourism through the Inca Trail has offered portedores such as Jose Antonio, a source of income enhancing the overall nutrition of their families.

Alcohol Consumption

Since the colonial period drunkenness has frequently been associated with ethnicity and ultimately Indigeneity throughout Latin America (Earle 2014). However, various anthropologists have sought to contextualise alcohol consumption as a vital component of Andean culture and ritual acts (Allen 2002; Butler 2006; Custred 1979; Heath 2012; Mitchell 2006; Orlove 1982). According to Allen, alcohol forms an integral part of Andean culture and

ceremonies, stating that is "it is difficult, if not impossible, to live in an Andean community without drinking" (2002, p. 118). Similarly, Butler describes drunkenness as a form of "holy intoxication that fostered communion with people and spiritual forces" (2006, p. 1). Not only did campesinos describe alcohol as a component of rituals and special occasions, but alcohol is also understood to provide good energy for walking long distances or working in the chacra (see also Chapter 3 for the connection between alcohol consumption and previous generations).

Today, one will rarely find alcohol being consumed or sold in Paru Paru and Sacaca. This is the result of community prohibitions on the sale of alcohol and intolerance for drunken behaviour in the street. Such prohibitions have only been in place for the past five to ten years and have come as a result of people's experiences with drunken parents and the introduction of Protestant religions.

The problems of ritual drunkenness resulting in alcoholism and domestic violence amongst many Andean communities have been documented (Allen 2002; Butler 2006; Mitchell 2006). However, Butler (2006) argues that the peasant lifestyle and productive labour offers a form of protection from the damaging effects of alcohol consumption. This has certainly not been the case in the communities where I conducted my fieldwork.

In the past when Paru Paru and Sacaca were more dependent on subsistence agriculture, the communities were rife with problems associated with excess alcohol consumption. Florella had a typical childhood of many highlanders as both her parents drank to excess. Although, her mother stopped drinking after being diagnosed with a serious medical condition, her father continued. The family would fear his drunken rampages when he returned home after a day or more of drinking and would sleep outside the house to avoid the beatings that would otherwise ensue. Others spoke of how their parents continually lost

possessions during a drunken stupor and of the hunger resulting from an insufficient amount of food produced as parents and family members drank while working in their chacras and passed out by midday. Problematic alcohol consumption was not limited to parents, as many adolescents and teenagers also drank to excess.

As part of this drunkenness the needs of children were not prioritised. One father stated that when he and his wife were drunks "We did not purchase fruits or anything for our children". However, now they are able to buy fruit and other foods to feed their family well. Similarly, another family spoke of how even though their father had adequate land, he did not work the chacra as efficiently as they do now and as a result there was insufficient food to feed eight children and two parents. For this family, four of the children were fostered out to live in other parts of Cusco as well as Peru because the parents were unable to care for their children. As a result, one son stated, "I don't want to drink the same like my father, I want to change, live my life differently." With this history, many, like Florella, described how they do not want their children to experience these same sufferings that they endured through their childhoods.

Religion has similarly impacted on the extent of alcohol consumption within these communities. Since the 1990s there has been increased Protestant missionisation into highland communities (Hall 2013; Mitchell 2006). Prior to this period most people adhered to some form of Catholicism as well as the animistic beliefs of Andean cosmology. Today, there are some five different Protestant denominations to which people identify. However, *adventista* (Seventh Day Adventist) or evangélica peruanita were the most common. According to Jose Antonio and Florella, members of the evangélica peruanita church, numbers have grown exponentially in recent years.

Protestant denominations strictly prohibit the consumption of alcohol as an act of demonstrating one's radical faith to God. For example, one Saturday I attended an Adventist church service in which the sermon topic was 'Women and Wine'. In the *leccion* from which the sermons are taught noted:

In many cultures, alcohol is associated with life. The people raise a glass so that the other will have a long life. However the irony is that each glass works towards the destruction of life.

Many Protestants also refuse to participate in Carnival or other ceremonies which are considered 'antiquated' such as the Corte Cabello and lengthy weddings (which go for five days, rather than three for other denominations). Although Catholics continue to participate in many of these ceremonies and often do not adhere to complete abstinence from alcohol, there has nonetheless been a decline in their overall consumption. For example, in the past it would have been common to drink for days or a week on end with such ceremonies. Now when people do drink it is limited to one day or night. As a result, during one focus group, the mothers were quick to state that "Catholics don't drink like they used to". This change in alcohol consumption by Catholics has been similarly noted in other areas of the Andes (Butler 2006).

As a result of this decline of alcoholism people speak about how men work more effectively in the chacras. Today men are capable of ploughing the field of four chacras in one day, whereas before it would have taken days or weeks to plough just one. Hall (2013) also reports of increased labour production due to the Protestant work ethic amongst other peasant communities in the District of Calca. Many campesinos stated today there is always sufficient food (especially potatoes, barley and habas) and sometimes even too much to know what to do with. Rather than spending limited incomes on alcohol, parents are able to spend more money purchasing fruits and vegetables than they would have previously. Life without

alcoholism is now "all calm". Echoing the sentiments of many women and men, "[It is] Very strange that I can't see drunks in the street".

However, in the community of Hauran it is common to find drunks and excess alcohol consumption. Such prohibitions do not exist in Hauran. *Chicherias* line the main streets - indicated by a collection of plastic bags tied to a pole. Young men tend to consume *cerveza* (beer) in groups on the street while older men will consume chicha before their two hour walk to the highland communities. Despite this, reductions in alcohol consumption are occurring, reflecting a similar pattern to that seen in other highland communities.

While scholars have been critical of peasant involvement in global processes as exploitative and marginalising, this chapter has offered a more balanced, alternative perspective on the influence of global tourism and religion. The benefits of these processes are tangible in the lives and diets of campesinos. Although hardships continue to persist in the daily lives of many people, they are no longer defined in the same way as a generation ago.

Chapter 2

Tengo prisa. No puedo comer ahora: Modernisation and Lifestyle

PARU PARU

I woke with the sunlight entering the room. The family had a separate building for a single bed where I had slept when visiting this family. I made my way in search of warmth to the kitchen and also the living area of their home. There is no gas stove, just their q'oncha in one corner of the room connected to a thin pipe acting as an ineffective chimney installed by a previous government—it has not prevented the roof from becoming blackened with soot. The mother, Yolanda sits on a small wooden stool by the q'oncha, she has four pots which need to be placed on the q'oncha but only three spaces. Her 10 year old son, Eduardo sits on the other side of the q'oncha, placing firewood and dried cow patties on the fire. Their eldest daughter, Juliana is pouring an herbal mate into a plastic water bottle to take with her to the secondary school, which is located in another community further down the mountain towards Pisac. She needs to walk for an hour to get there and leaves the house at 7am. She quickly says goodbye to me as she rushes out of the door having no time to wait until breakfast is ready. Breakfast is not as important as being on time to school.

Their five year old, Luciana stirs from what is the family's bed located at the other end of the small room from the q'oncha. It is layers of thin mattresses and alpaca blankets placed on top of a stone structure about a metre off the ground. A small hole is cut out of the stone and is where the family's cuy are kept at night and quickly hidden away when any adventistas arrive. Eduardo and Luciana eat small handfuls of popcorn (*kancha*) with a sprinkling of salt while packing it into small plastic bags to carry to school for lunch today. As it is only March the children will not be receiving a cooked breakfast or lunch which are normally supplied by the NGO (as this program does not begin until April when most children are regularly attending school). At 7.30am Eduardo and Luciana rush out the door. However, breakfast is

not complete. Wilber, the father, and Yolanda, both work to steam potato and *moraya*⁶ (a type of dehydrated potato) to serve alongside a segundo of fried pasta and vegetables. Once we have had our full, Wilber excuses himself saying that he is now headed to work in the chacra, while Yolanda will take her animals out to pasture in the higher regions of the community.

Introduction

A core feature of nutritional anthropology focuses on resource allocation and the types of servings that are offered to children. Food allocation, in particular offers insights into intra-household dynamics and ultimately the "household production of health" (Berman et al. 1994, p. 206). Such insights allow nutritional anthropologists to analyse how cultural values and wider contextual forces are lived out in everyday practice. For example, in the context of high infant mortality, Scheper-Hughes demonstrates how children who display a "knack for life" are allocated more resources and food whereas younger and weaker children can be subject to selective neglect (1992, p. 411). In contrast, in the Amazonian region of Peru, Piperata et al. (2013) posit that food is allocated towards the children who demonstrate the greatest needs. A similar occurrence is noted from the Andean department of Puno whereby young children are recognised to be vulnerable to the local condition of *debilidad* (Graham 1997). In this same region other research suggests that parents allocate resources (but not necessarily food) selectively towards boys (Larme 1997; Messer 1997). In the Ecuadorian Andes, rather than as a form of protection, meals are considered to be a gift from parent to child. Preference not only goes to the youngest children, but they are also "indulged a great deal" (Weismantel 1988, p.100).

⁶ Moraya are a variety of dehydrated potato. They are freeze-dried by placing the potatoes into a cage in the river and left for a month yielding a white dry potato. Chuño are black freeze-dried potatoes created by leaving the potatoes exposed to the cold June/July air for between a week and two weeks.

Such analyses on the selectivity of food consumption and distribution often assumes that food allocation is based on parents' conscious decisions, which are determined by the value and meaning they assign to children (see Finerman 1995). Furthermore, such research emphasises that young children are those most nutritionally disadvantaged by food allocation practices. However, in this chapter I suggest that the eldest children (those aged above 12) are the most nutritionally disadvantaged during the school term. This disadvantage is driven by family dynamics as well as broader forces acting upon these communities. Eldest children are not 'selectively neglected' as parents do not intentionally seek to disadvantage these children. Rather, this unequal allocation of resources is shaped by changing priorities emphasising school attendance without a simultaneous change in technology and method of food preparation. Government and NGO supplementary nutrition programmes primarily target children under the age of 12 resulting in a gap of available nutritious meals for secondary-school students. Although modernisation has frequently been hailed as the answer to poverty and malnutrition, this chapter highlights how modernisation has altered the way in which meals are consumed by children within campesino households.

Methods of Cooking

As within Wilber and Yolanda's small adobe home, a vital feature of any campesino household is the q'oncha. A q'oncha is a ceramic fire stove with generally two to three holes designed for pots or pans. Underneath wood is placed and a fire light with matches and straw. Although most q'onchas have a chimney, they are often small, thin pipes which do little to remove the soot from the air. Consequently most homes (and even some school classrooms) are blackened and community members are subject to an array of respiratory diseases. Globally, indoor air pollution causes pneumonia, chronic obstructive pulmonary disease and has been implicated in cases of tuberculosis, to which women and children bear the brunt of this disease burden (Burki 2011).

In other campesino households, a *cocina mejorada* (lit. improved kitchen) may be used instead of a q'oncha. Cocina mejoradas have been installed as part of a government initiative in partnership with the United Nations Development Program and from international aid provided by the German government. The primary aim of this program has been to reduce indoor air pollution caused by traditional stoves. As of June 2014 only 75,552 cocina mejoradas (benefitting 362,650 people) have been installed



Figure 1- Cocina Mejorada (Photo by Author).

throughout Peru (MINEM 2014). Such stoves were more frequently installed in Sacaca than in Paru Paru or Hauran.

A cocina mejorada is of a similar design to the q'oncha. Adobe bricks are built around the q'oncha to concentrate the heat and to make cooking quicker and easier. Florella commented that it also prevents her pots from becoming blackened and difficult to clean than when using the q'oncha. However, cocina mejoradas only accommodate two pots or pans, meaning that a mother has to be skilled at knowing which pots need to be placed where to allow for the maximum heat and so the cooking process is not extensive. A more substantial chimney than those seen with the q'oncha is then built into the cocina mejorada for ventilation.

Finally, some households have a gas stove. Wilber and Yolanda were described to me by other community members as adhering to a very ancient way of living because they only had a q'oncha. Every other family I lived with had gas stoves. Some families have purchased the stove themselves, while others were given the stove as part of a similar government program which installed the cocina mejoradas. The Cusco Department has been the second largest recipient of such stoves with 37,338 installed of a total 500,000 across Peru (MINEM

2014). However, locals remain perplexed about the distribution criteria which saw some households obtain gas stoves and others not. One family described how an elderly woman in their community received a gas stove despite her being unable to cook and frequently having to rely on food from others.

An argument could be made that the use of gas stoves amongst these households is an active attempt of campesinos to adopt a more Mestizo or white form of food preparation. For example, Weismantel reduces all form of food preparation and consumption to ethnicity, suggesting that "certain ingredients, techniques, and combinations are 'white', others 'Indian'" (1988, p. 88). Such an argument is overly dichotomous. Weismantel also relegates Indigenous practice to "the past" while white culture represents "the future" (1988, p. 154). The fact that both technologies are used demonstrates that neither one is considered the past and the other the future. Rather, the use of gas stoves demonstrates the way in which highlanders appropriate these technologies for their own purposes and according to the dish being prepared.

Gender and Cooking

Men are those most likely to cook using gas stoves than women. If the wife is not home to cook a meal then the husband may cook the entire meal on the gas stove, or a meal may be jointly cooked by both a man and a woman. For example, the woman may produce a soup using the q'oncha, while the man makes a segundo of fried pasta or fried eggs using the gas stove. I also witnessed a similar situation, whereby within another household, the men (the husband, brother or grandfather depending on who was available) would grind various grains into a fine flour using a metal hand mill that was attached to a wooden bench within the kitchen area. Moraya are often also ground into flour. However, this requires a different technique using a large, flat stone and a smaller, rounded stone. This task was only ever

performed by women. From these examples it is clear that there has been a gendered uptake of new technologies. This does not mean that women are ignorant and incapable of performing such tasks. Rather I suggest that men have more experience using these methods as most leave the communities to work as cooks on the Inca Trail or in restaurants in Cusco, ultimately using these forms of technology.

The fact that men, like Wilber, participate in the preparation of meals reflects a significant change in the gendered dynamics of the domestic sphere of Quechua households. Many Andeanist anthropologists have noted the complementarity of gender roles (Allen 2002; Hamilton 1998). With such complementarity both a man and women can perform similar tasks such as weaving or working in the chacra without threatening gender roles (Allen 2002). The preparation of food is often considered the exception to this complementarity, as the kitchen is considered entirely the women's domain (Butler 2006; Mitchell 2006; Pape 2008; Weismantel 1988). Weismantel (1988) also suggests that the practice of cooking is considered the most feminine task a woman undertakes, while Mitchell (2006) states that it is considered shameful for a man to cook. However, with most men working as cooks on the Inca Trail men are comfortable with cooking and often even boast that they are able to cook tastier meals than women. Thus male cooking is not a case of "trespassing on this right" of women (Butler 2006, p. 61). Instead, a man cooking within the home blurs dichotomous views of gender and demonstrates increasing complementarity of parents within the kitchen, supporting Hamilton's observation that no partner holds "exclusive control of labor or knowledge domains" (1998, p. 97). Although this is not the case in all households, since some men practice traditional gender roles that other anthropologists have described, there is nonetheless a growing trend towards men cooking within the home.

Cooking and the morning routine

For many families whom I visited when conducting interviews or observations, gas stoves tended to be used less frequently than a q'oncha or cocina mejorada. In many of these households gas stoves are often used more for storage than for cooking and some are afraid to cook with their stove for fear that a fire may start accidentally. Furthermore, families prefer to cook using a q'oncha or cocina mejorada due to the cost of purchasing gas bottles which is approximately S/40 (US\$13). In comparison, q'onchas and cocina mejoradas are fuelled by eucalyptus wood which can be freely sourced throughout the communities. Therefore a gas stove tends to only be used when food needs to be cooked quickly or the wife is not home to cook. Most other meals are usually prepared using the q'oncha or cocina mejorada.

In most campesino households a meal is composed of a minimum of three dishes; a mate, a soup or segundo and a side of boiled potatoes, maize or pansitos, depending on the time of day (refer to table 2). Preparing all of these components is lengthy and as a result a standard meal often requires at least one to two hours to cook. Most families will begin cooking breakfast between six and seven in the morning.

The extensive amount of time required to cook a meal is attributed to the fact that producing all three dishes often requires more than two or three pots to cook. For example, water may be boiling in a kettle or pot, potato steaming in another and pasta boiling in an additional pot while the final pot contains the fried vegetables to add to the pasta. Due to the limitations of the q'oncha/cocina mejorada in only accommodating two or three pots or pans, all dishes cannot be produced simultaneously resulting in the extensive time to finish cooking a meal. Similarly, if a child requires lunch in the morning to take to school there is often limited time and ability to produce such a meal.

Table 2: Structure of Meals

Meal	Type of mate	Accompaniment	Second Dish
Breakfast	Mate de avena/habas	Pansitos	Soup/Segundo
Lunch	Herbal mate	Potatoes	Segundo
Dinner	Herbal mate	Potatoes/maize	Soup/Segundo

This method of food preparation is suited to adults such as Wilber and Yolanda who work in the chacra or take their animals out to pasture. One will frequently see many women leave their homes between 8 and 9am to pasture their animals in the higher regions of the community after having consumed their entire breakfast. While men, once they have had their full, will head out to work in the chacra. Depending on the distance people travel within the community most tend to return home for a cooked lunch or carry what is either known as *fiambre* or *mote* (chuño, dried habas and maize) in a small pouch with them to eat in the chacra or mountains (Graham 1997). It is evident that such foodways are suitably adapted to the peasant lifestyle. However, the fast paced lifestyle associated with recent changes and modernisation conflict with existing foodways.

Changing attitudes towards school attendance

A generation ago boys would learn to work in the chacra from the age of five, while girls of the same age would learn from their mother how to perform domestic duties and pasturing their animals, meaning that attendance at school was erratic or non-existent. Núñez del Prado and Foote Whyte report of parental attitudes towards schooling in the 1960s from the comunidad campesina of Cuyo Chico (also within the Pisac region), whereby "the parents constantly claimed that the children didn't learn anything at school and only went there to waste time" (1973, p. 45). Further Núñez del Prado and Foote Whyte argue that there was a greater reluctance towards the education of girls as parents saw few benefits because "in the daily activities of the family it is the males who deal with problems and handle relations with outsiders" (1973, p. 45).

Within a single generation the priority of a child (regardless of their gender) is now their education and schooling. Many children like Juliana and Eduardo aspire to become tour guides or mechanics rather than working in the chacra. Furthermore, people seen to have a life composed entirely of the chacra and their animals without having completed any schooling are frequently described as 'disabled', unable to read and write, ultimately preventing people from being able to work or live in the city. One young mother values the education of her children and speaking of her personal experience stated that "Without an education, you suffer". It is evident that people see the importance of an education as fundamental for a functioning life. Furthermore, in Hauran, the schooling of children was the primary reason people reported for having relocated from the highlands.

Such changing attitudes towards schooling are also a reflection of the changing values of a child. According to Lancy (2008) there are three primary perceptions of children across societies from; the angelic and innocent 'cherub' to the child commodity or burdensome creature. It is the 'cherubs' which dominate Western notions of childhood due to a neontocratic (or child-centred) society (Lancy 2008). From research in the Puno Department, Graham (1997) states that young children are considered to be an expense because they cannot contribute to the productivity of the household. However, I argue that there has been a change from perceiving children as 'commodities' or as the additional help required as part of subsistence agriculture, to the cherub amongst these communities.

Not only is education highly valued amongst these communities, but it is compulsory according to Peruvian law. Children are required to attend three phases of schooling; pre-school, primary and secondary school until they are 16 years old (Hargreaves et al. 2001). Although this law came into effect in 1993, it has often been impractical especially for rural children to achieve and currently universal enrolment rates do not exist (Hargreaves et al.

2001; Streuli 2012; Wu 2001). However, over the last decade Peru and the Andean region, in particular, has seen dramatic increases in not only the number of children enrolled but also in attendance rates (INEI 2013). Between 2005 and 2013 attendance at pre-school grew the most rapidly than any other level from 49.5% of all children aged 3-5 in 2005 to 74% in 2013 (INEI 2013). Similarly, such increases have also occurred in the secondary schools with a growth from 66.8% of all children aged 12-16 to 80% within the same period (INEI 2013)⁷. Consequently, the daily routine and life of both male and female children in comunidades campesinas is now structured around school rather than that of a peasant lifestyle.

Punctuality and the ability to consume breakfast

Although the structure of a child's and family's life has changed, the method and speed of food preparation has not, meaning that children are unable to consume a complete breakfast cooked using a q'oncha/cocina mejorada and be on time to school. Children must arrive at school (both the primary and secondary) by 8am. Punctuality is vital as it is directly related to a family's ability to receive its monthly allotment of 100 soles (US\$32) as part of *Programa Juntos*, a conditional cash transfer scheme implemented by the Ministerio de Desarrollo e Inclusión Social (Perova and Vakis 2009). Money is given on the condition that children attend school for at least 85% of the year and that mothers and children under the age of five attend regular health checks and education seminars (Perova and Vakis 2009). However, many women spoke of the barriers to receiving such assistance due to illiteracy, while another woman stated how her child would often skip school without the mother's knowledge and as a result this family no longer receives Programa Juntos.

Most communities have their own primary school. However, this is not the case for secondary schools. Older children, such as Juliana in Paru Paru must leave at 7am in order to

⁷ Despite an increase in enrolment and attendance rates Streuli (2012) and Cueto et al. (2011) demonstrate that rural children do not obtain an equivalent education as evidenced in mathematical skills compared to those in urban areas.

walk to their school. Younger children such as Eduardo and Luciana of Paru Paru and those in Sacaca and Hauran are closer to their relative schools and can leave later at 7.30am to be on time. By this time, the entire breakfast has not been completely cooked. The fact that Juliana left home in the morning with a single bottle of mate is not unusual. Other children may only be able to consume mate de avena with one pansito before leaving for school as most do not have enough time to wait until the segundo or soup is prepared. It was after the children had left the house the parents and I would finish all components of the meal.

Supplemental Meals

The eldest children, like Juliana, are disadvantaged the most by this routine. This is because supplemental food programmes are directed towards children under the age of 12. Primary school children in all three communities receive meals at school. These meals are provided as part of the recently implemented (2014) Ministerio de Desarrollo e Inclusión Social program called *QaliWarma*. This United Nations Development Program backed program currently supplies meals to 57,677 institutions serving 3.2 million children across Peru (MIDIS 2015). In the Cusco region approximately 191,113 children receive meals (MIDIS 2015). Recipes for breakfast and lunch are based on recommendations made by the Centro de Nacional de Alimentación y Nutrición and vary according to the region in terms of local foods and food habits (MIDIS 2015).

The amount of food and consequently the number of meals served at a primary school is dependent on the relative poverty level of the area (MIDIS 2015). In Paru Paru and Sacaca children receive two meals a day, breakfast and lunch, because these communities are considered to be in a state of extreme poverty. In comparison, children from Hauran only receive one meal a day because the area is considered as one with a high level of poverty, but not extreme poverty (due to the wealth of Mestizo families living in this area). I spoke with

many mothers in Hauran who indicated that are unable to provide dinner for their children. Such children may only receive one substantial meal a day. Even though a need exists for various children to receive two government supplied meals, statistical measures overlook such needs. However, this measure may currently be the most appropriate as research outside of Peru indicates that targeting specific vulnerable individuals within schools frequently results in stigmatisation (Essuman and Bosumtwi-Sam 2013).

Although, Paru Paru is a recipient of QaliWarma, PN also provides food twice monthly to the primary school. The food delivered by QaliWarma is often not delivered on a consistent and reliable basis due to Paru Paru's distance and relative inaccessibility. Similarly, very little fresh produce is provided. It primarily supplies sugar, salt, vegetable oil, rice, quinoa, and dried meats to these communities. Thus PN provides an array of fresh foods, grains, milk and eggs in exchange for the community providing a cook and supplying the firewood required to cook the meals for the children. One PN staff member views their nutrition program as a vital way to encourage parents to send their children to school knowing that they will be fed, ultimately reducing the burden on parents to provide food for their children.

Children under the age of six also receive food aid as part of Peru's *Vaso de Leche* (Glass of Milk) program. This program is one of the longest running national programmes in Peru (Copestake 2006). According to Copestake the Vaso de Leche program was implemented in response to a march carried out by 25,000 women in Lima of December 1984 on the basis that "all children should have the legal right to a glass of milk each day" (2008, p. 548). Since 1984 milk or milk products as well as cereals have been distributed from the Ministerio de Economía y Finanzas to provincial municipalities (Stifel and Alderman 2005).

From there, women from the highlands must travel into Pisac once a month in order to receive their allocated amount.

The Vaso de Leche program has a primary target group of children under the age of six as well as lactating mothers (Stifel and Alderman 2005). Amongst the families with whom I spoke, many said that they stopped receiving milk once their child turned five. Furthermore, Tesliuc (2006) reports that in 2003 only 58% of those who received this food aid were aged between zero and six. Many women also commented that the amount of milk received is insufficient and may not last beyond a couple of days. As Copestake (2006) has reported milk supplements tend to be shared amongst the family and are often not solely consumed by the priority groups whom these supplements are intended for.

Despite these programs, BMI statistics collated by PN reveal that 90% of children aged between 4 and 12 in preschool and primary schools of two communities are considered underweight or severely underweight.⁸ I cautiously use such statistics considering that BMI is a problematic measure as it does not account for bone density or the difference between muscle and fat mass (Guthman 2013). Additionally, these BMI measures are based on international classifications (refer to WHO 2015) and are not standardised to the Peruvian population. Such measures were also recorded in March 2015, after a three month holiday in which children were not receiving supplemental meals. Nonetheless such measures provide a general indicator of the nutritional challenges facing children of these communities.

Secondary-school children are further nutritionally disadvantaged as they are not recipients of such food aid programmes. In the secondary schools neither breakfast nor lunch is supplied. Although some parents, such as Gloria (chapter 4) cook a meal for children to take for lunch, others may give their children no more than one or two soles for children to

⁸ BMI measures were only conducted on one day in March. On this day only 92% of children enrolled in the schools were measured. BMIs for children above the age of 12 are not available.

purchase lunch. Once at school, there is a dearth of nutritional options available for children like Juliana to purchase. Often the only options are pansitos with a slice of cheese or an egg, biscuits or ice-creams which generally cost no more than 50 centimos (US15 cents). After Andrea returned from school she would excitedly exclaim that she had purchased an ice-cream or a lolly for lunch. As these children have only consumed half or none of the breakfast, the most substantial meal that these children eat during a day will be dinner. Additionally, these children are often required to walk further than primary school children and may also be required to assist in domestic duties “Once they have finished their homework”.

As all children have the right to nutritious foods, action should be taken to address the nutritional burden facing campesino children, especially those in the secondary schools. From the evidence presented in this chapter, current food aid programmes have a limited impact on the number of children that are currently underweight. This is supported by evidence suggesting that current food aid programmes in Peru often do not reach the entire target population and are an expensive use of aid (Copestake 2006; Tesliuc 2006). This has been similarly noted in India whereby the most vulnerable populations often do not receive school feeding programs (Loksin et al. 2005). Additionally, Essuman and Bosumtwi-Sam (2013) argue against the top-down implementation of such programmes and stress the importance of considering local dynamics to achieve successful nutrition policies.

Future programmes should consider that campesino households are in a state of transition. The morning routine and method of food preparation continue to reflect that a traditional peasant lifestyle. However, children must adhere to differing time restraints compared to their parents. Consequently, many are unable to consume a complete breakfast or prepare a packed lunch for the day. Despite this, primary-school age children have

enhanced safety nets compared to secondary school students. Although such programmes are fixed to the academic year, the accessibility of primary education and ultimately the availability of nutritious meals during the school term, affords younger children the opportunity to consume more nutritional foods than their secondary-school counterparts.

Chapter 3

Yo sólo confío en mis propios productos: Natural Food and the Fear of Disease

PARU PARU

The fire of the q'oncha is burning. Ana picks up a large hessian bag containing a variety of new potatoes which have recently been harvested from the small chacra in front of their home. This particular type of potato, *revolución*, only takes between three and five months to grow and can be harvested prior to May when most other varieties of native potatoes are harvested. New potatoes are generally the size of a tennis ball with thinner skins than native potatoes. Additionally, because new potatoes tend to be larger and grow at lower altitudes than other varieties of native potatoes, many comment on their lack of flavour which lend themselves to be used more frequently in soups or fried dishes. Despite this, Ana's family always eats new potatoes as a side dish to the soup and segundos that they make. She places the potatoes in a pot to one side of the q'oncha with a small amount of water, on top of this she lays a small amount of straw and then moraya to steam.

Ana then takes her place on the small wooden stool between the q'oncha and her pots and pans. In front of her is a small bucket of water which she uses to wash the vegetables. Without using a chopping board, she slices the carrot, onion and tomato into small thin pieces into her hand. She purchased these vegetables yesterday at the Sunday markets in Pisac after having carefully selected each vegetable, ensuring that it was as small as possible, an indication that it was not grown with chemicals. These vegetables are added to a pot and are then placed onto the middle space of the q'oncha with a small amount of vegetable oil also purchased in Pisac. This will form the base of the soup.

Ana's husband, Romiro, sits on the wooden bench alongside one wall of the kitchen to which a metal hand grinding mill is attached. Beside is a small bag of wheat which he slowly

grinds into a flour. Once complete he passes it to Ana to add to the soup. Ana then adds water from the kettle which has been boiling towards the back of the q'oncha, leaving the soup to boil.

The potatoes are ready. They are placed into a large woven basket on the small table in one corner of the room. Ana's father, Jose Carlos, eagerly jumps from his seat where he had been peeling dried habas using a hooked knife, to collect a couple of the potatoes. He notices my hesitation and using his limited Spanish says to me, "*Come! Come!*" (Eat! Eat!). I copy him as he places one on his lap and with the other he begins to peel off the thin skin, something which I frequently had difficulty with, as the art to peeling a potato is dependent on not peeling the flesh with the skin. The skins are then either placed on the table or bench to be gathered up and put in a container for the pigs or directly onto the floor for the family's cuy. No salt is added nor is a salsa prepared for the potato to be dipped in.

Eventually the soup is ready and Ana begins serving each person. As a guest I am served first, then her four year-old daughter, Lisbeth and six-year old son, Bejamin, followed by Jose Carlos, Romiro, and Nelida. Ana does not serve herself until the segundo is underway. Using the steamed moraya, Ana cuts each potato into long thin strips. The red onion is too cut into a similar width to cook at the same time as the moraya. She is then offered an opportunity to stop cooking and eat her soup. Romiro and Jose Carlos bring their bowls to Nelida, who is sitting opposite Ana by the q'oncha and the large pot of soup, for second helpings after asking me if I wanted any more. I had learnt that it is not rude to decline second helpings, however families are frequently disappointed if you decline an entire dish altogether. After Romiro has had second helpings of the soup, he sits by Ana helping fry the moraya and onion using their gas stove while Nelida relaxes against the wall by the q'oncha eating her soup and no longer needing to attend to the fire. The segundo is

served in the same pattern as the soup, however by this time Lisbeth has curled up asleep on the stone bed.



Figure 2- New Potatoes: Revolución (Photo by author).



Figure 3- Native Potatoes (Photo by author).

Introduction

Ethnicity in Peru, especially in Cusco, is less determinable by race and is rather expressed through dress, language and most importantly food choices (Krögel 2011; Mitchell 2006; Núñez del Prado and Foot Whyte 1973). Consequently, current anthropological literature suggests that Andean populations reject traditional foods such as potato, kiwicha, quinoa and guinea pig on the grounds of ethnicity. By rejecting traditional foods in place of 'western' foods such as chicken, rice and pasta, people are seeking to disassociate themselves from their Indigenous identity and instead adopt a Mestizo or Peruvian identity (deFrance 2006; García 2013; Graham 2003b; Krögel 2011; Marquis and Kolasa 1985; Weismantel 1988). However, Abbotts (2014) argues that such analyses of food choice and consumption in the Andes represent an overly dichotomous view and instead suggests that there is a greater level of ambiguity to food consumption which Andeanist anthropologists have frequently failed to recognise. I wish to further this argument demonstrating how community members reject or select the foods of the city such as meat and vegetables, preferring instead to eat their own produce, particularly potato. Although, Graham (2003b) notes the importance of one's own produce and the selectivity people display to city foods as well, her discussion is largely

limited to that of ethnic identification. This chapter will argue that community members do not seek to engage in 'de-Indianisation' (de la Cadena 2000). Rather, Quechuas seek to balance between the two imaginations that they hold; one of city-people as a source of disease and contamination, and the other of their healthy and disease free ancestors. This balancing act requires Quechuas to engage in 'counter-cuisine' (Belasco 1989) by rejecting 'conventional agriculture' and adhere to 'tradition' by consuming natural foods in order to achieve an imagined state of optimum health. Such analyses will highlight the importance of understanding the cultural significance of 'natural' foods to campesinos and how this dictates food selection and consumption practices.

Imagination

Quechua-speaking campesinos, like Ana and her family, live in the borderlands between two distinct, 'imagined communities' (Anderson 1983). The first community is that of the *abuelos* (grandparents) of these highlanders; people who in the past lived in the same or nearby comunidades campesinas in which highlanders live today. The other community, is the city, specifically that of Cusco representing modernity and change, located approximately an hour and a half, southeast of the comunidades campesinas. Campesinos do not consider themselves the same as either the abuelos nor of city people. It is the very fact that these highlanders live in the borderlands which results in a "lack of fit" (DuBois 1999, p.7).

I use the term 'imagination' deliberately because the notions of the abuelos and that of city people are narrative constructions and do not necessarily create a factual representation of either community. Neither are these imaginations produced for the sake of ethnic identity between Mestizo and Indian. Instead, people hold these imaginations to reflect differing values and understandings of life and wellbeing. Fundamentally, these two imagined communities differ in the types of foods consumed, providing an explanatory model for the

diseases that do and do not exist amongst the comunidades campesinas. In this way, imagination can be defined as "not just as a capacity to construct images, or as the power of mental representation" but is rather "a way of living creatively" in a dynamic and fluid world (Ingold 2012, p. 3). Hence imagination is a practice and according to Bruera is a vital component to alimentation because "to eat is not only to incorporate a nutritional substance, but also an imaginary substance: a web of memories and meanings that range from the dietetic to the poetic" (2012, p. 566).

Through these imaginations campesinos create a specific nutritional ideology which centralises the need to eat natural foods. According to Portilho a nutritional ideology is "a symbolic and cognitive system that defines the qualities and attributes of foods, whether they should or should not be consumed" (2010, p. 554). Adhering to this ideology does not singularly serve to dictate or justify practice but also forge identity and values in accordance to the community which shares this conception of the world. By analysing the practice of food selection and consumption emerges a system of values and identities to which Quechua-speaking highlanders either seek to reject, select or cling to. Furthermore, Weismantel suggests that this analysis assists in understanding "what a people think of themselves, who they are, where they live, and what their place is in the natural and social world and in the political and economic systems of the nation" (1988, p. 194). Despite the existence of a nutritional ideology that people may express and indicate they adhere to fervently, Laderman argues that a nutritional ideology "provides the basic script, but the actors are not constrained to follow it in detail" (1984, p. 553). In this way an ideology can be "subject to innovation, interpretation and rationalisation" (Laderman 1984, p. 553). Hence it is vital to consider together what is both voiced and practiced in order to understand how this nutritional ideology structures everyday food consumption.

The abuelos, semi-subsistence agriculture and health

Amongst the social memory of community members, the abuelos are the intermediaries between the Incas and present day highlanders. The abuelos are grounded in what Sorescu-Marinković (2011, p. 54) considers a 'secondary past'; a space "between the distant past of the legends and the present". Contrary to historical records which indicate extreme rates of poverty, hunger and disease resulting in high mortality rates and low life expectancies—due to respiratory, infectious diseases, liver cirrhosis as well as cardiovascular diseases (Buck et al. 1968; Dutt and Baker 1981; Paponnet-Canntat 1995) — community members considered the health of their abuelos to be an optimum state of health. The abuelos were frequently described as people who lived into their hundreds, were healthy, unaffected by cancer and displayed great strength and energy. When discussing how life compares today to that of before, one young mother stated, "Before everyone lived better, until our abuelos, they were healthy, until now they were the ones who lived the longest". Thus the abuelos are depicted to have almost superhuman qualities; impervious to disease or the effects of excessive alcohol consumption.

The health of the abuelos for many people is attributed to diet, as previously people would have only consumed foods produced by oneself or community. It is not just the fact that people grew or produced everything they consumed, but that the food was 'natural'. Although people use a variety of terms to describe such produce, natural, organic, ecological or *sin químicas* (without chemicals), I will use the term natural. Ana pointedly stated to me one time that her family produces crops that are natural not organic "Because organic food does not have any flavour". The term natural implies that it does not contain chemicals from fertilisers, pesticides or hormones, however it may be grown using manure from animal pens. Similarly, the crop or animal is grown in a 'normal' period of time (as determined by people's knowledge of agriculture and animal husbandry). Importantly, seeds are not purchased and

are obtained from the previous harvest, providing the assurance that they have not been modified or altered in any way. Thus campesinos' definition of natural foods is equivalent to the United States Department of Agriculture definition of organic farming (Gold 2007).

An additional element to the definition of natural foods is that they must not be processed nor refined. Neither are natural foods bought in packaged bags. Ideally natural foods are sourced from the community itself. Further, such foods are not solely considered a nutritional substance. They are also sources of strength, energy and courage which has been similarly noted amongst other Andean communities (see Corr 2002; Graham 2003b; Gudeman et al. 1989; Larmer 1998). Importantly, only 'natural' rather than 'organic' foods can transfer these qualities. I speculate that campesinos, like Ana, distinguish between natural and organic to also dissociate themselves from the growing amount of 'hippies' living in Pisac. Such hippies are often foreigners from North America or Europe who adhere to vegetarian or vegan lifestyles, desiring such food to be organic. Simultaneously, many hippies frequently engage in Ayahuasca ceremonies or other drug use; behaviour which many campesinos shun. Thus 'natural' does not only describe the food but also the lifestyle and values of its consumers.

Although people romanticise the life of the abuelos "Because they were great, in what they ate, and how they worked", people also express incongruous statements about the life of their abuelos. People within a single conversation will often describe the perfect life of the abuelos, and later state the problems of such a life. For example, one woman stated that an entirely natural diet of one's own products is not completely balanced. Similarly, Jose Antonio, having spent his childhood working by his father's side in the fields, stated that "The old life is a bit difficult". Butler (2006) argues that such contradictory statements can exist fluidly amongst Andean culture. Andean thought can facilitate the existence of paradoxes

where opposites can both be true, at times more so that two unrelated concepts (Butler 2006, p. 52).

Families like Ana's sustain a facet of the abuelos life by growing crops cultivated in family owned chacras. Each family tends to own between three and five blocks of land spread across the communities. In Paru Paru the land at the highest altitude is where people primarily grow potato along with other tubers such as *lisas*, *oca* and *ano*. In the lower regions of the community; barley, oats, wheat, quinoa, habas and *tarwi* (lupin) are grown. As it is lower in altitude maize can also be grown in Sacaca. In the plots of land adjacent to people's homes at all altitudes, products such as onion, garlic, lettuce, carrots, herbs, medicinal plants and small amounts of potatoes can be cultivated.

These products are grown using the cultivation techniques of their abuelos due to the high inclination and small size of chacras as well as the expense of purchasing fertilisers and other chemicals. People continue to use tools such as the *chakitaqlla* (a tool composed of the wood of eucalyptus, the skin of a llama's neck and a metal blade to plough the land) and farmers also adhere to a crop rotation system where crops are only grown on the same block land for one year. Afterwards, the land is rested for six to seven years in order to maintain the nutrients in the soil. This is not practiced everywhere throughout the communities, especially in the lower regions as these areas support the greatest amounts of crops. On these chacras people use the excrement of their animals, in particular the baby guinea pig, which adequately fertilizes the land to produce sufficient crops each year. People are comfortable with the fact that their crops are smaller and take longer to grow than with 'conventional agriculture' as this indicates to them that their crops are natural, a source of vitality, superior in flavour and how their abuelos would have grown such crops.

Many people whom I interviewed in Hauran do not have sufficient space to cultivate crops. A house will often have a small garden where people tend to grow peaches, prickly pears, calabaza and maize. People often stated that they also had their own chacras in the communities where they originated from. Despite living closer to the city than those from Paru Paru and Sacaca, people said that they still prefer to eat crops from their own chacras of the highland communities where most continue to use traditional cultivation techniques. Therefore for people of Hauran the desire to eat like abuelos outweighs the ease of accessing 'unnatural' foods from the city.

Potato and its connection to the abuelos

The most important crop which people produce is that of the potato. It is also the crop that has a powerful symbolic connection to the abuelos. It is undeniable that potato is the principal component of both the past and present Quechua diet (Krögel 2011). Weismantel refers to potato as "the validator" in Andean cuisine (1988, p. 92), while Glaves considers it to be "the seed of Andean society" (2001, p. 51).

Today potato is served at most meals; whether it is an accompaniment or a component of a dish or both, as Ana served dinner in the above vignette. Although outsiders often commented to me that "All they eat is potato", Weismantel suggests that the value of potato is "indicated by its ubiquity in the cuisine [as] it is an appropriate addition to any meal, no matter how many other starches are present" (1988, p.130). Although potato is ubiquitous in the Andean diet, people do not believe that a diet should be comprised entirely of potato.

Community members speak of their potato crops with incredible pride and endearment. For example, while walking past the chacra of another community, Romero stated "Look at these potatoes. They are not as beautiful as mine". With over 3000 varieties each type of potato is valued for its different flavour and texture profile, leading to different

forms of preparation (Krögel 2011). Those in Paru Paru, in particular, boast that their potatoes are the most delicious, due to the altitude, the soil in which they are grown and, from their perspective, the use of natural cultivation techniques.

Aside from its taste and as a staple component of the Andean diet, potato is also used as a medicine amongst campesinos. PN's nurse indicated that chuño is a natural antibiotic while moraya is a natural anti-inflammatory. Additionally, during a focus group one mother said "The potato is most valued for its different medicines" and that different colours of potato are served to treat various ailments. Furthermore, potato is often combined with other products such as herbs, barley and carrot in order to cure diseases or inflammations.

The most important quality of potato lies in the fact that potato was the mainstay of the abuelo diet. Consequently, it is considered central to longevity, strength, energy and an absence of cancer seen amongst the abuelos. Thus a connection to the abuelos is forged through the continued consumption of natural potato. A similar occurrence has been noted amongst Korean rice farmers by Reinschmidt (2007), who described how this dietary mainstay links ancestors and the living. In the same way that potato is not merely a food staple, rice to Korean rice farmers represents a whole system of values and meanings.

The city: a source of disease and contaminated foods

Not everything can be grown in the chacras. People will often travel into the town of Pisac on Sundays to purchase fruits, sweet potato, chili or pumpkin (and other vegetables when they are not ready to be harvested from their own chacras). When purchasing such items, one must be careful to purchase the smallest produce, as Ana did above. By purchasing the smallest items, this offers the greatest chance that the product was unlikely to have been grown using chemicals and is a sign of it being natural.

The concern for consuming natural food is not singularly limited to that of fruits and vegetables. In all communities people emphasised their preference for eating meat or protein (such as milk and eggs) from their own animals, when they are fully grown. Many indicated that the meat sold in the markets contains large amount of hormones, and like the crops of conventional agriculture, these animals develop in unnatural periods of time. By consuming the meat of one's own animals, people can be assured that the meat would not harbour any dangerous hormones or other chemicals. Campesinos also purchase bread, quick oats, rice, pasta, sugar, salt and oil at the local markets. Selected pantry items can be purchased from small family run shops, like that owned by Jose Antonio and Florella, for a higher price. Despite consuming these city goods, a clear sentiment exists that eating one's own natural produce is far superior than that which can be purchased.

The desire to consume natural foods does not solely come within the Quechua community itself and is firmly reinforced by various NGO and government programs. Others have heard similar messages from engineers working in the community or in the hospital as part of their antenatal care. During one education seminar conducted by PN, one mother was concerned that her children were getting sick as they enjoy eating raw tomatoes and suggested that the chemicals used to grow the tomatoes were causing this. The nurse, Maria confirmed that tomatoes are grown using fumigation techniques and encouraged the women attending the seminar to select the smallest possible tomatoes whenever they are purchased, as this is more natural and is less likely to contain such chemicals. Maria stated that this is not necessary for other fruits with thicker peels like banana or mango. Hence this nutritional ideology has been affirmed by 'legitimate' and 'knowledgeable' sources. Further, these sources of knowledge are also people with experience of the city of Cusco, the place where campesinos understand disease and contamination to emanate. Not only do outsiders validate campesinos nutritional ideology, but also their imagination of the city.

Cusco, the departmental capital, is a city which most campesinos visit infrequently. From Sacaca one must take a half hour small bus (*colectivo*) into Pisac and from there travel for an hour to Cusco. Such a journey is often treacherous as the roads are narrow, carved into the sides of the mountains and serious accidents are frequent. Additionally, a visit to Cusco can also be expensive for campesinos, with a one-way journey costing approximately 6 soles (US\$1.88). In the municipalities of Pisac and Calca people can complete most errands, shopping or business negotiations. Therefore often the only reason campesinos travel to Cusco is for access to healthcare in the regional hospital. Although a health post is located in the town of Pisac, the healthcare is limited to minor conditions. For more serious health concerns or childbirth, one must venture to Cusco. Consequently, for many campesinos, their infrequent and often traumatic experience of Cusco is primarily limited to the confines of Cusco's regional hospital.

The construct of the city, is thus one imbued with images of the multiplicity of diseases which city people are inflicted with. In particular, people are most concerned by the incidence of cancer that exists in Cusco. Although many community members did not personally know people who had suffered from cancer, they were aware that it existed and that it was especially prevalent in the cities. However, according to epidemiological statistics the rates of cancer mortality per 100,000 people are highest amongst the Andean departments of Huanuco (150) and Huancavelica (133.2) as well as the Amazonian department of Amazonas (137.4), whereas Cusco has a cancer mortality rate of 87.1, significantly lower than the Peruvian average of 107 deaths per 100,000 people (Ramos Muñoz et al. 2013). While the statistics paint a different perspective on cancer prevalence, campesino perception of the city remains a place associated with health risks.

Campesinos do not view a diagnosis of cancer as the result of living in the city. Rather, cancer, in particular, is the outcome of purchasing and consuming foods that have been produced through 'conventional agriculture', that is agriculture which employs the use of advanced technologies or chemicals. Additionally, when people travel to Cusco they are naturally confronted with foods unlike those grown in people's chacras. People come into contact with such foods in the markets or while working in the restaurants and hotels within Cusco. An extension of this is when men work on the Inca Trail as cooks with foods purchased from other parts of Peru. These foods are ultimately understood to contain fabricated químicas and added hormones and are unnaturally large. Further, many people were concerned by packaged food items that 'come in bags' which have been refined and processed, no longer resembling their original and natural form. Thus food and disease are entangled into the imagination of the city.

It is not just city food which is considered unnatural to these highlanders. Many described how modernisation, climate change, the increased use of cars and the environmental pollutants of cities are altering the physical environment of these highland communities. People consider the air, the river and almost every aspect of the community to be contaminated due to the city and as a result one man stated "We, humanity, hope for life like before, when everything was natural, when products didn't have chemicals and it was clean". Thus the contaminants in food are intricately intertwined into concepts of the environment. People fear the force of the city knowing they are unable to prevent such damage.

Changing foodways, changing explanatory models of disease

Despite careful attitudes towards the purchasing of food, community members perceive their health to be worsening when compared to the past. People describe how life expectancies

have declined as campesinos only live until the age of 70 rather than into their hundreds like the ancestors.⁹ People also note a general lack of energy and strength, as well as an increase in the amount of diseases, aches and pains, unseen amongst their abuelos. One woman spoke of how infections and diseases are more common amongst people of younger ages today;

Before, my family when they were my age, didn't suffer from any of the diseases like people do now. Their body didn't hurt. Nothing. They were also still healthy. Now we all suffer from diseases. Now we are all saying 'Oh here hurts, oh there hurts'. It's not the same.

This differs from Oths' findings that "bodily pain is seen as a natural and expected condition of life" (2003, p. 67). People interpret pain as a lack of strength, a virtue of their abuelos which they no longer seem to possess to a full extent.

Whilst there has been an increase in natural diseases there has been a simultaneous decline in people's reports of the incidence of supernaturally caused diseases. In 1959 Núñez de Prado and Whyte (1973) classified diseases in the Quechua community of Cuyo Chico into those which were caused by natural, supernatural or mixed forces, with Larme (1997) stating that in an Andean community in Puno, *wayras* (air or wind borne illnesses from the supernatural environment) were considered the primary cause of disease. Community members, too, noted that illnesses can be caused by supernatural forces, such as *mal viento* (bad wind) or *mal espíritus* (bad spirits). However, people reported that there has been a significant decline of supernaturally caused diseases.

Anthropologists have reported that the consumption of city foods has often been considered a cause for soul loss (*susto*) or attacks from *wayras* (Greenway 2003; Larme 1997). However, community members describe how city foods are a primary cause of natural diseases. One man stated that most diseases "We create within ourselves", due to poor

⁹ The apparent decline in life expectancy may in fact be attributed to the increased formal registration of birth dates. Based on research from 1974 Mitchell (2006, p. 17) states that his informants "often do not remember their birth dates and can only guess their chronological age".

choices and eating the wrong foods. Consequently people's explanatory models of disease are changing alongside the increased purchase and consumption of food from the cities. The confusing existence of 'new' diseases are understood through their association with the city. Accordingly, one can seek to prevent such diseases through appropriate food choice and consumption practices.

City foods generate fear not just because these foods originate in the city, but that they do not contain an intrinsic balance necessary for health. Amongst many Andean communities health is created by the balancing of the three humors; fat, blood and air (Paponnet-Cantat 1995). Blood and fat are considered to be the "primary principles of vitality and energy" (McKee 2003, p.138). People understand the químicas and excess fat or oils contained in city foods to disrupt the balance of one's blood producing a host of naturally caused diseases. For example, the consumption of hormones is frequently considered a cause for children growing quickly and allowing diseases to advance rapidly throughout one's body, while pesticides and insecticides are considered sources of cancer. Many also spoke of the excess fat of foods in Cusco and the resulting stomach aches that they experience. Similarly, others were aware of the problems associated with the excess consumption of sweet foods, as the cause of tooth decay which previously was not evident amongst their abuelos, even though it was not customary to brush their teeth.

Although some diseases are attributed to the addition or excess of certain chemicals, people also indicated how eating processed foods are not natural as they have been refined and vital elements have been removed and are thus not as healthy as products which people grow themselves. Graham (2003b) has noted a similar concept in the district of Puno whereby people state that city foods are not considered as healthy as locally produced crops. Consequently, city foods are forbidden in the post-partum period and after men return from

work in the gold mines (after having consumed daily amounts of such foods) as these are deemed to be the times when a person is most vulnerable to disease (Graham 2003b).

However, campesinos live with a daily fear. City foods such as rice and pasta as well as evaporated milk have been incorporated into almost every meal of the day. The increased consumption of city foods creates a sense of vulnerability to city diseases. This fear is not only due to the increased consumption of such foods, but by the uncertainty and the invisibility of knowing what city foods do or do not contain and how this will affect one's body and health. When discussing the consumption of such foods, a middle-age man remarked, "We don't know how (the food) has been produced and you don't have a long life...For this reason I prefer my organic food".

Despite the growth in natural diseases, campesinos believe that their current state of health is superior to that of city people. This is attributed to their continued consumption of natural foods, especially potato. When discussing the qualities of potato, one father stated "The potato protects against many diseases, for this reason there aren't many chronic diseases here, like cancer, because it's healthy". In this way, eating potato affords campesinos a connection to the abuelos, whilst simultaneously disconnecting themselves from the community of city people.

This current state of campesino health is precarious. Not all comunidades campesinas grow crops naturally and in the same way as the abuelos. According to some people various communities had resorted to the use of commercially produced fertilisers or insecticides as the land has been depleted of nutrients or because of a growing trend for people tending to keep less animals (ultimately reducing the amount of excrement available to use as fertilisers). However, many community members view the use of these químicas as yielding to the traps of the city, attributed to a growing desire for wanting things easily and quickly. In

this way, campesinos must be vigilant. Protecting their health requires continued awareness of the values of city people and contentment with crops and animals growing with a natural and normal period of time. Without this contentment campesinos risk increased exposure of themselves and their children to chronic diseases and cancers and will never achieve the optimum state of health witnessed amongst the abuelos.

Chapter 4

Carne es malo para su cuerpo: Nutritional Messages and Ethnomedical

Understandings

SACACA

I arrive in the mid-morning at Miguel and Gloria's house. After greeting me, Catalina, their thirteen year-old daughter, announces that she needs to go check on the family's two sheep. Miguel and Gloria do not own a significant number of animals, keeping a pet dog (endearingly named Suki), their many cuy and the two sheep. In the past the family has kept cows and pigs, however the animals became burdensome on the family and Miguel said how they had insufficient shelter for their cows that when it rained the cows were 'sad'. The only reason they continue to keep the sheep is for the wool they provide.

Miguel and Gloria are artisans, using dyes sourced from various plants and flowers across the community to colour the wool. Miguel is proud of his skills and is one of the few people in the community who knows how to produce natural dyes. Using this wool, he and Gloria produce an array of artisania, from *lliqllas* (shawls), to scarves and blankets. Their artisania always includes bright and colourful patterns reflecting traditional designs of this region. They have limited opportunities to sell their artisania, and are dependent on tourists to purchase these items in Pisac.

Miguel and Gloria urge me to accompany Catalina to the field located on the other side of the community from their house. Suki, also comes along for the journey. Although most families own at least one dog to protect their other animals against foxes or thieves, Suki offers more companionship than protection. For twenty-five minutes we walk along the even dirt road, before turning off and through a field which Catalina says belongs to her uncle.

Within five minutes we reach the family's chacra where the sheep are grazing on alfalfa. Catalina, quickly spots that one of the sheep has wrapped itself tightly around the metal pole, to which Gloria tied its rope to this morning. Despite their best efforts to tie down their sheep, there were at least two occasions where Gloria would exclaim to me that she had lost one of her sheep and would spend all afternoon searching throughout the community until it was found. Catalina readjusts the metal poles and once she is satisfied we return to their house for lunch.

The afternoon consists of the family dyeing wool and weaving. Although the family has looms, Gloria often sits in the garden behind their house to weave. The threads are wound around a single nail in the ground while the other end is attached to her skirt. This method typically yields belts or designs which are threaded onto the bottom of women's *polleras* – colourfully patterned skirts, either worn on a daily basis or reserved for special occasions, depending on a woman's preference.

Before the sun sets deeply in the sky, Gloria and Catalina head to the other side of the community, each with a sickle to cut maize and habas stalks. The stalks are laid across a large rectangular cloth, known as a *manta*. Once a sufficient amount has been cut, Gloria and Catalina haul the load onto their backs while I offer my assistance by carrying the sickles. We walk slowly along the dirt road for no more than 500 metres until we reach their house. The stalks are placed on the floor of the kitchen. With Miguel we peel the maize and habas from the stalks. The stalks are then carried over to where the family's many cuy (approximately one hundred in total) are kept. Miguel and Gloria's cuy do not live in the kitchen area of their home, like many other families. Instead they are kept in a separate building from the family's home. Once the pens have been locked for the night, Gloria begins preparing dinner.

Introduction

While campesinos hold their own nutritional ideology in regards to the consumption of natural foods, they are simultaneously subjected to outside educational messages seeking to address dietary inadequacies typical of the Andean diet. Dietary surveys reveal that the campesino diet is extremely low in fat, calcium and other vital nutrients (Berti et al. 2010, 2014; Berti and Leonard 1998; Browman 1981; Weismantel 1988). This is often attributed to the fact that the principal component of the diet are carbohydrates especially that of potato, whilst all other foods are "peripheral or 'optional'" in the construction of a meal (Weismantel 1988, p. 99). Furthermore, today, as in the past, meat is consumed occasionally, during fiestas or celebrations such as the Corte Cabello, birthdays, Christmas, weddings or in household exchanges of reciprocity (Burchard et al. 1992; Graham 1997, 2004; Mitchell 2006; Paponnet-Cantat 1995; Weismantel 1988). While some have argued that the low-fat diet is an adaptive feature of high-altitude living (Browman 1981), the limited fat content of the Andean diet has also been shown to prevent the absorption of the available fat- soluble vitamins present in the diet (Berti et al. 2010).

Aside from food supplementation programmes, dietary inadequacies have sought to be resolved through nutrition education messages. Such programmes are borne from the foundational notions of public health and development discourse which emphasise that with adequate education people will be able to make informed decisions and the right choices in regards to food selection (Fitchen 1997). However, as many have argued, nutrition is not a simple issue and a matter of eating the 'right' foods (Dettwyler 1993; Oths 1998).

Additionally, Orr (2013) argues that as campesinos become increasingly aware of their lacking nutrition so too is the incidence of mental illness rising amongst these communities. This chapter seeks to explore how nutritional knowledge, in regards to the consumption of

meat and sugar is transmitted and interpreted by campesinos, and ultimately how such knowledge is practiced in everyday life.

The messages of nutrition education

Most of the educational messages which campesinos are subjected to address the need for a balanced diet. Such messages are delivered through a range of different sources including urban health professionals, foreigners or local health workers. However, campesinos remain perplexed about what role meat takes in achieving this 'balanced diet' and which meats are the healthiest to consume.

Gloria and Miguel have been instructed by urban medical professionals to feed their children more meat. They state that they should eat more cuy as it is a rich source of protein. Although they endeavour to feed their children as best as possible, eating meat on a regular basis is often impractical and not customary for families like Gloria and Miguel's. Despite feeding their mentally disabled son more than they feed themselves, Miguel often lamented that many outsiders including NGO staff or medical professionals comment on how wasted their son has become. Miguel and Gloria frequently exclaimed that their son always demands more food and frequently cries out in hunger and that each time they satisfy him. Therefore to be told on a regular basis that they do not care properly for their son is a demoralising message for this family. This points to the gap between health education messages and the need for an empathetic understanding into why this family is unable to feed their son meat or cuy more than once or twice a week.

Others have also received conflicting or inaccurate messages regarding the healthful qualities of meat. During one conversation with Jose Antonio, he asked me whether it was bad to eat red meat. I replied by saying that I have been told that red meat should be consumed occasionally. He was satisfied with my response indicating that that was how often

his family consumed red meat because "It contains quite a lot of cholesterol" and that instead they prefer to eat chicken which they own. Another young father also reported that a doctor had told him that "It is bad to eat meat except for trout and lamb, because they are more natural, others no". Based on the 'knowledge' transferred from doctors and other health professionals, families fear non-communicable diseases of modernisation such as heart disease even when their family's consumption of meat is infrequent.

Many men also receive health information through their contacts with tourists. In Paru Paru majority of the tourists who visit adhere to alternative lifestyles, supporting vegetarianism and veganism, ultimately sharing these ideas with the highlanders they engage with. Although this itself is not a problem, it contributes to the variety of conflicting messages highlanders receive. Such confusion is illustrated in how one young man described to me the problems of the modern diet: "Chicken contains a lot of fat and so does potato, if this is eaten with soft drinks it mixes in your stomach and then into your blood and that is very bad for your health". Consequently, this man eats virtually no meat fearing its effects on his body.

Women with school-age children also receive education seminars from PN's nurse, Maria. Maria is both Spanish and Quechua speaking and has worked amongst these communities for more than ten years. Maria understands the issues that face campesinos and the difficulties in obtaining meat. During one of the education seminars Maria emphasised to the women that their families do not need to eat meat every day as long as they incorporate a variety of different protein sources into their diet such as cheese, milk and legumes. Such culturally informed education is invaluable to campesinos when posed with many contradictory messages about achieving an adequate diet. Despite the value of the education seminars Maria conducts, generally no more than two are held each year. Only one seminar I

attended addressed nutrition, while the other focused on sexual health issues. Furthermore, when Maria asked the mothers to recall the information presented in the previous seminar, many of the mothers had forgotten. Considering that Maria delivers valuable and culturally relevant education, PN should enhance their nutrition education by increasing the number of seminars that are conducted in the communities. More regular seminars would also enhance the retention of information amongst mothers.

Is meat really the problem?

While the majority of nutrition education messages address the 'balance' which should be achieved in regards to the consumption of meat, the excessive consumption of sugar amongst campesino families remains largely unopposed. This poses an interesting dynamic.

Campesinos currently fear non-communicable diseases commonly associated with modernity from their consumption of meat, even when such diseases are uncommon amongst these communities. In stark contrast, multiple people including many adolescent children indicated to me that dental problems such as cavities are common even with adequate dental hygiene practices. Many also connected dental concerns with their taste and consumption of sugar. For example, one afternoon Yulissa was teasing Andrea that her cavities were due to her love for sugary foods.

Campesinos enjoy heavily sweetened mates containing at least one to two tablespoons of raw cane sugar per cup. Currently, rates of diabetes mellitus are low in the rural Andes due to the active lifestyles of many campesinos; working in the chacra, pasturing animals or walking up and down the steep slopes on their way to other communities. However, this nonetheless reflects a worrying trajectory as the modernisation process continues and as lifestyles become increasingly sedentary. Furthermore, this also poses the question, why are campesinos willing to adopt the message that meat is dangerous for one's health, whereas

messages against the consumption of sugar remain acknowledged but not feared in the same way? I suggest that there are two primary factors for this, the ease of access to sugar compared to meat and concepts of meat and fat integral to Andean ethnomedicine.

Consumption of meat

Despite primarily reserving meat for special occasions, there are no restrictions amongst Andean culture on the consumption of meat (Bolton 1979). Graham suggests that meat is consumed at these events as these meals "take on a different structure and include a second-course dish" (2004, p. 2293). Today, however, segundos are more frequently consumed as part of a breakfast or dinner meal. The only taboo regarding meat consumption that people expressed was in regards to the consumption of pork or cuy amongst adventistas. Adventistas are said to be forbidden from consuming these animals due to their connection with the devil. Despite this, I was served cuy in adventista households.

Aside from cultural designations of when to eat meat, its consumption amongst campesino households is primarily dependent on the number and maturity of the animals that families keep. However, owning animals can be a demanding job. Camelids, cows and sheep must be taken out of their pens on a daily basis to other areas of the community to graze on alfalfa in the wet season. In the dry season, sufficient pasture must be brought to the animals. Miguel and Gloria spoke of the past when they kept cows and the diligence of their eldest son waking in the early hours each morning to collect pasture to feed them. Now he lives in Cusco, and the burden is too great for the family to own cows. Even the most religious people of the communities who fervently adhere to the Sabbath day of rest do not take a day off from pasturing their animals. One young woman stated that as long as they do not use or pick-up a tool they are not considered to be working and can take their animals out

on a daily basis. Such a job is suitable if the husband is available to work in the chacra; ploughing, sowing or harvesting.

As men are increasingly involved in the formal economy, finding work distant from one's community and working for extended periods of time in other areas, they often do not have the ability to work frequently in the chacra. In addition to this, the pasturing of animals was previously the responsibility of school-age children. In the past children would begin pasturing animals from the age of eight as a demonstrable sign of adulthood (Larme 1997; Weismantel 1988). Today, as children attend school more frequently they are not regularly available to assist their family in the pasturing of animals except on the weekends or during the school holidays. Consequently, women must adopt not only the responsibilities of the domestic sphere and working in the chacra but also pasturing their animals (Allen 2002; Jones et al. 2012; Larme and Leatherman 2003; Weismantel 1988). Adopting all of these responsibilities means that owning a large amount of animals is impractical and many families like Miguel and Gloria's are forced to keep fewer animals. Such evidence supports Weismantel's suggestion that "traditionally based families who are not suffering from a shortage of land probably eat the most animal protein" (1988, p. 99). However, these 'traditionally based families' are few and far between.

Even when families own animals, the consumption of meat is primarily dependent on the availability of money. I heard a resounding statement that "When there is money we buy meat". This comes as many animals are often kept for a secondary purpose. For example, Miguel and Gloria keep their sheep for the wool they provide, rather than for meat. The only exception is pigs which are primarily kept for meat and clearing scraps. Even when families do keep pigs, they will often own no more than one or two. In Paru Paru this comes after the introduction of community prohibitions which restrict pigs to living in 'casitas' or enclosures

and are not allowed to roam freely. Such prohibitions were put in place after a period whereby vast numbers of pigs caused devastating damage to many people's chacras and crops.

Most families are unable to purchase meat on a regular basis due to the high cost of meat and low disposable incomes. In this way, most mothers stated that their families only ate meat "Every once in a while". Even though campesinos are more frequently engaged in wage labour resulting in an overall increase in monetary assets, this increase does not equally compensate for the decline in livestock assets.

People also stated that there is less money available during the school holiday period as this is the time when children are not receiving cooked breakfasts and lunches supplied at schools. There is less paid work available at this time because the Inca Trail is closed during the month of February to rejuvenate. Some fathers, like Jose Antonio, even stated that they would not start working again on the Inca Trail until April as the trail even in March was too muddy and very dangerous trek despite agencies continuing to conduct tours. Together these factors reduce the disposable income of the family and ultimately their ability to purchase meat.

Sugar Consumption

An integral factor in the palatability of a mate is sugar. In the past, mates were consumed infrequently and primarily for special occasions. This is because of limited incomes of campesinos reserving such treats for when money was available to purchase a small amount of sugar. Unlike meat which is most frequently sourced from one's flock once matured, sugar has until now been an expensive item, unaffordable to consume in large quantities regularly. Despite this, dietary surveys from the 1970s reveal that sugar was consumed more frequently than meat (Johns and Keen 1985).

Today, the increased cash incomes of campesinos mean that sugar is purchased on a regular basis and consumed daily. Amongst most families a mate is consumed at least once or twice a day. Each person, child and adult alike, is entitled to one to two cups depending on the type of mate that is served.

Concepts of meat and sugar

Educational messages often express the need for campesinos to balance the three main macronutrients of carbohydrates, protein and fat. The concept of fat and its excess being damaging to one's health is synonymous in Andean ethnomedicine. According to these understandings fat, a key humor, must be balanced. Furthermore, many campesinos already believe meat to be high in fat. For example, Gloria stated that she does not enjoy eating pork, lamb or beef because of the fat content which makes her stomach uneasy.

In contrast, sugar is more elusive term to campesinos. During one seminar conducted by Maria she spoke of proteins, fat and carbohydrates as separate categories from fruits and vegetables. However, sugar or sweetness was not spoken of. Campesinos do have a concept of sweetness categorising foods according to tastes, particularly whether something is sweet, salty, bitter or sour (see also Weismantel 1988). Johns and Keen (1985) suggest from taste preference studies conducted amongst an Aymara¹⁰ population, that they exhibit an increased inclination towards sweetness than any other taste. For example, I witnessed one mother hiding a bag of *capuli* (a type of cherry) to prevent her nine-year old son from consuming it all within one day.

As sweetness is not a specific humor in Andean ethnomedicine, it is not a factor necessary to be balanced in order to achieve optimum health, facilitating excess consumption. Furthermore, as meat is often salted or prepared in a savoury manner, it could be suggested

¹⁰ The Aymara are a separate Indigenous and language group from Quechuas, inhabiting the Andes primarily in southern Peru and Bolivia.

that meat does not have the same desirability to the campesino palate in the same way as sugar.

Conclusion

Child malnutrition amongst Quechua-speaking highlanders is the product of a broad and dynamic process. The past two decades has seen the increasing modernisation of comunidades campesinas, bringing improvements to the diet as well as new technologies and lifestyles. Although this state of transition is one to be celebrated, due to declining rates of extreme poverty, hunger and preventable disease, this transition simultaneously produces its own set of challenges. This thesis has sought to highlight a few of the issues evident during fieldwork, from the declining number of animals people own contributing to the lacking consumption of protein-rich foods, while changes to lifestyles and social demands without a simultaneous change in technology and method of food preparation result in a nutritional disadvantage for older children. Campesinos have also internalised the fear of modernisation and associated diseases, witnessed through the nutritional ideology which valorises the sole consumption of 'natural' foods. Together such findings demonstrate the complex nature that is malnutrition and the foodways which produce it. Campesino food-related knowledge and practices are influenced by a broad range of actors and forces on a local, national and global level. Furthermore, such foodways are not stagnant and are likely to transform in future years. Such dynamics ought to be considered when conducting nutrition interventions addressing malnutrition. I will provide five recommendations which can be utilised in both government and NGO programmes.

Current food supplementation programmes should be enhanced. Efforts should be made to ensure that there are more reliable and consistent deliveries of food to schools especially to remote areas. The Vaso de Leche program should be re-evaluated. Instead of basing food rations on calorie intake, supplementation could more effectively address essential nutrient intakes and would ensure that children are the primary beneficiaries. Furthermore, nutrition programmes should consider the needs of children no matter their age,

as all children have the right to sustaining and nutritious foods. Therefore, food supplementation programmes should be expanded to secondary-schools or fund the provision of nutritional and affordable foods to high-school students.

Additionally, an inexpensive and locally appropriate solution for rural areas of Peru could involve altering the start time of the school day in the morning. If rural schools were offered the flexibility to start half an hour to an hour later than the current time of 8am this would increase the ability of children, especially those attending the secondary schools to consume more of the family's breakfast meal and be on time to school.

The current provision of gas stoves should be expanded to communities such as Hauran and Paru Paru and offer discounts when purchasing gas. In this way, this method of food preparation would be a more viable option for daily use as well as reducing the incidence of diseases that result from indoor air pollution. Education should be provided to women and some men on how to use gas stoves safely and to maximise on their cooking ability.

Finally, Andean ethnomedical concepts and local definitions of wellbeing and nutrition should be centralised in nutrition education interventions. Healthcare provided in the cities as part of women's pre-natal and anti-natal related care and other healthcare consultations ought to consider such understandings when consulting with clients. Emphasis should also be placed on the disease risks common to comunidades campesinas rather than the urban population when providing such education. Such consultations should incorporate the value and ethnomedical understandings of naturally-produced foods and provide education about chronic diseases and cancer that are congruent to local knowledge.

In terms, of the educational seminars conducted by PN, education should be made available to all community members, not just women with children of primary-school age.

The number of these seminars should be increased to enhance knowledge retention. Nutrition education can offer a more detailed explanation of people's sugar consumption to prevent tooth decay amongst children.

These recommendations are attuned to the life-worlds of the campesino children who have appeared throughout this thesis. As a result, such recommendations may not be suited to other communities. Therefore the unique and diverse experiences of children throughout the Andes should be considered when implementing nutritional interventions.

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