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**Health, Culture, and Lifestyle in Contemporary Tonga:
With Particular Reference to Diabetes and Diet**

A thesis
submitted in partial fulfilment
of the requirements for the degree
of
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Abstract

Over recent decades there has emerged a significant literature regarding the effects of development and globalisation on the culture of Pacific Islanders. It often has emphasised the alarming rate at which non-communicable diseases and related health complications have increased, presumably due to changes in lifestyles. The aim of this thesis is to report on a research project that investigated the contradictory effects that globalisation and development have had on the people of Tonga, particularly in respect to their way of life and how they negotiate the relationship between tradition and modernity. It is informed by a period of ethnographic fieldwork undertaken by the researcher with three families in Tonga, as well as unstructured interviews with members of the Tongan community in Tonga and New Zealand. The study especially explores the link between the shift away from traditional lifeways and increasing ill health, with a focus on the link between diabetes and diet, and more generally Tongan understandings of 'health' and non-communicable diseases and their treatments.

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*For Mum and Dad,
A diamond in the rough
'Ofa lahi atu*

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Glossary

<i>Aka fia</i>	The disinterring of bones
<i>Anga-fakatonga</i>	The Tongan way
<i>Anga</i>	Shark
<i>Atu (or vale)</i>	Tuna
<i>Fahu</i>	The oldest aunty to her brother's children
<i>Fai kava</i>	Make kava (a drink made from the root of the kava plant)
<i>Faikekai</i>	Flour dumplings in a sauce made of coconut milk and sugar
<i>Fa'iteliha</i>	Free choice
<i>Fakama</i>	Shameful
<i>Fau</i>	Hibiscus tiliaceus (plant)
<i>Fea'</i>	Flea market
<i>Fekefeke</i>	Fever
<i>Fihu fatu fa</i>	A thirty or forty foot fine mat
<i>Fonu</i>	Sea turtle
<i>Fua</i>	Elephantitis and mullet (fish)
<i>Fue</i>	Creeping vine
<i>Hafakamoui</i>	To save a life
<i>Haka</i>	A method of cooking; to boil
<i>Heki tanga</i>	Relocating a relatives remains
<i>Hiapo</i>	Inner bark to make tapa
<i>Hikule'o</i>	A god who resided at <i>Puluto</i> (Hawaiki)
<i>Hoppa</i>	A type of banana
<i>Ika 'eiki</i>	Fish fit for a king
<i>Kahi</i>	Ailments of the abdomen (piles, haemorrhoids, backache)
<i>Kahokaho</i>	Large yam (prestigious)
<i>Kautaha</i>	A group for women to make textiles together for a central chiefly woman patron (replaced with <i>taulangalanga</i>)
<i>Kape</i>	Giant taro
<i>Katoanga</i>	A fine mats and tapa exchange group for women
<i>Kiekie</i>	A kind of skirt that is worn over the women's <i>tupenu</i>

	(especially for dancing)
<i>Kele'a</i>	A critical newspaper, conch shell
<i>Koko'anga</i>	The assembly stage of making tapa
<i>Koloa</i>	Treasures
<i>Kulokula</i>	Filariasis
<i>Kumala</i>	Kumara
<i>Lafa</i>	Ringworm
<i>Lakalaka</i>	A standing dance
<i>Lālanga</i>	Weaving
<i>Lassi</i>	Pawpaw
<i>Lau teau</i>	A 100 foot fine mat
<i>Lou'akau</i>	Pandanus
<i>Lu (or pele)</i>	Green leaves (spinach)
<i>Mahaki faka-Tonga</i>	Tongan sickness
<i>Mahaki faka-palagi</i>	Western sickness
<i>Mala</i>	Bad luck
<i>Malo e lelei</i>	Greeting, hello
<i>Mana</i>	Power, prestige
<i>Manioke</i>	Tapioca
<i>Manu</i>	Good luck, success
<i>Masima</i>	Corned beef
<i>Matalafolaukai</i>	Voice of concern
<i>Ma'u Kakala</i>	Title for a talking chief
<i>Maui</i>	God of the underworld
<i>Moa</i>	Chicken
<i>Moko-tea</i>	White lizard
<i>Momoko</i>	Cold
<i>Mo'ui le lei</i>	'Health'
<i>Ngatu</i>	Tapa cloth (once it is dyed)
<i>Nima tapu</i>	Royal undertaker
<i>'Ofa</i>	Love, generosity, compassion, sacrifice

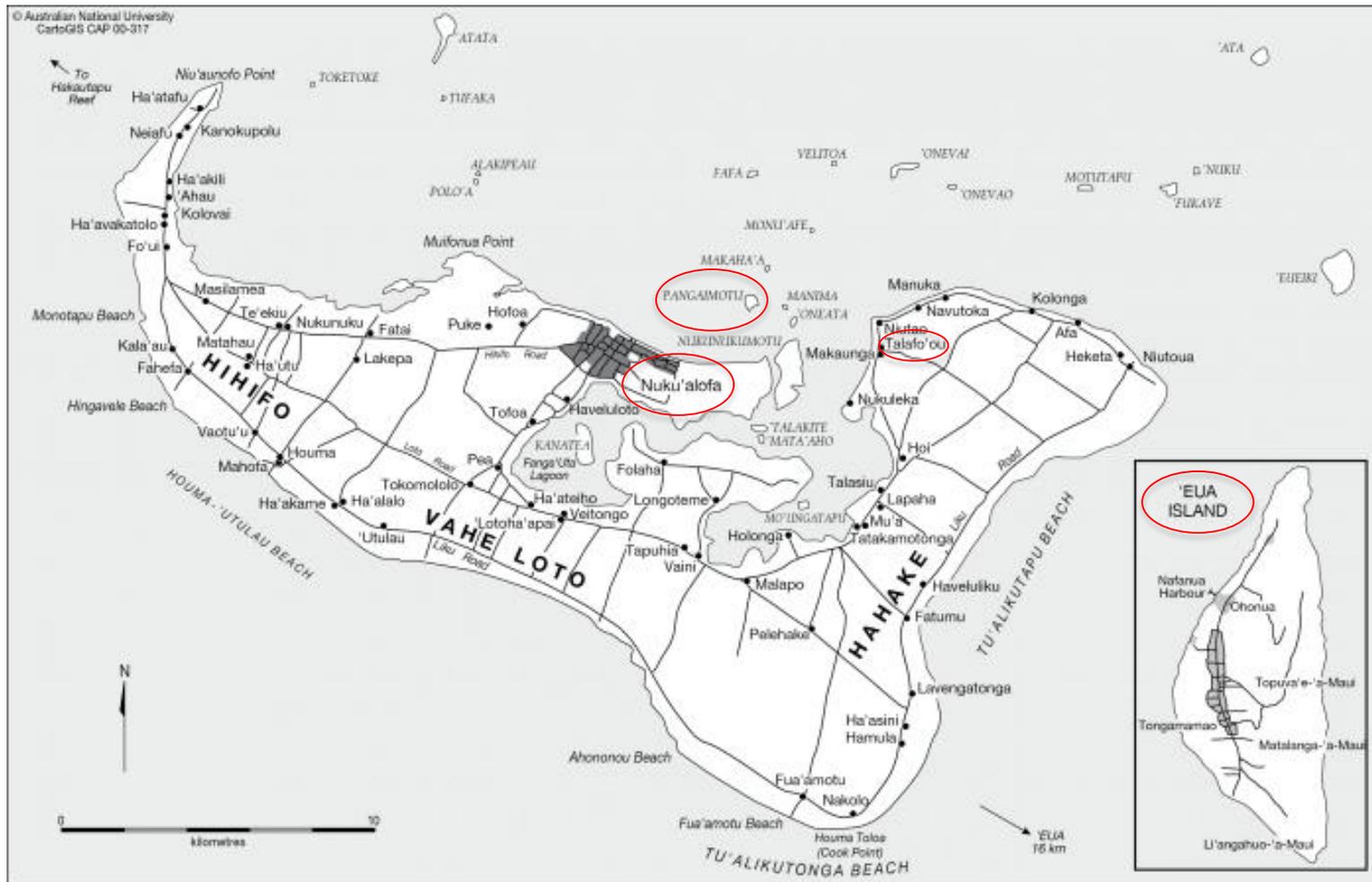
<i>Pa'anga</i>	Tongan currency
<i>Pala</i>	Skin infections
<i>Palagi</i>	A non-Tongan of European descent
<i>Palukula lave'itavake</i>	Long tail snapper
<i>Puaka toho</i>	Large, male pig (prestigious) and <i>toho</i> is the back
<i>Puletaha</i>	A two piece outfit that is one colour, worn by women
<i>Pulotu</i>	A place where the gods reside, also referred to as Hawaiki
<i>Na'a ke kai?</i>	Have you eaten?
<i>Niu</i>	Coconut
<i>Siale</i>	Gardenia and the name for George
<i>Sipi</i>	Mutton/lamb flaps
<i>Soke</i>	A dance (with sticks)
<i>Tangaloa</i>	God of the sky
<i>Tangaloa Tufunga</i>	God of the earth
<i>Talo</i>	Taro
<i>Tapu</i>	Forbidden
<i>Taovala</i>	A kind of skirt made of pandanus and worn over the <i>tupene</i> , worn at formal occasions
<i>Taufale</i>	Broom
<i>Tauhivaha'a</i>	Tending to social relationships
<i>Taulalanga</i>	A group that took the place of <i>kautaha</i>
<i>Tevolo</i>	A spirit
<i>Tipi</i>	Tuberculosis
<i>Tohi</i>	The decorative stage of making tapa
<i>Tono</i>	Yaws
<i>Tu'i Tonga</i>	Head of state
<i>Topai</i>	Dumplings in sweet coconut water
<i>Tupenu</i>	A large piece of material that wraps around the waist - the traditional attire for male and female
<i>Tutu</i>	Beating of the bark
<i>'Ufi</i>	Yam

Abbreviations

BMI	Body Mass Index
EEZ	Exclusive Economic Zone
HRH	Her Royal Highness
MAFF	Ministry of Agriculture, Forestry, Food and Fisheries
MAF	MDG Acceleration Framework
MDG	Millennium Development Goals
MOH	Ministry of Health
NCDs	Non-communicable Diseases
STEPS	STEPwise approach to Surveillance
USDA	United States Department of Agriculture
WB	World Bank
WHO	World Health Organisation
WTO	World Trade Organisation



Map 1. The Kingdom of Tonga
 (Source: Destinationworld.com)



Map 2. Tongatapu
(Source: CartoGIS)

1 Introduction

The aim of my research is to investigate the contradictory effects globalisation and development has had on the people of Tonga, in respect to their lifestyles and how they negotiate the relationship between tradition and modernity. I explore the link between shifting away from a traditional way of life and increasing ill health. I focus, in particular, on diabetes, and more generally the cultural understandings of non-communicable diseases and their various treatments. I also look at the “fit” between these understandings and current health promotion.

The prevalence of non-communicable diseases (NCDs) and related complications throughout the Pacific has reached a crisis level that demands global attention. According to the International Diabetes Federation (2014) the western Pacific region has the highest amount of people with diabetes in the world. In Tonga alone, the proportion of the population with type II diabetes has more than doubled from 16.4% in 2004 to 34.4% in 2012. Rates of obesity remain high at over 60% and hypertension and cholesterol levels sit at almost 30% and 50% respectively (WHO 2012a; WHO 2014). It is evident that the impact of colonisation, globalisation and development on Pacific countries - that were essentially self-sufficient before European contact – have resulted in these nations becoming dependent on developed countries (Hughes and Lawrence 2005).

Modernisation, globalisation and capitalist notions have had a significant impact on Tongan culture, class structures and political systems. Roseberry (1988) argues (following Mintz 1985) that changes in consumption and diet are linked with class structure, work and eating habits. There is prestige attached to imported or foreign goods and as such, one’s status and grandeur in Tonga can be exhibited through the consumption of imported goods regardless of rank. There is a competitive undertone within Tongan culture that Hughes and Lawrence (2005) attribute to contact with Europeans who not only brought infectious diseases, but also new forms of competition and rivalry. This competitive aspect is evident in Tonga, particularly through consumption practices. There is a desire for Tongans to exhibit their status through the commodities they buy such as cars, houses, technical gadgets and food. The bigger the house or car, the higher one’s status. It is an outward expression of

one's wealth (regardless of whether the car is roadworthy or not). In the past this was expressed through the number of pigs one had or the crops one produced. Modernisation and development have brought with it the improvement of technologies that have resulted in a mass movement of people and goods around the world. As such, new ideas and innovative techniques and products find their way back to the islands where ideas of the past are challenged. In the past only the royal family and nobles were able to participate in such travel, sending their children to be educated overseas, enjoying vacations and so on. Tongans take their cues from the royal family and other elites on how to behave and it also influences their consumption behaviour. Consequently, globalisation has meant that these luxuries are now possible for commoners to indulge in. Now everyone, if financially able, can go overseas and work, study or holiday. They bring back with them new ideas about politics, economics, cooking and new tastes both in fashion and food. Besnier (2009; 2011) refers to this phenomenon as *conspicuous consumption*.

Hughes and Lawrence (2005) identified urbanisation, dietary change, low population physical activity levels, lack of government policy, food dependence and aid, and acceptance and/or belief that foreign goods and services are superior, as the major factors that correlated to recent adverse health outcomes. Urbanisation has likely been a major contributor to changes in lifestyle and to some degree, culture. On Tongatapu, urbanisation is evident particularly in the capital, Nuku'alofa. It is expected by my research participants and others (Colagiuri, et al. 2002; Foliaki and Pearce 2003; Hughes and Lawrence 2005; Tin, et al. 2014) that less urbanised areas such as outer islands still retain most of their subsistence way of life, as access to imported food is not as easy. In Vanuatu a survey carried out by Carlot-Tary, et al. (2000) found a difference in the health of those who lived in rural areas as opposed to urban. Those in rural areas were less likely to be obese than their counterparts (Hughes and Lawrence 2005). In Tonga, from my own participation in both diasporic and local Tongan life worlds, it is evident that Tongans living on the islands further out have retained a subsistence way of life and are thus healthier.

Traditionally, like other Pacific islands, Tongans lived a subsistence lifestyle, producing what they needed to survive with some surplus to contribute to ceremonial

events (Campbell 2001). These traditional foods included, taro, breadfruit, tapioca, giant taro, octopus, goat, fish, horse, hibiscus leaf, local chicken, shellfish, taro greens and cabbage (Evans, et al. 2003) Over the years there has been a shift from this subsistence way of life to a more demanding cash economy. However, the former is still important, just not as predominant. Tongans are constantly trying to balance a capitalist and traditional economy to meet not only social obligations but also to pay for school fees, uniforms, and bills. Engaging in multiple modes of production is one way that Tongans can cope with these demands. While it is important to make money it is just as important to maintain social relationships and in order to do that family members need to fulfil these obligations by contributing financially or through other marketable commodities such as fine mats and tapa. These ceremonial valuables remain important culturally but have also become commodified and are an important source of income (Addo 2013; Besnier 2011). This highlights also the agency Tongans have to take capitalist notions and reshape it to fit their needs.

The contemporary focus is predominantly on being able to make money and contribute to the global market in some way. For example, switching to cash crops, moving to urban areas or overseas for wage labour and so on. This shift has also seen an increase in imported food to Tonga, particularly from Australia and New Zealand. However, the food that arrives is typically less nutritious, higher in fat and has been found to be a leading cause of the increase in obesity and non-communicable disease in Tonga (WHO 2003). For example, the nutritionally low meat flaps or sheep bellies that are fifty percent fat. Gewertz and Errington explain how this ‘delicacy’ in the islands is used as dog food in the countries that produce it and send it to the islands, “For the former, [New Zealanders and Australians] flaps, which contain less than fifty percent lean meat, are visibly too fatty to seem appealing or healthful. For the latter, [Pacific Islanders] flaps are too cheap and plentiful to be passed over” (2010:12-13). Evans, et al. (2003; 2001) found that the increased consumption and reliance on imported food is not necessarily a result of a lack of knowledge or education in regards to nutritional value, but more likely to be determined by economic constraints. Imported food tends to be cheaper and easier to obtain than traditional food sources. This has been described as a kind of ‘food poverty’, which is

defined by WHO as “the inability to obtain healthy affordable food” (2012b:12) and there is a significant link between ‘food poverty’ and obesity. Thus, I argue that consumption practices are not just status driven, but also necessitated by economics and constrained by time. Working a waged job from nine to five does not give people much time for growing, gathering or hunting their own food. Instead, the lure of being able to buy food and quickly prepare food is increasing popularity. Unfortunately, the nutritional value of this food tends to be lacking.

An important aspect that must be looked at in conjunction with all other areas of concern is the cultural importance placed on food and its role within society. In Tonga there is a particular understanding of diet, exercise and health. Wright and Breitenbach (1994), for instance, studied the ways in which Tongans living in America could live healthier lifestyles while keeping within their traditional constructs in relation to food and the prestige that is attached to it. Food is a symbol of wealth and weight is seen as strength, so rather than health education promoting the idea of ‘losing weight’ they suggest a more constructive message would be promoting ‘losing fat’ as a way to feel more energised. Young-Leslie also highlights the strong connection between food and social relations; as well as food being a reflection of status, “A large body potentially signifies sacred and chiefly connections” (2004:404). Women are typically larger than men because they embody “familial prestige and demonstrate social status through consumption of food” (Young-Leslie 2004:404). Their duty as women usually entails that they sit. Whereas men do more labour intensive jobs where energy and calories are used up more. Thus, obesity in men was usually less predominant. However, the shift to urbanisation and waged labour has seen a decrease in the physical activity of men and an increase in obesity. This is due to the typically sedentary nature of urbanised jobs, having less time to work in the bush and being in a work environment where getting a meal most likely consists of grabbing something quick (and unhealthy) from the shop.

It has been argued by many researchers (see for example Evans, et al 2001; 2003; Treagus 2010; Foliaki & Pearce 2003; Hughes and Lawrence 2005; Snowdon and Thow 2013) that in order for the adverse effects of imported food to be mitigated, there needs to be an introduction of regulations that ban the import of unhealthy foods

such as meat flaps. In 2000, Fiji banned the import of flaps under the Trading Standards Act and while the Ministry of Agriculture, Forestry, Food and Fisheries (MAFFF), representatives from the Ministry of Health (MOH) and the members of parliament I spoke to, would like to see Tonga take the same stance against mutton flaps, there is a concern that doing so could negatively affect relations with New Zealand, one of Tonga's major aid donors. Having accurate labels on food that explicitly state what each product contains and the nutritional value therein is something that only recently has been addressed in Tonga for many imports. At the end of 2014, a Food Standards Bill that ensures food is fit for human consumption, prepared in sanitary conditions and without misleading labels, was passed in Tonga, the first of its kind (Fonua 2015). This legislation is likely to instigate more control of the kind of imports coming into Tonga and the ability of officials to mitigate the number of nutritionally deficient foods entering the island.

Given the alarming increase in NCDs, it is crucial to address the cultural concepts of health and health care already in existence in any particular society. In Tonga, sickness can be divided into two types; *Mahaki faka-Tonga* (Tongan sickness) and *Mahaki faka-palagi* (Western sickness). Poltorak (2010) and Wright and Breitenbach (1994) explain that Tongans see sickness as being associated with bad luck, *mala*, and good health with *manu*, good luck and success. My own field research in Tonga suggests that if someone is ill it is often thought that they have done something bad to offend the God or the spirits, *tevolo*. This is one reason why Tongans do not pay much attention to prevention healthcare because it is perceived that one's destiny is in the hand of God. Thus, if one falls ill it is seen as a result of having done something bad. Therefore, for some people, Western therapies can be seen as an inefficient method for treating *mahaki faka-Tonga* and it is thought that only a healer will suffice. The efficacy of a healer has changed over time and they are not used as often as they once were. However, the natural remedies, and to an extent some healers themselves, still give peace of mind to those who fall ill. Where access to hospitals is limited, the role of the traditional healer remains important to the village and its people. Healers can provide the necessary skills and knowledge to put at ease the family of those who are ill.

Poltorak's (2010) extensive work on healers and their powers indicates that healers typically hold a Christian ethic and are perceived as mere instruments as their power comes through God. Healing knowledge is kept, and passed down through generations, within a particular nuclear family. Such knowledge is thus highly family specific. Therefore, it is common to find healers that have very different remedies and solutions for ailments. However, more recent non-communicable diseases such as diabetes do not fall into a clear-cut category of *mahaki faka-Tonga* or *mahaki faka-palagi*. As a result, a wound that is diabetes related may be treated traditionally because the symptoms of diabetes are largely unknown to Tongans.

This thesis is based on the premise that all aspects of Tongan life need to be considered when looking at the extent to which changes in Tongan culture have had an impact on lifestyle. Thus I discuss political, economic, cultural, and health landscapes in relation to the myriad of changes that have occurred in recent decades. In the short span of the 11 years between the two trips I took to Tonga, rapid change has occurred. In 2003 I went to Tonga for the first time (that I could remember) with my parents, two brothers and my sister. I had been waiting for this trip for a long time and had decided that the perfect way to celebrate turning twenty-one would be a trip to Tonga. We stayed in Tonga for ten days and visited family in Talafo'ou and 'Eua. I was working in Seoul, South Korea at this time and during my stay I was amazed that I experienced more of a culture shock in Tonga than I had in South Korea. This trip made me realise that I wanted to learn more about where my mother comes from and gain the cultural knowledge that I was lacking. Also, the many visitors my family have had over the years from Tonga. In particular, my aunty from 'Eua who came to get treatment for diabetes, peaked my interest further. For my masters research I undertook ethnographic fieldwork for a month in Talafo'ou, 'Eua and Nuku'alofa. This included participant observation and interviews with a variety of participants from noble to prime minister to commoner.

The following chapter goes into more detail on the methods I used during my fieldwork and also outlines some of the challenges faced. Chapter three gives a description of the three sites in which I conducted fieldwork and provides profiles of my research participants. This gives some background on my participants and assists

the reader in understanding some of the behaviours and observations participants make in relation to the broader context of the thesis.

The social and political landscapes chapter discusses traditional elements and highlights some of the changes that have occurred within these landscapes. These are discussed further and in more depth in the following chapters. I discuss the geography of Tonga and how the threat of climate change has meant having to find alternative production methods and the impact modernisation has had on the importance of agriculture in Tonga. The notion of modernisation and globalisation threads through this chapter as I highlight the ways in which these have had an impact on the economy, political, social and cultural structures and the health of Tongans. It is in this chapter where it becomes evident that the traditional way of life has subsided and the increasing pressure to engage in capitalist activities while also upholding traditional obligations is having an adverse effect on Tongan lifestyles and health.

Chapter five discusses in more depth the traditional culture of Tonga and illustrates the religious practices of Tonga before Christianity. Describing this helps to illustrate the changes that have occurred since the introduction of Christianity and how that has had an impact on Tongan lifestyles and culture. I also show how traces of the old religion are still found today. The strong link Tongans have to the spiritual world, for example, its influence on how they treat certain ailments, and how important spirits are to the social harmony of society, all illustrate the persistence of pre-contact Tongan beliefs.

The chapter on Lifestyle draws on the discussions in previous chapters to emphasise the marked changes in Tongan lifestyles. It examines the socio-cultural meaning associated with food and its role in maintaining social relationships and, in turn, good health. How globalisation and modernisation has shaped the consumption behaviours of Tongans is also examined. The concept of health is explored and highlights the disconnection between health messages and culture. The ways in which Tongans cope with the pressures of modernisation is discussed in reference to an underlying anxiety in which people use spirits to help transcend the disparity between tradition and modernity.

Finally, the previous chapter leads into the chapter on Health and the problems that have arisen as a result of the various changes. I briefly look at the kind of illnesses Tongans were faced with centuries ago but focus primarily on the rising cases of non-communicable diseases (NCDs). I examine the issues that surround these illnesses and how Tongans perceive them and the kind of treatment available to them. I also discuss the disconnection between the messages that are disseminated on living a healthy life and the complexities of Tongan culture that arise in contention with this.

2 Method

For anthropologists the research methodology of ethnographic fieldwork is aligned to the objective of reproducing, as far as possible, a holistic understanding of a society. In this synopsis, a society or culture is understood as a whole, as an integrated system, and the most effective way of achieving this understanding is through ethnographic fieldwork. This is the detailed description of social life based on first hand observations over a long period of time with the aim of producing an in-depth, holistic and longitudinal study of one group (Okely 2012). It includes the cornerstone of anthropological methodology, participant observation, which requires ethnographers to completely immerse themselves in the culture they are studying and to take meticulous notes of everything they observe (Fife 2005). Adopting this method allowed me to gain a better insight into the everyday actions and behaviours of my family members; preparing meals, eating, walking or driving to work or school and so on. By taking part I was able to observe, take in what was going on and learn through not only doing, but also watching and listening. As Fontein observes: “the emphasis on participation and experience also allows for eliciting other kinds of perceptual and embodied knowledge” (2013:75). Along with participant observation, I also conducted semi-structured and unstructured interviews in New Zealand and in Tonga, supplementing my findings with secondary sources. In writing this ethnography I have analysed the data from all sources and discussed the themes weaving my experiences and stories throughout to illustrate my findings in a descriptive and engaging manner.

2.1 Participant observation

Participant observation is a qualitative research method wherein the researcher *is* the primary tool and the research emphasises the culture being entered. Understanding culture as the context of research makes it a valid qualitative approach to research (Bryman 2012; Jorgensen 1989; LeCompte and Schensul 1999). As stated by Okley, “knowledge can be acquired through the total experience, not primarily through the role of detached questioner” (2012:80) and as a participant observer I will be able to understand and make meaningful observations of my surroundings.

Therefore, the risk of inaccurate observation is greatly reduced when one participates because as Jorgensen explains “the researcher gains through subjective involvement direct access to what people think, do, and feel from multiple perspectives” (1989:56). Furthermore, participating allows for family to go about their normal routine and the behaviours of participants are more likely to be ‘natural’ than ‘socially acceptable’ (Jorgensen 1989; Okely 2012; Spradley 1980).

Thus, at the beginning of the year I spent one month in Tonga where my time was split between three different locations. ‘Eua, one of the main outer islands, closest to the main island of Tongatapu, Nuku’alofa, the capital, and for the majority of my stay I resided in a village forty minutes by car from the capital in Talafo’ou (see Map 2.2). As a participant observer, I recorded day-to-day interactions, observations, and informal conversations by writing field notes on a daily basis in a notebook and also in an online blog. The blog was created in conjunction with research participants and was privately accessed by those who had permission to use it. It was a way of disseminating the information to participants and gaining feedback. Using a small notebook to note things down as they happened meant I was able to write points of interest in a discrete manner and write in more detail later that night. Often, the online blog was my way of writing in more detail about the daily happenings.

Monday saw Aunty start working on her weaving again. So, she goes next door to the wee house there that is all part of Lama's land and the house is used for fai kava and weaving. A couple of ladies come everyday to help her make a 3oft mat made from Lo'akau. It's quite the process. You boil the leaves first, then take them out to the sea and tie them to these sticks that are out in the middle of the beach, for 6 or 7 days (I was wondering why there were random sticks out in the beach). Then you dry them in the sun, sort them out and roll them up ready to be sliced into thinner bits to be weaved.



She adds another piece by just putting it down on top of the shorter one and weaving it in. Very clever!



It usually takes about a month to do one mat and 2 weeks to decorate it. They sell it in NZ for around \$1500 pa'anga.



This is the dried leaf and then Aunty cuts it with a box knife thingy.

Figure 2.1. Extract from online blog

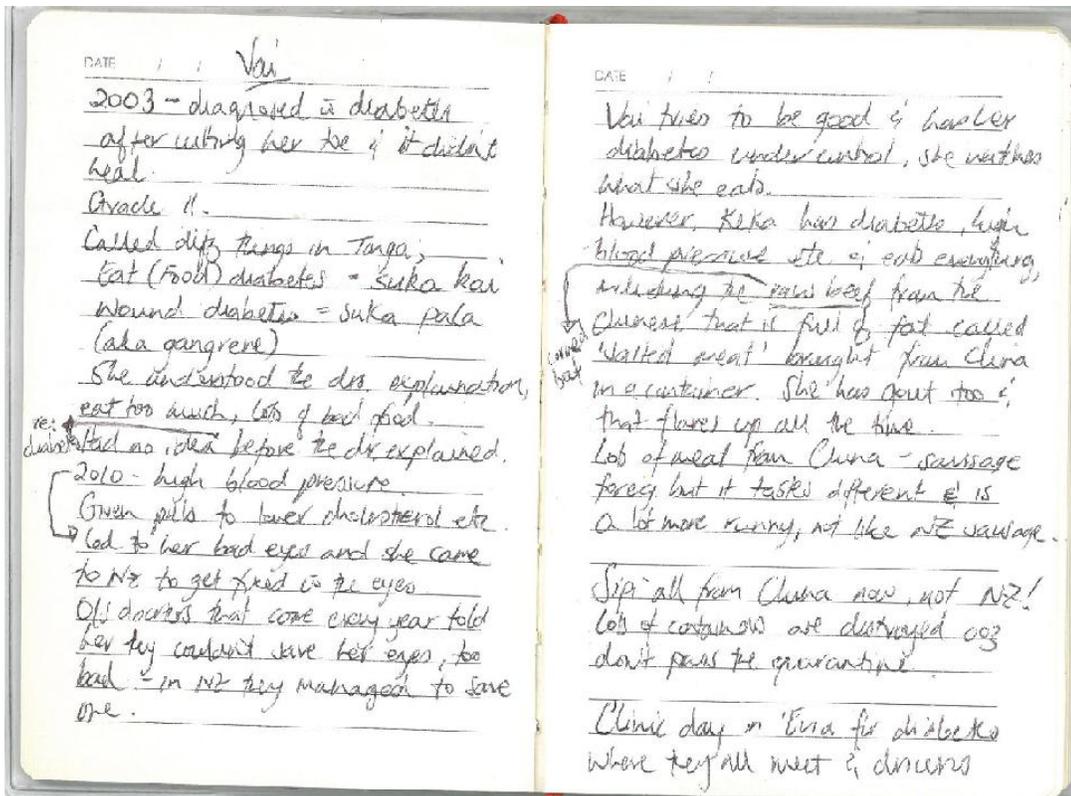


Figure 2.2. Field notes in 'Eua talking to Vai about diabetes

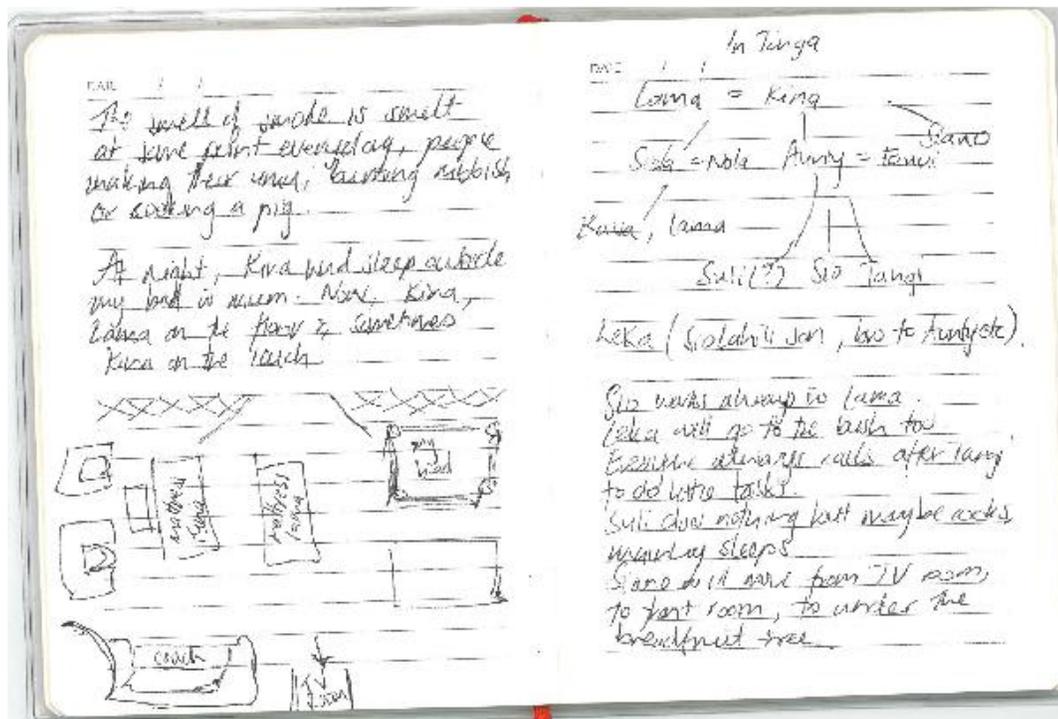


Figure 2.3. Field notes describing the house in Talafu'ou and kinship relations

It was a challenge to balance the dual role I had as researcher and as a family member. As such, I would often have to remind myself that I was there to do research and to see everything as important enough to note down. Jorgensen (1989) emphasises the importance of writing everything down, as one's memory is rarely able to remember every detail. Furthermore, as Okely explains, "the anthropologist becomes the collector and a walking archive, with ever unfolding resources for interpretation" (2012:25). Writing field notes helped to highlight any themes that needed to be looked at in greater depth in my analysis and to raise important questions that may have needed to be addressed (Bryman 2012; Fontein 2013). A vital component of my participation was the ability to understand Tongan. As I knew only the basics of Tongan I enlisted the help of my mother as my translator. It was important to clarify with our family that all information would remain confidential and as such a confidentiality agreement was included in my ethics application to the University of Waikato and Tonga, and was presented to the participants (see Appendix A and D). Each participant had the option to remain anonymous but all participants gave permission for the use of their names in the thesis. Further, I intend to send a summarised report to family and the Ministry of Health in Tonga that highlights the major themes I discuss in the research.

I was interested in the experiences and behaviours toward food, food preparation and consumption of those I stayed with. Their attitudes toward health and what their understandings of health are, and their thoughts on the effects modernity has had on Tongan culture, if any. Through participant observation I was able to gain a better understanding of what I observed and it helped with identifying questions that I was able to ask later in my semi-structured and unstructured interviews with elders, health professionals, and members of parliament.

2.2 Semi-structured and unstructured interviews:

I included semi and unstructured interviews because they are more like conversations and I had more flexibility to adjust the direction of the discussion to other areas of interest or significance as they presented themselves from the interviewee's responses. For both types of interviews the questions were open-ended

which allowed the participant to answer as they please, at a pace that suited them and in as much detail as they wanted. I chose to interview three Tongan academic professionals in New Zealand before conducting my fieldwork in order to gain some insight into their knowledge of Tonga and their thoughts on the changing culture and its impact on Tongan lifestyles. The following topics were used as a guide to ensure the necessary themes were discussed:

- Changes in Tongan culture (perceived to be positive/negative)
- Changes in lifestyle - diet, exercise, preparation of food
- Traditional Tongan and modern western methods of healthcare
- Cultural knowledge of diabetes
- Access to traditional customary healers and medicines
- Access to western-styled medical facilities, staff and medicine

A common thread among all three interviews was the fact that modernisation and globalisation have had an impact on the Tongan culture. Particularly, the migration of Tongan people. It was argued that migration was a contributing factor to the gradual unravelling of the social structure in Tonga. According to Koloamatangi (interview with author, October 29, 2014), this is because underpinning the social structure is family and family dynamics have changed. It is no longer a close social unit in one place but instead transnational. There is a disconnection that, as observed by these three participants, has resulted in an increase in domestic violence, suicides and such. Furthermore, as pointed out by Koloamatangi, language is an important feature of any culture and Tongan values are tied up with its language. The increasing diaspora overseas has meant that many children are growing up without knowing how to speak Tongan. As such, they are unable to truly understand Tongan values such as love, respect and reciprocity. Koloamatangi goes on to explain that the Tongan language has specific vocabulary for these ideals and because the next generation is missing this vital part of their culture there is a perceived erosion in respect and fulfilling familial duties. Vaka (interview with author, October 29, 2014) also expressed his concern over the shift in Tonga from being a collective society to one that is more individualistic as a result, he felt, of globalisation and modernisation.

Changes in lifestyle have led to a dependency for those in Tonga on the diaspora. It was pointed out by Koloamatangi that some people await remittances from family overseas rather than cultivate crops. Further, these three suggested that a lot of people they knew came to New Zealand to make money, which was then used to buy cars. This was a reflection, as they saw it, of the change in Tongan priorities, such that in the past everyone came to New Zealand, typically, for education only. Now, while education is still considered a priority, so is being able to import a car. This perpetuates the competitive behaviour of the Tongan people. Given the hierarchal nature of Tongan society, it is not surprising that food is also ranked. According to Koloamatangi, everything is ranked, food, clothes, plants and goods. There are chiefly mats and commoner mats, the Heilala plant is the chiefliest plant and the monarch is symbolically referred to as Heilala. The pig is the most prestigious food, the *toho* (back of the pig) the chiefliest part. There is chiefly fish, in particular the head of the fish. And, the *kahokaho* yam is the most prestigious root crop. According to all three interviewees, western food did not seem to be as highly ranked.

In regards to health, there was a general consensus that ailments that are wholly traditional are treated in a traditional way. All other illnesses were typically treated by western methods, particularly if something needed to be removed from the body. Both methods have their limits. In Auckland there was a kind of revival of the traditional Tongan medicine among Tongan communities, almost like a fashion trend, and more traditional Tongan medicine was being sold in Auckland shops. Perhaps this is a way that the diaspora can re-establish a connection with the island culture. A point of difference between the interviewees was the importance of traditional healers in Tonga. While some thought they were still significant, others believed it to be a 'dying' art. It was, however, agreed that the knowledge of healers rarely left the family unit. As for the knowledge of diabetes in Tonga, it seemed that their major concern was the health messages were not getting through. One interviewee recalls seeing a health promoter talking to a village in Tonga and using slides and lecture notes. The message was not received well and, according to my participant, this was because of how it was disseminated. Messages need to be culturally relevant and meaningful to people. They need to be delivered in a way which captures and

persuades people to live healthier lives (Malakai Koloamatangi, Timotei Vaioleti, Sione Vaka, interview with author, 29 October, 2014),

It was pointed out by Vaka that the formal health system in New Zealand and Tonga are very lineal. Tonga, however, is a collective society, therefore it is cyclical. Thus, traditional healers meet the Tongan collective circular needs in a more culturally appropriate way than the more lineal, individual system of western medicine. Vaka explains that in a hospital the circular need is 1) biological 2) sociological and 3) spiritual. However, in Tongan traditional practices it is reversed and the spiritual is prioritised over sociological and biological needs. Health is about relationships with people and the supernatural world. If someone gets sick there is a disruption to those relationships and this is when traditional healers can help in the mending of that relationship. Vaka emphasised this point:

If you ask someone with diabetes if they're healthy and they're surrounded by family, they'll say they're healthy. If you then ask if they have diabetes they'll say yes, but they are healthy. As long as they fulfil their obligations to society and family then they are healthy and happy. Trying to fix indigenous people through a western lens is rarely successful. (Interview with author, October 29, 2014).

Once I was in Tonga I conducted a total of seven interviews. I spoke with an esteemed member of the community, *Ma'u Kakala*, a Ministry of Health (MOH) representative from the Non-Communicable Diseases (NCDs) Unit, a CARITAS representative, a previous employee at the Ministry of Agriculture, Forestry, Food and Fisheries (MAFFF), a well-known noble, and two government representatives; the Prime Minister and Minister of Police. Throughout these interviews I used an interview schedule similar to the one I used with my New Zealand participants, but I allowed for more divergence as some participants had a lot of interesting points that I had not considered. *Ma'u Kakala* was my key informant and because of his title as a Talking Chief and *Nima Tapu* (Royal Undertaker), I was able to gain access to participants such as the members of parliament, the noble and the Ministry of Health representative without too much delay. Having a key informant with the cultural knowledge to ensure I respected the values and traditions of Tonga that I was not so

accustomed to, was invaluable in ensuring I spoke in the correct manner and wore the correct attire when in the presence of a noble.

I had been to Tonga eleven years before and had remembered that even though I had travelled and lived in various countries like South Korea, Indonesia, Italy, and Tunisia, I had never experienced the same kind of culture shock I did when stepping off the plane in Tonga. This time round, I felt I was much better prepared for it having experienced Tonga first hand rather than fantasise about it from television adverts or drawing comparisons to the holidays cousins went on to Samoa. Having had that reality check I was able to cope much better, a key strategy to coping according to DeWalt and DeWalt (2011), along with having a family member or companion in the field with you.

Given more time, I would have liked to have spent longer on the main island but also to have reached Vava'u, Ha'apai and Niua to gain even more information on the impacts that have occurred on those main islands. The kind of descriptive data I have acquired could not have been possible through surveys, or interviews alone. Ethnography is all about discovery. It not only incorporates interviews and observation but also requires the five senses to engage and take in everything. As the researcher, I was the primary tool of data collection. My job was to discover what people do and their reasons for doing it without first analysing these activities based on my own experience or knowledge. People's constructs of their world are highly variable and locally specific and it is this understanding of culture as the context of research, which has resulted in ethnography being a viable alternative scientific approach to research (LeCompte and Schensul 1999).

3 Profiles

During my month of fieldwork in Tonga, I stayed with family in ‘Eua, Talafo’ou and Nuku’alofa. I undertook participant observation within these settings where I participated in everyday activities and held informal conversations. In addition to this, I conducted informal interviews with three participants in New Zealand in the months leading up to my departure to Tonga. I met Dr Vaioleti in Hamilton, and Dr Koloamatangi and Dr Vaka on campus at Massey University in Albany. While in Tonga, I interviewed a further seven participants. I met with the Prime Minister and the Minister of Police at the latter’s residence and for the remaining interviews I met with the participants at their place of work. Using a multi-faceted approach to gathering my data allowed me to gain the rich, descriptive details and varying perspectives on the topics I was interested in exploring. The following profiles give some background information on the participants, their dwellings and expertise. Having this information helps to see more clearly their perspectives and gain a better understanding of how they interpret their lifeworld and the impacts globalisation and modernisation has had on them.

3.1 ‘Eua

In ‘Eua I stayed with my uncle, Stan (fifty-six years old) and his wife, Matavai (fifty-seven years old). They live inland, fifteen minutes from the port, in an open plan two-bedroom house. As you walk in, you enter a large open lounge area with various sofas and armchairs along the walls. Straight ahead is the kitchen, which takes you outside to the back porch. Another kitchen bench is outside and here is where most of the cooking and food preparation takes place. There is a very large concrete water tank that sits out the back and behind that is a pigpen. There is a small simple shed in the middle of the yard for the *umu* and a couple of meters to the right of that is another shed for storage and cooking on an open fire. A number of pigs of various sizes, chickens and dogs roam the back yard.

In their household at the time, they had their adopted son Tevita who is ten years old and their nephew from New Zealand, Afa, who is eight years old, staying with them during the school holidays. Their elder adopted daughter, Ane (twenty-one

years old) had recently left the family home and moved in with her new husband in a house roughly ten minutes walking distance. Stan and Matavai have around a dozen pigs and four piglets that they kept separate from the rest of the group. Until they are big enough not to get hurt or injured, they will remain in the ‘nursery’. There are five to six chickens that roam around and various stray dogs and puppies. Everyday Ane and her husband come over to the house and clean and get lunch or dinner prepared.

Stan and Matavai manage and run a small family sawmill business, ‘Eua Timber Ltd.’, set up by my parents (see Figure 3.1). During peak times they employ up to five workers and a number of family members help out but are paid in kind or through gifts of food or cigarettes. The sawmill was quiet when I visited and so it meant that Stan and the other men of the family could tend to their garden. It is a family garden, which is situated approximately four kilometres from the house and deep in the bush. Stanley and his family, as well as his brother’s family and their uncle, are responsible for the garden and while I was there, everyone was helping out with tending to the Kumara (see Figure 3.2). Whenever anyone needs food, they will typically go and harvest it themselves (or possibly with some help) and will get enough not only for their own family but also to gift to others.



Figure 3.1. The sawmill in 'Eua
(Jacinta Forde)



Figure 3.2. Kumara and the garden in 'Eua
(Jacinta Forde)

Matavai was diagnosed with Diabetes in 2003 and decided to start a walking group with a couple of other women from the village around the same time. Sadly, the group became smaller as sickness overtook most of the women in the group. This reality led to Stan and Matavai asking for some help from their extended family and in 2012 she came to New Zealand to receive treatment for her ailing eyesight and to gain some further information and possible medication. Matavai stayed in New Zealand for nine months and since being back in Tonga she has tried to maintain a healthier lifestyle, but admits to often ‘falling off the wagon’. She has lost her sight in one eye but because of the treatment she received, her other eye was able to be saved. Nowadays, despite having lost the vision in one eye, Matavai spends most of her time at home, sitting and helping Ane make crafts, household items or items of clothes such as the *kiekie* (see Figure 3.3) or the very useful *taufale* (indoor/outdoor ‘broom’).



Figure 3.3. Taovala (worn by males) kiekie (worn by females)
(Jacinta Forde)

3.2 Talafo'ou

Talafo'ou is situated twenty-five kilometres from the capital, southwest of the archipelago. For the majority of my fieldwork I stayed with my mother's uncle Lama and his extended family. The house is roughly two hundred to three hundred meters from the beach, inland slightly and surrounded by a low-lying hedge at the front and trees around the rest of the perimeter. The house is a European style dwelling, made of concrete with a lounge, kitchen and four small bedrooms flanking a short hallway. Yet the day to day living has Tongified the structure and the common room of the house is what used to be the porch but now has a tarpaulin around the structure as the walls (see Figure 3.4). This makes the room the coolest one during hot days. In the back, off the kitchen, is a semi-outhouse with toilet and shower and next to that is a structure resembling a back porch where most of the cooking takes place. The kitchen is used more for the preparation of food and for cleaning the dishes afterwards. The back yard can be entered from the outdoors kitchen and here some pigs and chickens roam. There is also a spot for pig on a spit and next to that is the *umu*. As you walk back around the side of the house to the front, there is a large water tank and rainwater is collected from the spouting of the house and into the tank, filtered by a common household sieve (see Figure 3.5). Just in front and to the side of the water tank is another small rickety type dwelling made of wood, which resembles a sleep

out where the young adult men sleep. Just next to the sleep out is a low lying hedge and a small walkway that takes you to a piece of land next door with a large shed, the front of which is completely open and makeshift walls around the sides and back. This was built by Lama for *Fai Kava* and is also used by Anti for her *lālanga* group when they weave (see Figure 3.6).



Figure 3.4. *Left*, front of the house in Talafo'ou; *right*, sketch of the inside porch living area (Jacinta Forde)



Figure 3.5. Water well with filter (Jacinta Forde)



Figure 3.6. Kava house in Talafo'ou
(Jacinta Forde)

Lama is the head of the household with his wife, Tangkina (Kina). They have seven children, their youngest daughter, Anti, and their youngest son Felisiano, live with them. Felisiano has Down syndrome and can often be found sitting alongside his mother or in the lounge relaxing or watching TV. Once a month he goes to a programme for people with disability and spends the day in the city. He is a very large young man, short, round and with short clipped hair and a huge smile. He usually only wears knee length shorts. He always has his *ii* (fan) with him to fan away the heat, or if sitting with his mother, will fan her to cool her down. His elder sister Anti is in her forties and has long straight dark hair that she wears up in a twisted bun on top of her head, held with a *kalosipani* (a flower) clip. She is a large woman who wears a singlet and *tupenu* around the house. When she goes into town she will wear a long flowing skirt and blouse or a maxi dress. Living with her are her three sons from an earlier marriage and her recent husband, Fa'au. Anti's oldest son is aspiring to be a mechanic, a large young man, he would often leave household jobs for his brothers to take care of, unless really pushed to help. Anti's second son, Siaola (Jnr) helps Lama with everything, he is his right hand man. Siaola Jnr. is tall and slim, athletically built in comparison with his older brother. He is in his final year of high school but in his spare time he helps Lama in the garden or by doing any and all

the household chores for him. The youngest of the boys, Tangi, is still at middle school and is similar in build to Siaola. He is the life of the household, cheeky and mischievous. However, he is also the one that gets called on to help with many minor house chores and to help out his Grandmother whenever she needs things. While I was there, their grandson, Leka, from Australia was staying for a few months to help out his grandparents. Leka was born in Tonga and raised for the most part by Lama and Kina. Towards the end of my stay, another grandson came from America. He was finishing his theology education at the Wesleyan School of Theology.

Anti's new husband, Fa'aui, works for the Ministry of Education Examination Unit and every morning takes Tangi and his cousin, Kava, to school on his way to work. They leave the house after eight in the morning and will usually leave the city around 4:30pm. During exam time, Fa'aui often does overtime and is not home till after eight o'clock.

Lama is eighty at the end of year and Kina is seventy-three. Lama is a fit man who continues to use his bike to get around the village and to take him to the bush. It takes Lama around twenty to thirty minutes to bike from home to the bush (and around ten minutes to drive there). He goes every day, except Sunday, to work. He dresses simply with a shirt, often unbuttoned, and cream coloured trousers that have seen better days and are now marked and stained with dirt, oil, and hard work. He is not a big man but he has a quiet confidence and demeanour about him that demands respect. Kina is a large lady; she has a raspy voice that can be heard around the house. For most of the day, Kina lies on the floor of the front porch and will cry out, usually to Tangi, whenever she needs something. She mends clothes, washes clothes, and makes *ii's* on the floor (see Figure 3.7). She is an expert at mat weaving and has passed on her skills to Anti. Kina rarely partakes in weaving nowadays, but she will give advice if it is asked for. She also makes her own clothes, skirts mostly and blouses. On extremely hot days, she may just wear a skirt that could be pulled up and double as a dress if need be.



Figure 3.7. *Left*, Kina doing the washing; *right*, making an ii (Jacinta Forde)

Lama's grandfather was *Ma'u Matapule* (talking chief and *nima tapu* - royal undertaker) for the king, and when he passed, this title was passed onto Lama. However, Lama did not want the title and instead passed it on to his second eldest son, Siaola (the youngest male to have received the title; *Ma'u Kakala*). Siaola lives less than two kilometres from his family home. He was sent to New Zealand as a teenager and studied at St Thomas' Canterbury College. He is married to Vinola and has four children, two of whom are living and studying in New Zealand. Siaola is a tall man, solidly built with a 'kava belly' and he is often dressed in shorts (to the knees) and a button-up short sleeve shirt or t-shirt. For the most part, most of the men I saw in the village wore shorts and a t-shirt, singlet or button-up shirt. They would adorn *tupene* (traditional attire for men) for more semi-formal/formal occasions, for school, church, a village meeting or any situation where you would have to look respectable. Given Siaola's *matapule* title, he is a respected member of the Tongan community and known as *Ma'u Kakala*. Thus, because of his position in society I chose to have Siaola as my key informant during my time in Tonga. A role he enjoyed because not only was he able to help me gain access to important people, he

was able to discuss his views on the impacts of modernisation, in particular the effect the economy has on Tongans capabilities to eat better and live healthier lives. A theme that others also agreed with and is discussed in later chapters.

3.3 Nuku'alofa

In the capital I stayed with my great Aunty Tupou and her granddaughter who I have always known as my cousin, Lisa. Staying with Tupou and Lisa was a stark contrast to my stay in 'Eua and Talafo'ou. They live on the top floor of a new apartment building, large, modern and in the centre of the city. The apartment has all the modern amenities including a working fridge. From the balcony you look down at the Talamahu market and the bustling cars and people lining the streets. When you look out across the busy streets you can see the sea and the port where the large cruise liners dock.

Lisa is a young woman in her early thirties working for the Her Royal Highness (HRH), Princess Sālote Mafile'o Pilolevu Tuita. Lisa was born in New Zealand and has lived most of her life in Auckland. Since being appointed to her new position with HRH, she lives between Tonga and New Zealand periodically. She was brought up by her nana who was born in Tonga and later migrated to Auckland, with her *palagi* husband. Tupou is a small lady in stature and size with grey hair pulled back into a loose ponytail, she wears glasses and loose fitting skirts with a blouse. She is a devout Catholic, has a gentle nature and when she talks she can command a room. Tupou is a traditionalist and believes in upholding (most of) the Tongan customs.

3.4 Interview Participants

I was privileged to meet with and discuss the topic of changing culture and its impact on Tongan lifestyles with a variety of people from different social and political stances within the Tongan community in Tonga and New Zealand. For the three academics in New Zealand we discussed changes in Tongan culture and lifestyle and their thoughts on the traditional and western methods of healthcare and how these are perceived by Tongans. The interviews in Tonga were much the same but had more scope to diverge into different avenues.

Interviewees in New Zealand:

Dr Timote Vaioleti is a Senior Lecturer at the Faculty of Education at the University of Waikato. He is a well-respected member of the university and held in high regard by the Waikato University Pacific student cohorts. His research includes adult education, Pacific issues, Pacific education and cultural learning to name a few. In 2012 he became the first Pacific Islander to have been accepted into the International Adult and Continuing Education Hall of Fame.

Dr Malakai Koloamatangi is a Research Fellow and Lecturer at Massey University in Albany. He came to New Zealand with his parents when he was young and is the first in his family to go to university. In 2013 he was appointed as Massey University's Pasifika director and is an advocate for promoting research based on Pacific island values, priorities and ethics. Also, he actively contributes to Australian and New Zealand media particularly on Pacific island issues. Dr Koloamatangi's expertise is in national and international Pasifika development.

Dr Sione Vaka is a Lecturer in Nursing at Massey University. Dr Vaka worked in Tonga and New Zealand as a mental health nurse and he recently completed his PhD on mental health for Tongan people living in New Zealand.

Interviewees in Tonga:

Mele 'Amanaki has a Masters in Food Science and currently works for the Secretary General Public Service Association. Her focus is working for the trade union and workers protection in Tonga. Previously, Mele had worked for ten years at the Ministry of Agriculture, Forestry, Food and Fisheries (MAFFF).

Amelia Maafu is the programme Coordinator for CARITAS. CARITAS is a faith-based organisation that works towards human development at the grassroots level in Tonga. In December 2014, Amelia represented the Pacific at the Climate Change Forum in Peru.

‘Ofa Tukia works for the Tongan Ministry of Health. She is leading the team working at the Non-Communicable Diseases Unit at Vaiola Hospital in Nuku’alofa. Her team’s focus is to promote primary prevention to the general public who are not already diagnosed with an NCD.

Ma’u Kakala (Siaola Tangifua) is a talking chief, the *Nima Tapu* (Royal Undertaker) for the King and a member of the Talafo’ou village council. He is married with four children and an esteemed member of the community.

Lord Vaea is the noble’s number one Representative for Tongatapu. He was previously appointed as the Minister of Internal Affairs. He is the Master of the Royal Household and is well known for his extensive knowledge on Tongan traditions and customs.

Hon. Dr Pohiva Tu’i’onetoa is Tonga’s Minister of Police and was elected to parliament in 2014. He studied in Australia and the United States where he gained his Masters of Business, Doctor of Christian Ministry and Certificate of Civil Law. He has worked for the royal family as the private secretary to His Majesty and for over thirty years he had been the Auditor-General.

Hon. Samiuela ‘Akilisi Pohiva is the Prime Minister of Tonga and the Minister of Education.

At the end of 2014, Akilisi Pohiva was elected as Tonga’s prime minister, the longest serving member of the People’s Representative. In 1987 he was first elected into parliament though had campaigned for democratic change since 1978. He explained in his interview that for nineteen years before working for the Ministry of Education, he taught at a primary school for twelve years and was awarded a scholarship to study at the University of South Pacific in Suva. It was here that he began to lay down his groundwork to raise the awareness of the public to the undemocratic procedures and practices within government. In order to do this, he

along with other like-minded reformists, decided to broadcast a weekly radio programme; *Matalafolaukai* (voice of concern) in 1981. Social, political and economic issues were the major topics of discussion and it was the first time the government had been challenged or criticised publicly for its practices. Consequently, the Tonga Broadcasting Commission was directed by Cabinet to discontinue the programme four years later. A further effect of this action was Pohiva's dismissal as an Acting Senior Inspecting Officer of secondary schools, which led to Pohiva taking the government to court for wrongful dismissal. He won the case. Later in 1986, he started the controversial, radical and critical newspaper, *Kele'a* (conch shell). It was not until the end of 1992 at the Convention on the Constitution and Democracy that the ideas and actions of the reform movement of the last 14 or more years were solidified and recognised as the official beginning of the pro-democracy movement. When Pohiva was elected, it was the first time that the people had chosen their cabinet. Previously, five representatives of the people and nine noble representatives formed the government. Now, fifteen representatives of the people form the government and it can be seen as a government for the people. The aim of pushing for democracy for Pohiva and those who support the movement is for good governance, a government that is accountable, transparent and fair. In 2013 Pohiva's struggle and commitment for democracy was acknowledged by the Parliamentarians for Global Action and he was awarded the Defender of Democracy Award, the first Pacific Islander to ever receive one (Koloamatangi 1999; Akilisi Pohiva, interview with author, January 24, 2015).

4 Social and Political Landscapes

Culture is influenced and affected by various factors. Social and political landscapes are such factors where culture can be moulded, changed and in some cases overridden. The social and political landscapes of Tonga have had a huge impact on the culture today. Thus, it is essential that when looking at the extent of change within culture and how it has impacted Tongan lifestyles, all aspects of Tongan life be taken into account and examined in respect to the people, their culture and lifestyle.

4.1 Geography

Tonga is an archipelago in the South Pacific located in the western region of Polynesia, made up of over 170 islands of which only 45 are inhabited. The three largest island groups are the low-lying Tongatapu group (including 'Eua), the volcanic and coral Ha'apai group and the flat coral islands of the Vava'u group. Further north is the smaller volcanic Niua group. Given the fertile nature of Tongan soil, agriculture is an integral aspect of Tongan livelihoods (Haas 1977; Tonga 2007; Tongan Department of Statistics 2011). In the 2001 Agriculture Census, 64.2% of Tongan households were agriculturally active with 90.5% in the remote Niuas. In 2011, agriculture contributed \$111.4 million pa'anga to the national GDP, the second largest industry after the service industry. Tonga is well known for its squash exports, mainly to Japan, and in the 1990s there was a boom in squash. However, the increasing competition from other countries, higher freight rates, increased necessity and cost of fertilisers and mechanised machinery, resulted in a bust of sorts where the quantity produced and exported plummeted from 23,000 tonnes at its peak to 1,500 tonnes in 2010, with no profit in the first two quarters of 2014 (Besnier 2011; Moorhead 2011; Tongan Department of Statistics 2014). While having suffered some hardship in regards to building up a strong agricultural industry for export, Tonga remains a semi-subsistence nation in which agriculture continues to have a vital role.

The sub-tropical nature of Tonga's climate creates an environment where vegetation such as banana, coconut, mango, squash, root vegetables and sago can thrive (Haas 1977; Tongan Department of Statistics 2014). However, it also means

that Tonga is susceptible to tropical cyclones and hurricanes that can hit the island from time to time and do irrevocable damage to crops and villages. A more recent threat to have an impact on Tongan crops and village life is the effects of global warming. The increasing warm temperatures, and the unpredictable and growing intensity of extreme weather events mean the people of Tonga have to find alternative cultivation methods to ensure their crops can survive. In some cases this includes the use of pesticides, or producing crops that can withstand such extreme weather conditions (Caritas 2014).

Surrounded by 700,000 square kilometres of ocean water, and with an Exclusive Economic Zone (EEZ) of 676,401km² (Bell, et al. 2011), it is surprising that Tonga's fishing industry is not more commercially developed. In the 1980s there was a push for exploitation of deep slope resources, which resulted in economic benefits from exports and foreign revenue (Fisheries Division 2014). Tonga's fisheries can be divided into four broad categories; offshore fishing, deep-water fishing, inshore fisheries and game fishing. Offshore fishing involves fishing outside the 12nm zone but within the EEZ and all boats must be registered and acquire a special licence. As is the case for deep-water fishing also but with the addition of management plans suggesting a limit on the number of licences issued. Tuna and snapper are the predominant catch and "one percent of the tuna catches in the Western Central Pacific comes from Tonga" (Likiliki 2006:11). At the industries peak, there were thirty-three tuna fishing vessels both foreign and local and 44 for snapper. Due to the lack of maintenance, prolonged El Nino conditions, lack of safety measures and the rise in fuel costs, the fleets were cut down to twelve locally owned tuna boats in 2006 and fourteen snapper boats in 2014 with only three active (Fisheries Division 2014; Likiliki 2006). The emphasis on offshore and deep-water fishing was to relieve the pressure of inshore fishing, which was being overfished resulting in depleted stock. For some local fishermen, inshore fishing is their livelihood. And while the government has set up sixteen public enterprises to fish commercially, according to Pulu, "in present- day Tonga, half of the state's businesses cost the Tongan taxpayer more money to operate than what is generated in revenue" (2013:82). Further, with a depleted inshore fishing stock, local fishermen

are unable to access deep sea fishing rights due to government restrictions such as, “specific types of vessels, length and gross tonnage and restrictions on the types and number of manual reels (six) used” (Likiliki 2006:12). This is further compounded by fishers being unable to afford the state fishing license and operation costs (Pulu 2013).

A more recent category of fishing is game fishing, which is proving to be an aspect of the industry that could benefit Tonga’s economy further in conjunction with its tourism industry. Game fishing is essentially targeted at tourists and expatriates in Tonga who partake in annual fishing tournaments and tourist attractions such as whale watching.

Alongside the fishing industries potential to increase economic revenue in Tonga, fisheries have a significant role in Tonga’s cultural world. As Likiliki explains, “Certain fish are used by fishers to present to the king or high ranking nobles. Fish such as tuna (*atu, valu*), long tail snapper (*Palukula lave’itavake*), shark (*anga*), mullet (*fua*) and sea turtle (*fonu*), are regarded as fit for a king (*ika ‘eiki*)” (2006:26). Thus, it is important that the fishing industry is managed well enough that these species are not overfished and disappear, as they are intrinsically tied up with Tongan culture and livelihoods.

4.2 Economy

The economic landscape of Tonga has changed from a subsistence way of life to a more dual kind of economy where subsistence still exists, particularly in the outer islands and more isolated regions. A market economy, however, is generally dominant throughout the archipelago.

The fertile land of Tonga has allowed for a thriving agricultural industry with root crops, copra, yams, plantains for food, pandanus and *kava* growing in abundance, which are all major contributors to Tonga’s overall economy. Copra, squash, pandanus as fine mats and more recently *kava*, contributes in the form of trade or export. Produce such as yams and again pandanus contribute to the ceremonial side of things, particularly with the ‘*inasi* (share) ceremony. The sea is also an important resource of economic significance. The variety of products that the sea provides range

from fish and shells for food, implements, ornaments, whale's teeth for cutting and abrasive tools as well as for religious purposes. The meat of a turtle was typically saved for chiefs and their shell utilised for combs, rings, jewellery and fish hooks (Cummins 1977). Now, the harvesting of turtles is not as common. In 2008, new legislation stipulated that any harvesting or selling of female turtles and male turtles undersized was illegal (see Appendix F) (MAFFF 2008).

The wealth of Tongans was and is still today, largely measured by the amount of agricultural and marine produce one has or can easily acquire. In earlier years, this wealth would have been held mostly by chiefs and would be redistributed. Today, the wealth of a household can still be measured by the number of pigs one has to contribute to ceremonies and such, but also the number of fine mats and tapa a household has. This combines with the income from wages and remittances. Having a vehicle or two is a more recent form of wealth and a way of showing your status. Some family's houses may be falling apart, but they have a van or other vehicle in their driveway, a commodity most contemporary Tongan families cannot do without. This is what Besnier (2009) calls *conspicuous consumption* in his paper on the emergence of a middle class in Tonga. The status and importance attached to cars started after the windfall of the squash growers in the 1990s that saw them purchasing imported Japanese cars, some barely road worthy in New Zealand, littering the streets of Nuku'alofa. Irrespective of the dismal state of the cars, being able to afford one and drive around was enough. There is a competitive nature to it where the size of a non-elites car is "turned into a symbolic claim to be thrown at both superiors and peers" (Besnier 2009:234), the bigger, the better. This is intertwined with the idea of *mimesis*, which Besnier describes as where, "The high ranking provide a model for action that ordinary folk emulate" (2009:224). Thus, the behaviour of non-elite Tongans is taken from the cues of those with rank or wealth, which accounts for the highly competitive nature of Tongans when it comes to illustrating and acquiring status particularly through material things.

Before the coming of the Europeans in the late 1700s and early 1800s, the currency in Tonga was whale's teeth. This changed to iron tools, axes, chisels and guns once there was European contact and today the currency is the Tongan *pa'anga*.

The more common trades and professions at the time of European contact, were utilitarian skills; canoe building, net making, fishing, domestic, agricultural work, and decorative and ornamental skills; club carving, whale ivory sculpting, and tattooing (Cummins 1977). Today, these professions are still in the repertoire of a lot of men and women. The men typically keeping to the more utilitarian skills, but more are also delving into carving and woodcrafts as these skills can be used to make money. The more traditional skills are still needed in order to maintain a semi-subsistence way of life. Being able to supply food for ones family is obviously important, however, the increased pressures of living within a market economy means that some must find a skill or job that can generate some kind of income. A skill that has always been important to Tongan life, both economically but socially also, is one that the women of Tonga possess. The skill of *lālāngā* (weaving) and making tapa or *ngatu* (once it is dyed) is an activity that belongs only to women in which their *mana* and *ofa* is embedded (Addo 2013).

Tapa and fine mat making is important economically because the mats and tapa can be traded for money and are often exchanged among groups that some women join, called *katoanga*. These groups can be women within a kin group or around their village and, nowadays, can also include women living overseas (Evans 2001; Young-Leslie 2004). For the Tongan diaspora it is not only a means of financial independence but also distinguishes them as producers of a unique craft, specific to Tonga (Addo 2013). A *fihu fatu fa* (a 30ft or 40ft fine mat), can fetch a price between \$500-\$700 *pa'anga* and a *lau teau* (a 100ft fine mat) can cost up to \$1500 *pa'anga* when sold overseas, in this case, New Zealand. It can take up to 3 months for a *fihu fatu fa* to be made and a good six months for a *lau teau*, however this can vary depending on how often and how many woman you have working on it. Typically, a group of three to five women will get together and weave from early morning to sun down, *taulalāngā*. In Talafo'ou, my aunty Kina is well known for her weaving skills. Originally, she comes from Ha'apai and this is where it is said the best weavers come from. Given her age, she no longer participates in *lālāngā* but passed on her knowledge to her daughter, Anti. Skills and knowledge are passed on to generation to generation through children observing their parents and relatives shaping wood and

stone, building houses and, in this case, weaving (Cummins 1977). Anti was in the process of finishing a *fihu fatu fa* and every day, except Sunday, she went to a shed like house that had been constructed by her father for *fai kava*, a very simple design and large enough to lay out completely flat the unfinished mat plus four more (see Figure 3.6). She sat for hours with three or four women from the village and one would strip the leaves of the pandanus while the others would sit on the mat, use talcum powder to keep their hands from sweating and weave. They weaved with such speed and ease that it looked like a job that could easily be picked up. Suffice to say, I did not possess the refined skill needed to weave a fine mat with such precision and the time it would take to learn this skill highlights the importance of passing down such knowledge to ones daughter from a young age.

The significance of *lālanga* and *ngatu* does not stop at its economic contribution. Perhaps more important is its social function. Every morning I would wake to the sound of the rooster's crow and, in the background, the light rhythmic sound of paper mulberry being beaten with a heavy wooden mallet. Tapa making is a three-step process in which *tutu*, the beating of the bark, is the first stage and the most strenuous. The second stage is *koko'anga*, assembly, and finally, *tohi*, the decorative stage. Like *lālanga*, women come together as a group to complete the final two stages. Addo explains, "Women transform the workspace into a site infused with '*ofa*' (love, compassion, sacrifice), and the work strengthens their social bonds with one another, as well as to those to whom they intend to gift the barkcloth" (2013:45).

Likewise, a woven mat is strong and durable and this characteristic is often the basis behind a metaphor to describe the interaction of people within a society, weaving in and out of each other as they find their place in society. The relationships that develop through this weaving are the solid foundation of a society. This symbolism is echoed in the Tongan proverb "*'oku hangē ki he lālanga 'a e kakai*" - "human kind is like a mat being woven" (Addo 2013:33). Similarly, this metaphor can be used with tapa with the idea of the *hiapo* (inner bark) being placed on top of each other and fused together. This emphasis on societal strength and solidarity with people intertwining and forming relationships like the plaited mat and fused layers of barkcloth, is further evident in the exchanging of these *koloa* (treasures). The

exchange of fine mats and tapa is an integral part of formal ceremonies such as at funerals, weddings, first birthdays and graduations. Traditionally, *puaka* (pigs), *kava* and root crops, in particular *‘ufi* (yams) and *talo* (taro) were given at important ceremonies such as the *‘inasi* ceremony where the first yields were given to the *Tu’i Tonga* and “controlled by the chiefly and socially elite women” (Young-Leslie 2004:403) but in which now people of all strata can participate. The exchanges of these goods are important for showing respect and love between people (and to their monarch) as well as maintaining or gaining social ties with those overseas and in Tonga. Young-Leslie explains that, “Gifting benefits can derive through the release of an obligation incurred by a previous gift, creation of future obligations, or elevation in social status gained by the distribution of a large amount of wealth (that is, pandanus mats)” (2004:403).

Having a store of mats and tapa is important in any household so if there is a funeral, for instance, the family is able to attend the funeral with a gift of mats. My great aunty, Kina, had to return to Ha’apai because her aunty had died unexpectedly. She took with her a couple of gifts; a fine mat, *ngatu* and a modern, fully decorated, blanket. She happened to also be the *fahu* and so she returned with even more *ngatu*, mats and blankets. As *fahu* it is her responsibility to redistribute these gifts and usually they will go to those closest to her. These then get added to the store they already have, in preparation for a future ceremony.

Even though the Tongan economy has retained some of its traditional aspects, there have been many changes. King Tupou IV’s initiatives for opening Tonga to tourism, investment and researchers, continues today. This increased investment has led to growth in sea and air transport and telecommunications. Telecommunications operates much better in Tonga than in New Zealand. The cost of Internet in Tonga is by far cheaper and the coverage is strong even out in ‘Eua. The increased sea and air travel means that people can move more easily between island groups. Access to services on the main island is now much easier for those in the outer islands. In turn, the urbanisation of Nuku’alofa has seen more overseas businesses cropping up, including banks and more recently, café’s and bars. The ease of travel has also seen an increase in Tongan’s going overseas for education and employment opportunities.

In turn, this has seen an increase in remittances from overseas. In 2009 the World Bank reported that Tonga was the second highest country receiving remittances from migrants at 28% (as a share of GDP) (Mohapatra, et al. 2009). Remittances along with foreign aid make up over half of Tonga's economy. According to Tonga's Prime Minister, Akilisi Pohiva (interview with author, January 24, 2015), this is compounded by the negative impact the economic crisis has had on Tonga's economy and while it is beginning to recover it is at a slow pace. Pohiva goes on to suggest that relaxing immigration policies in Tonga so that the movement of people overseas is easier is one option. This could see an upturn in the economy because of increased remittances, up skilling and new ideas and ventures being brought back to the islands. However, he also notes that while the policy is to encourage foreign investment, this reliance on remittances and foreign aid, particularly the latter, means that the government is at the mercy of external factors and can be pressured into making decisions they may not necessarily want to make but are "forced by circumstances to do" (Akilisi Pohiva, interview with author, January 24, 2015).

Despite the market economy slowly infiltrating its way into urban Tonga, Tonga has maintained a semi-subsistence way of life, even more so in the remote outer islands. *Kape* (giant taro), *ufi* (yams), *pele* (green leaves), *kumala* (kumara) and *manioke* (tapioca) are grown for household consumption as well as, to be sold at the local market or the main market in Nuku'alofa, Talamahu. However, there is not only the threat of the market economy on sustaining an agricultural lifestyle, there is also the increasing threat of global warming. This is implicated in changes in some traditional gardening techniques, the use of chemical fertilisers and negative impacts on crops and peoples livelihoods from increasingly severe natural disasters.

4.3 Political

Tonga's political landscape has seen a shift from a rather strong feudal monarchy to a more democratic system. It is estimated that more than a century before the arrival of Captain Cook, Tonga's government was a tripartite pattern where *Tu'i Ha'atakalaua* was the natural political leader, *Tu'i Kanokupolu* maintained effective political dominance and *Tu'i Tonga* was the religious head of state

(Cummins 1977:65). By the early 18th century the *Tu'i Kanokupolu* had taken over the *Tu'i Ha'atakalaua* as the dominant lineage. In the 19th century under George Tupou I, Christianity became a central part in Tongans lives, along with a focus on the production of copra and an increased access to imported foods (Campbell 2001). Following the years of Queen Sālote's reign, named 'the period of peace', Tupou IV came into power with the intention of 'modernising' Tonga. He was pro economic growth and his ultimate aim was "to transform the Tongan economy, which was still at the time almost entirely subsistence based (though supplemented by copra and banana exports), into a commercial and industrial economy in which subsistence agriculture would survive as a supplementary activity" (Campbell 2001:209). This push for modernisation led to a substantial amount of overseas borrowing and also resulted in the development of a new social class, one that was educated overseas and brought with them new attitudes towards status and authority. Out of this new social class came the need for a more democratic way of governing. The government was formed with fifteen representatives, five representatives of the people and nine representatives of the nobles. People believed there was no transparency, justice or fairness within the government's proceedings and wanted good governance. The tax changes in 1986, which had poor people taxed more than the wealthy and corrupt activities such as the infamous passport scandal in the late 1980s and again between 2011-2013, led to the establishment of the pro-democracy movement. While the idea of pro-democracy originated in the 1970s, it was in 1991 that the pro-democracy movement officially emerged with the intention of bringing transparency, good governance and to restoring justice and accountability within parliament. The founders of the movement, which included the current Prime Minister, Akilisi Pohiva, championed these ideas. However, tensions boiled over in 2006 resulting in the riots in Nuku'alofa, after which the government refused to vote on proposals of democratic reform.

Consequently, these changes in the political economy have led to social and cultural change within Tonga, "Education, foreign travel, monetisation and the nuclearisation of the family inevitably changed people's value orientation" (Campbell 2001:241). According to Besnier the diaspora of Tongans has affected aspects of the

economy, society and culture with the “constant back and forth movement of people, goods, money, ideas and symbols” (2009:219) between home and those living outside of the archipelago. He describes four characteristics that make up the emerging middle class in Tonga, “an intense awareness of the importance of the extralocal for the local; a valorisation of consumption and of the performance of consumption; and engagement with multiple modes of livelihood; and a commoditisation of structures of reciprocity and obligation” (Besnier 2009:250). A consequence of this on an emergent middle class is a waning emphasis on reciprocity and obligation in people’s social lives that constitute as middle class. Yet, for the poor, reciprocity and cultural obligations are still hugely relevant, as tradition remains central to their livelihoods.

4.4 Social & Cultural

With various changes happening around and within Tonga, something that has remained relatively intact is the Tongan desire to hold onto their perceived traditions. During the forty-seven year reign of the revered Queen Sālote, a time of peace, unity and stability (though not initially) graced Tonga. Sālote believed that the way to advance Tongan modernity was to ensure that the commoners benefited from modern commodities and as such set up a public health service, free education, better sanitation and health care (Addo 2013; Latukeyu 1967). However, she also emphasised the importance of family and tradition as the way to strengthen the nation and as Addo explains, “Tongans should be guided by their kinship-focused traditions and cultural obligations as they joined the community of modern nations...they should adhere to traditional Tongan values” (2013:10). This dichotomy of tradition versus western is often highlighted by those in power in order to legitimise ones position or as a form of control by indigenous elites (Lawson 1993). While Queen Sālote encouraged her people to adhere to a traditional way of life, she sent her own children overseas to be educated.

Likewise, in regards to change in the political system, tradition is often called upon by the elites to highlight that the age-old system they have, has seen them stave off colonialism and is the very reason why they have remained independent. According to the elites, democracy failed the Greeks, who invented it, and as such,

the Tongan authoritarian rule is preferred (Lawson 1994). The traditional polytheistic religion supported the socio-political hierarchy in which the chiefs and priests were divinely ordained. Later, Christianity rocked the foundations of these claims with notions of equality and freedom particularly for commoners, but aspects of the faith were adopted and adapted slightly to once again reinforce tradition and the position of the elites. As such, Tongan culture is still very much a part of Tongan people's lives. There are some aspects of it that have since disappeared or merely morphed into a different kind of form. Central to Tongan life, however, is the importance of God and the church.

Religious practices have always been extremely important in Tonga. Before the introduction of Christianity and its teachings, Tongans believed in traditional gods; *Maui* (God of the underworld), *Tangaloa* (God of the sky) and *Hikule'o* who resided in *Pulotu*, also referred to as *Hawaiki* (Samate 2007). There were sacred houses where people could go and claim sanctuary, gather for prayers, and make food offerings, very much like a church. Gods would be consulted before sewing yam seeds, setting off on a voyage, or before war. The *'inasi* ceremony was vital to this process and would be a chance to give thanks and ask for a bountiful season in the future. This ceremony continues to some degree today and can be likened to a harvest festival where "prayers and produce are offered to the god *Hikule'o* through his earthly representative the *Tu'i Tonga*" (Cummins 1977:76). However, the offerings and requests made by the Tongan people were largely only for those of high rank, commoners were often unnoticed. Despite this, all Tongans believed in respecting the gods and if someone neglected religious rites then famine, war, disease and sickness were the kinds of punishments that could afflict them. Around the early 19th century, the beliefs and efficacy of traditional religion began to waiver and a new religion began to emerge.

Christianity brought with it the acknowledgement that everybody had a soul and the right to life after death. Thus, the support of commoners was huge and many are now devout Christians who would give anything for their faith. This devoutness is evident in Tonga in the many different religious affiliations. The census taken in 2011 showed that 36,592 Tongans belong to the Free Wesleyan Church, followed by

18,554 belonging to the Latter Day Saints, 15,441 identifying as Roman Catholic and the fourth largest religious following the Free Church of Tonga has 11,863 members (Tongan Department of Statistics 2011).

A stronger focus on Christianity and church leaders meant that the rank and status of a chief, which was interlinked to the idea of being ‘divinely ordained’ changed. A shift in power occurred as the transfer of money and wealth went to churches as opposed to chiefs. Despite this, the monarch and some chiefs quickly grasped the ideas of Christianity and adopted them as their own, a move reflected in Tonga’s motto: *Ko e ‘Otua mo Tonga ko hoku Tofi’a* - God and Tonga are my inheritance (Tuku'aho 2007).

While a huge part of Tongan culture had changed, the traditions that were attached to the traditional gods still continued, such as the ‘*inasi*’ ceremony and the importance of feasts and gatherings within the church community. Gift exchange and the redistribution of wealth still occurs, as mentioned above, however, a significant change is a creeping nuclearisation of Tongan families. Where traditionally families were very much extended, they are still today to some degree, but the idea of sharing everything is not as prevalent as it once was. The pressures of commercialisation and the market economy have resulted in families sharing less and less with those outside of their nuclear unit. I witnessed this when one of my family units earned money through selling handicrafts but did not let their extended family know how much they made. Likewise, when Kina had to redistribute the mats from the funeral, she only went out as far as one of her son’s family. Yet, whenever someone calls on the help of his or her extended family, they are often willing to assist where they can. This was evident when Siaola needed money to send his daughter to university in New Zealand. His siblings all pitched in and along with him working overseas in Hawai’i and Australia he was able to get enough funds together. The social relations with kin living overseas are also important to Tongans and maintained through gift giving, so situations such as needing to work for a few months, is made possible by the hospitality and help of family and friends overseas.

Furthermore, the introduction of the market economy has also brought with it an increased amount of imported food to Tonga and, in turn, a high consumption of

these products. The change in Tongan diet from largely traditional local food to a diet higher in fat and sugar content from imported goods, has seen an adverse effect on the nations overall health. That is not to say that Tongans have abandoned their traditional produce, rather they have supplemented it with imported food such as *sipi*, bread, cheap fatty meat, canned goods, noodles and so on. Techniques of cooking have also changed and more ‘efficient’ methods are used such as frying or using a microwave. Moreover, the pressure of the market economy means that some families choices for what kind of food they can buy, is determined by their financial situation and often they cannot afford healthier alternatives.

4.5 Health

A subsistence way of life is a relatively healthy way of life and this was the case for Tongans before the economic reforms and introduction of the market economy. Men would work in their gardens, children would walk to school, the main form of transport at one stage was a person’s legs and food was eaten from locally grown produce. This high level of activity, healthy eating and manual labour meant that the only kinds of diseases that Tongans were afflicted with were *tono* (yaws), *kulokula* (filariasis), *fekefeke* (fever), *fua* (elephantitis), *pala* (skin infections), *lafa* (ringworm), *momoko* (cold), *kahi* (ailments of the abdomen, including piles, haemorrhoids, backache, scrofula etc.) and a later European entrant *tipi* (tuberculosis). Ailments were categorised into two groups of causation based on their origin, 1) “ailments of natural origin, such as wounds and broken bones and 2) ailments whose origin was not readily apparent, such as internal illnesses and tumours, which were thought to be cause by the actions of supernatural beings” (Whistler 1992:7). This reflects how the beliefs Tongan’s had before Christianity, while no longer as prevalent, are still significant when trying to explain things such as illness. There is a strong belief in the spiritual world and respecting spirits because they are ancestors. Thus, for illnesses seen as *mahaki faka-Tonga* (Tongan sickness) customary healers or curers would be consulted (Bloomfield 2002; Whistler 1992; Wright and Breitenbach 1994). These healers were especially important in isolated areas such as the outer islands or any area that was difficult to gain access to medical care. From my experience in

Talafo'ou and 'Eua, there did not seem to be any significant healers that people could direct me to. Instead, I was told that a lot of families these days just practice their own kind of herbal remedies that have been taught to them by their elders. These remedies are suitable for minor kinds of ailments such as scratches, stings, sore eyes, and backache - the discernible ailments. However, if the remedy failed people would go straight to the nearest clinic. This is in contrast to the perceptions of those I interviewed in New Zealand who believed healers continue to have a significant presence within Tonga. It was mentioned by some of my participants in Tonga that this may be the case for those living in the remote north. The decline of customary healers could be a consequence of a major increase in non-communicable diseases, which is associated with *mahaki faka-palagi* (western sickness). The change in diet from a traditional subsistence diet of fish, root crops, taro leaves, fruit, and shellfish to one that is high in fat, salt, and sugar has been a major contributing factor to greater rates of obesity, diabetes and other non-communicable disease (Evans, et al. 2001; WHO 2003). Furthermore, decreased physical activity due to the introduction of vehicles and other transport (Besnier 2011) and the shift from subsistence production to wage employment, contributes also to the fact that Tonga is one of the most obese nations in the world, just behind Samoa by .1% at 43.3% (Senthilingam 2015).

5 Traditional Culture and Religious Practices

There were four Tongan Gods, one of them, the God of the sky (*Tangaloa*), went fishing and saw a reef. He wanted an island to be made near that reef. Another God, god of earth, *Tangaloa Tufunga* - the carpenter, made that island. *Tangaloa* then wanted a tree on the island and a tree (*Fue*; like vines) started to grow and creep along the ground. Within that tree a worm was moving about. *Tangaloa* split the worm into three - *Kohai*, *Ko'au*, and *Momo*. These three were said to be the first Tongans and ancestors of the *Tu'i Tonga*, *Kanokupolu* and *Ha'a Takalaoua*. (Fa'au, interview with author, January 16, 2015).

Traditional beliefs are one of the foundations of a culture and understanding these beliefs helps to explicate the social values and institutions that develop from them. Tradition and religion are pillars of Tongan culture and in order to comprehend the full impact that modernisation and globalisation has had on culture, it is imperative that the traditional and contemporary beliefs are explored. In this chapter I look back at the traditional religious practices that dominated the landscape and how aspects of it have disappeared but at the same time a major element remains embedded in *Anga-fakatonga*. I discuss the impact of Christianity and how a kind of syncretism of the old and the new beliefs occurred.

There are a number of stories of origin in Tongan culture and their popularity tends to wax and wane over time. The myth of *Tangaloa*, the tree and the worms, has been the most favoured since pre-contact time. This was later replaced by the belief that the *Tu'i Tonga* was descended from the God *Tangaloa* 'Eitumaptupus and a mortal woman (Campbell 2001; Fa'au, interview with author, January 16, 2015). This distinction was the basis of differentiating between two classes of people; those with divine ancestors and those descended from the worm, mere men (Campbell 2001). There is also an alternative belief that the site of origin is Palestine, as evidenced by a black mark that can be found on some children, thought to be a symbol of the Jews. This belief was first proposed by the early missionary, Reverend James Marsden, who concluded that Polynesians were “an offshoot of the Ancient

Hebrews” (Craig 1989:xii). Another possibility is South America, because of the gourd and kumara. These two crops are not native to Tonga and it is believed that the early Polynesian seafarers went as far as South America returning to the Pacific with gourd and kumara, cultivating them once they settled. The current belief is that Tongans come from Taiwan, and are thus descendants of the Austronesians (Campbell 2001). This is backed up by archaeological and anthropological evidence that suggests Austronesians came from Taiwan to the Bismarck Archipelago where they developed the Lapita culture and pottery. The latter was found as far as Tonga and Samoa, suggesting that the Lapita people travelled into remote Oceania settling and creating the Polynesian cultures that are evident today (Irwin 2015).

5.1 Traditional Religious Practices

Before Christianity was introduced to the islands, Tongans had a polytheist belief system. While Gods and semi Gods such as *Tangaloa* and Maui are associated with creation and essentially part of mythology and folklore, *Hikule’o* is considered the most important God because he represented the *Tu’i Tonga*. As well as these Gods, there was, and to some degree still is, a strong belief in the efficacy and agency of spirits. Each family had a patron spirit that would transpire into an animal and was the protector of the family. Given that commoners had no place in the traditional religion or afterlife, these spirits were deemed to hold a chiefly status. Furthermore, it was believed that certain living creatures, for example, lizards, sea snakes, sharks and octopi, were god’s vessel to communicate to man (McGrath 2003). This belief in spirits emerging as an animal is one that has, at least for my family, continued to exist. While I was settling down for bed on my first night, a *moko-tea* (white lizard) scurried across the roof. My mum looked up and said, “Oh, look! *Malo e lelei, Malia*”. Malia was my mother’s grandmother who brought her up for the most part of her childhood. Everyone in the family knows that the *moko-tea* is Malia and that she comes around to keep an eye on things. My parents came to Tonga to get married in the 1970s and my father told us children many times what happened their first night.

While we were sleeping there was a horrible noise. Cats were fighting under the house where we were sleeping. The fighting and noise went on for hours.

The next morning Lama said that that had never happened before at his house. Everyone thought it was either Malia or other spirits unhappy because a white man was in the house or they were all simply saying ‘hello’.
(Max, interview with author, February 15, 2015).

Even in New Zealand, my mother carries with her this belief of spirits in animals. When my grandmother died in Auckland, New Zealand, the next day while we were working in the peony patch at our home in Christchurch, a butterfly came and hung around us. Wherever we went, there it would be. When it looked like it was not going anywhere, my mother deduced that it was her mother saying ‘hello’. Since that day, we see grandma every season.

Tongans have an attitude of respect toward spirits and their relationship is one that is pragmatic, social, symbolic and intrinsically tied to politics, economics and history (McGrath 2003). Tongans view spirits as *tapu* but not as something that is inherently evil which is often the stigma attached to them elsewhere. McGrath (2003) describes two ways in which the meaning of spirits can be understood. First, in regards to the emotions that surrounds mortality and understanding the “inexplicable with meanings that embody a socially informal self”. Second, through rituals in which the spirits “serve to maintain social order or may function as change agents themselves because they are so flexible and responsive to change” (2003:31). The integral role that spirits have in the social structure and being part of history and tradition, suggests that their presence is likely to transcend time.

McGrath highlights the clout that spirits can have when it comes to challenging traditional ways with modernity, particularly in regards to politics. He states that, “Socially constructed knowledge about spirits serves to reinforce certain (but not all) beliefs about power and authority that complement a changing political landscape” (2003:33). This ties in with the idea that religion is intrinsically interlinked with all aspects of Tongan life and particularly with respect to those in authority. The polytheistic religion that was prevalent in earlier days supported the socio-political hierarchy throughout Tonga. As such, traditionalism is often used to evoke nostalgia of a time in the past that was stable and virtuous. It is used to legitimise the political structure of the time, and later when Christianity was

embraced, the people adopted the new Christian values as their own and having always been a part of tradition. This exemplifies the notion Lawson discusses, “Tradition, or any particular tradition, is not immutable, permanently fixed, or immune from criticism or change” (1993:6) which means it can be manipulated and changed to “reinforce taboos of tradition and also create new ones” (1993:6). These values can be used as tools of legitimising the current state of political power, where keeping with tradition reinforces the rightful position of the monarch and most importantly emphasises *anga-fakatonga* as the right way. Any other external notions of political structures are often seen or portrayed as ‘un-Tongan’ (Lawson 1993; Lawson 1994).

The role of God and spirits is an important one when it comes to the political hierarchy. *Mana* is bestowed on a person by a god and if one lacks *mana*, breaks *tapu* or misuses *mana* it is interpreted as a sign of God’s disfavour and as a result, spirits bring to them misfortune. Therefore, it is imperative that the spirits and gods are appeased. In the past this was usually done by performing a ritual of some sort; whether that be a sacrifice of an animal or in some cases a human sacrifice or presenting the god or spirit with something of value or food. It was very much akin to the way that one who was inferior would approach a chief (Campbell 2001).

The ‘*inasi*’ ceremony is an example of a ritual where people give their first yields to the *Tu’i Tonga* in order to maintain good favour with the god *Hikue’lo*. The divine ordination of the *Tu’i Tonga* means that the people of Tonga have a revered respect for him and as such an abundance of gifts, particularly food, is given to the King on special occasions. These days, the king visits each main island once a year during the Royal Agriculture Show where the proceedings resemble those of the *inasi* (Bennardo 2015). The recent coronation of King Tupou IV saw dozens upon dozens of *puaka*, root crops, and bought goods such as cabin bread gifted by the people for the eleven-day celebration (see Figure 5.1). These gifts were presented and on display during the *Taumafakava* ceremony. It is at this ceremony that the king’s power is installed through the presentation of these gifts. There is a ceremonial breakdown of the *kava* plant and a dance that depicts the mixing of the *kava*. Sitting in a large circle are 150 nobles and the king drinks *kava* from a coconut shell to mark his

confirmation of the title (ABC/AFN 2015). Following this ritual is an array of celebrations from block parties, black tie balls to choral recitals until the official day of coronation at the Free Wesleyan Church in the capital, Nuku'alofa.



Figure 5.1. Coronation of King Tupou VI
(Photos courtesy of Emily Mafileo from www.coconet.tv)

It seems only fitting then, that given the strong presence of spirits within the Tongan landscape that spirits are considered important to the social structure and well being of Tongan society. *Tevolo*, which is often misinterpreted as the devil, is a nameless spirit that offers protection to kin or brings misfortune and punishes transgressions of all kinds. The advice given in a dream by a spirit holds more weight and validity than a healer or doctor and one must follow through with that advice. McGrath explains, “*Tevolo* offer pragmatic solutions for ordinary problems like illnesses and reinforce what are considered to be important social values such as respect” (2003:42). Thus, when a person falls ill it was (and to some degree still is) typically associated with the idea that a spirit is bringing misfortune to the sick person for some reason. This reason could be because the spirit feels that they have been disrespected in some way by the ill-stricken, or they are trying to communicate to their loved one that something is awry where they were laid to rest. The former is a belief that many Tongan’s still adhere to today. It is important not to anger the spirits

by disrespecting them when one walks past, or is in the vicinity of, a cemetery. Actions such as chewing gum, whistling, singing, eating or wearing a flower behind ones ear can invoke anger from the spirits. These precautions resonate with a story told to me by my mother and uncle as we were driving through Lapaha on our way to Talafo'ou.

When Malia was younger, she and her youngest sister Nau had to go the Kolonga. They took the horse and cart, Malia rode the horse and Nau sat in the cart. As they were riding past the cemetery, Nau spotted a shrub full of beautiful flowers called *Siale*. Without Malia knowing, Nau jumped out of the cart, picked a flower and put it behind her ear. When Malia turned to check on Nau she saw her under the mat sleeping. By the time they got back to Lapaha, Nau was very sick. She slept for hours and hours and someone ran to the copra factory where her father, *Siale* [Charlie], was working. *Siale* was one of five Germans who were invited by Queen Sālote after WWI and two found themselves in Lapaha and he married my great grandmother Tomi [Tominika]. He developed the copra business in Lapaha at that time. Anyway, he told the messenger that Nau would be fine and he didn't go back with them. By the time he got home, Nau had died. So, it is said that Nau was 'sleeping' in the cart only because a spirit in Kolonga was angry with her for taking something [the flower] that was not hers and slapped her across the face, making her sick.

(Tesei Forde, interview with author, January 10, 2015)

Visiting a cemetery is not something one should do lightly either. A visitor should not loiter or if they are not from the village or do not have a connection to those buried there, it is advised that they make their visit brief (McGrath 2003). The day before we arrived to 'Eua a funeral was being held for a young member of our family. We wished to pay our respects to the recently deceased and fellow relatives laid to rest in the same cemetery. However, the family was apprehensive because the last time my mother went to the cemetery, she fell quite ill and according to my uncle it was because all of our relatives had missed her and loved her so much that they had wanted to touch her. Because they touched her, they made her sick. Thus, because my

mother had not been back to Tonga for ten years, there was concern that this event may reoccur. Regardless, we went to visit, albeit briefly, and no misfortune befell us.

Where deceased family members are laid to rest and how they are buried is also significant. Previously, travelling between villages and islands was difficult and as a result deceased relatives who died away from their village would be buried in the village where they had died. A consequence of this was a disturbance of sorts in which the spirit would visit their relatives in a dream because they were unhappy. In order to rectify the situation, the remains of the deceased had to be removed and transported back to the deceased's own village. This was known as '*heki tanga*' and was performed to heal a kind of social dislocation (McGrath 2003). While it does not happen as often as it used to, due mainly to the illegality of the transference of a body, the 'social dislocation' can sometimes still be felt especially with the increased diaspora of Tongans overseas. As well as this, conflict within the family over where to bury the body, or not enough space in the family plot can lead to '*heki tanga*'. A tale told by my mother from Kina about my great grandmother, Malia exemplifies this.

Malia died in Talafo'ou and because all her children were there they decided that she should be buried in Talafo'ou. But, the spirits of Talafo'ou were unhappy with this because she didn't come from there, she belonged in Lapaha. The spirits 'shooshed' her out of the cemetery and out to sea. Malia would sit under the breadfruit tree outside Lama's house, cold and sad. The only person who could see her was Kina. This went on for a while so Lama went to Lauaki (the chief) and told him what was happening. Lauaki went to the cemetery, spoke to the spirits and told them to leave Malia alone and that she should be made to feel welcomed. Since that day, Malia never showed up under the breadfruit tree again.

(Tesei Forde, interview with author, January 14, 2015)

The way people are buried can also have an affect on the relationship between deceased and living relatives. Some ailments that could not be cured by regular means were thought to have been caused by a spirit. The afflicted is unable to perform their family duties and as such must perform '*aka fia*', a process of "the disinterring of bones from a grave" (McGrath 2003:34). It may simply be a case of

rearranging an ancestor's bones to make them more comfortable, to clear debris or any roots that may be protruding into their skeleton. Before coffins were introduced, the deceased were wrapped in tapa and laid in the ground. This is perceived to be a simpler and less constricting method than the modern acrylic nylon fabric and wooden coffins that can tighten, splinter and cause discomfort. This discomfort could be linked to a subconscious anxiety of having to grapple with modernity while holding on to tradition. People today are expected to conform to contemporary ways, including a heightened expectation regarding material provisioning for families. An expectation that much exceeds former subsistence wants and needs. This often results in (mostly) males leaving to work overseas, creating more dispersed families, and a society where tradition is perceived to be under threat.

Some people make sure that their deceased relatives are buried in a lavish coffin with all the trims. This is to show how much they meant to them and the more elaborate the coffin, the more expensive it is, the more love it shows. The elaborate decoration of gravesites has also been discussed by Burley (1995) as symbolic of one's status, particularly the status of the deceased. Burley (1995) postulates that decorating graves with beer bottles is a form of conspicuous consumption, whereby it is overtly showing that the deceased (and their family) have the status and financial freedom to indulge in western activities such as drinking imported beer. This could be extended to include the elaborately decorated quilts that can be seen throughout cemeteries, at the head of a grave, much like a headstone. However, because these decorations are made of modern materials and coffins made of wood, the wood can splinter, glass can shatter and thus cause discomfort, which can lead to social discord.

This discord, I suggest, is a reflection of the on going importance of spirits in the social order of Tongan society; they continue to have a say in the changes that are occurring and are a constant reminder of the necessity of maintaining a link with the past. McGrath suggests, "Spirits connect *fakatonga* (the Tongan way) with an image of an ideal traditional, pre-contact Tonga" (2003:43). There is a conflict between wanting to maintain tradition but also embrace and participate in the modern world of capitalism. Spirits are a way in which to process and reconcile this conflict. The inextricable was, and is still for some, rationalised by spirits. Despite many events

and/or ailments now being explained by science or medicine, for some Tongans this movement towards the modern world is one they are not familiar with nor understand fully. Hence, spirits can help bridge the transition from the traditional 'old' way, to the modern 'new' way. They allow people to hold on to tradition and what they know while dealing with and coming to understand the changes modernity has brought about. Spirits can become a placebo for something people cannot understand or explain and as a result, they continue to be an integral part of Tongan life and culture. The belief in spirits is reinforced not only by the traditional religious belief system but also by Christianity. The idea and importance of the spirit is central to Christian teachings. There are similarities between these two belief systems where, in Christianity, the idea of sinning is aligned to turning your back on God, or the spirit. As a result, there are consequences that one must face and for some, the inextricable can now be explained by the hand of God. At the same time, he is all loving and if people are good Christians, as those before, there will be very little social discord and people will be rewarded either on earth or in the afterlife. Christian ideals have been adopted and become interwoven within Tongan tradition and culture that it is now seen as always having been this way.

5.2 Christianity

Even before the arrival of the first missionaries to Tonga, there were rumblings of change and in the 19th century the belief in traditional gods and religion began to wane. Two leading chiefs, *Fīnau* and *Tāufa'āhu*, showed openly their disdain towards the traditional gods through blasphemy and rejecting the traditional practices. For *Tāufa'āhu*, he destroyed many sacred houses and built a chapel in Ha'apai, even before the missionaries had arrived. This scepticism and declining belief in the traditional gods opened up a doorway for Christianity to enter through (Latukeyu 1977).

Initially, the Wesleyan mission was met with obstacles and challenges from some chiefs and priests who did not believe in the missionaries' teachings and saw them as a threat to their power. Lawson points out that the system of politics that legitimised the power of chiefs was upheld by religious belief and practice. This

again highlights the use of traditionalism as a tool to legitimise the position of the elite (Lawson, 1993). The idea in Christianity that everyone was equal, that no one could lay claim to property belonging to another, and everyone could ascend to heaven (regardless of rank) if they followed a specific moral conduct, stripped away the traditional rights and beliefs of the chiefs (Latukefu 1977).

A further hindrance to the early missionaries was their lack of education in the Tongan language and lack of skills to truly ‘heal’ people when needed. Those missionaries in Nuku’alofa fared better than their counterparts in Hihifo and their successful administration of medicine resulted in a number of Tongans joining their cause. Tongans attributed illnesses, whether traditional or introduced, to the anger of Gods or ancestors (Latukefu 1977; Whistler 1992). Thus, despite where the cure came from; missionary or traditional priest, Tongans believed there was “a direct connection between the efficacy of medicine and the power and truth of the gods” (Latukefu 1977:123). Later, support was given by a number of chiefs who saw that the way to gain technological knowledge and power, that the missionaries seemed to possess, was through their god and the adoption of their religion. The support of *Tāufa’āhu* was also instrumental in the missionary’s eventual success. After already showing his disdain towards the old religion, he began to embrace Christianity and tested his scepticism with the traditional religion by challenging the gods and asking them to prove themselves, likewise with the Christian god Jehovah as well. After offending the traditional gods with blasphemy and destroying sacred objects, *Tāufa’āhu* swam out to sea and challenged the gods to come to him to prove they were gods. When none came, he decided to test Jehovah. He went out to sea with two men, threw them overboard and asked Jehovah to save them from the sharks. His two friends lived and this demonstrated to him that the Christian god had the efficacy he was looking for in a religion (Latukefu 1977).

Education was a key priority of the missionaries work and schools were built soon after conversion. Two further significant developments were the establishment of central government for the whole of Tonga and the introduction of the rule of law (Latukefu 1977). With the support of *Tāufa’āhu*, who would later become King George Tupou, the missionaries gained momentum and ‘heathen’ customs were

banned by both mission and state legislation. The King would later turn his back on the Methodist mission after the condescending treatment toward chiefs from the missionaries, and he established the Free Church of Tonga in 1855 (Latukeyu 1977). A further consequence of banning 'heathen' customs was the choice, for those opposed to the mission, to practice underground or join the Roman Catholic mission. The Roman Catholic mission took hold in Tongatapu and while it also met with some resistance, particularly from the Wesleyan sector, it is now the third largest religious denomination throughout the kingdom.

Today there are seventeen religious denominations in Tonga, fourteen of which are Christian (Tongan Department of Statistics 2011). The values of Christianity, regardless of which denomination one belongs to, are central to Tongan culture. In the traditional religion there was a fear of supernatural punishment for behaving in a socially inappropriate way. Likewise, in Christianity it is preached that God punishes the sinful; for example, the story of Noah in the Book of Genesis illustrates this through the sending of the flood. The beliefs and efficacy of the old religion have been transferred to Christianity and as such continue to be integral in maintaining social control and society's moral order. This, again, emphasises the importance of maintaining relationships in order to avoid any misfortune (Bloomfield 2002).

There is a kind of syncretism that is evident in Tonga where the old beliefs have not completely been disregarded but have, to some extent, blended with the teachings of Christianity and can help with explaining certain occurrences that Christianity does not account for. Christianity is very ingrained in the Tongan way of life but the fact that there is still belief in spirits shows "the process of remaking the new to complement the existing" (McGrath 2003:39). So, things like *Puloto*, which was the focus of funeral rituals, has since changed to heaven but *Puloto* is still referred to in songs and poetry. There is one god that everyone reveres, but spirits are still taken seriously and respected. This duality in religion can also be seen in healing practices where determining whether someone's illness is *mahaki faka palagi* or *mahaki faka-Tonga* is important in understanding which approach to take in curing the affliction. The latter is more likely to be treated traditionally with herbs or considering *aka fia* or *heki tanga*, the former would be treated with biomedicine.

Many of the earlier beliefs are woven into the tapestry of Tongan culture, particularly the idea of angered spirits and ancestors as animals. These beliefs continue to play an important role for many Tongan's, especially when explaining the unexplainable and to some extent as a mediator between coping with the changes modernity is bringing.

6 Lifestyle: Food, exercise, consumption

“Kai ki ho’o ‘iló, ‘ikai ki ho uá”

(Eat with your knowledge, not with your taste)

In this chapter I take a closer look at the impacts modernisation has had on the kind of food consumed and the effects this has had on Tongan’s health. Economic factors and the effect of phenomena that are out of people’s control, such as global warming, is also an avenue I explore while highlighting the issues that Tongans themselves are afflicted with. I also look at consumption habits and explore further the strategies Tongans have used to balance the complexities that arise between trying to live a relatively traditional existence within a growing capitalist society.

6.1 Food

Food is more than just an aspect of life one has to participate in in order to survive, like breathing. It has a social and ritual importance that is embedded in Tongan culture and society. Young-Leslie (2002) highlights three ways in which food is used as a medium of exchange that reflects culturally traditional ideals. Food is frequently used to show *‘ofa* (generosity/love), *tauhivaha’a* (tending social relationships) and *fa’iteliha* (free-choice). In the case of *‘ofa*, this can be seen in everyday interactions when people visit each other. The first thing that is asked is *‘Na’a ke kai?’* (Have you eaten?) and the host will make sure that you eat something. This is a cultural ideal (norm) that I have witnessed growing up in New Zealand particularly with family members visiting our house. And of course, in Tonga, it was even more evident. At every house I visited I would be offered food, even when I visited the homes of ministers and that of the noble’s. This offering strengthens or maintains social relationships, the second ideal *tauhivaha’a*.

The social relationships of Tongans are extremely important and often when there is a conflict or tension within those relationships, this can manifest in other ways such as ill health or misfortune. Food, then, is one of the major contributors to

ensuring social relations are maintained. It is embedded in the culture and is very much a part of who we are (Siaola Tangifua, interview with author, January 27, 2015). In addition, the social status of people is manifested through ones appearance. Particularly for woman, the larger they are, the more status and prestige they have. Young-Leslie suggests “social weight is demonstrated through physical weight and...food production factors in demonstrations of (male) cultural competence” (2002:5). This is in keeping with the notion of a man fulfilling his familial duties by providing for his family and any surplus production is an exhibition of his masculine capabilities while also demonstrating ‘*ofa* when his surplus is shared around (Young-Leslie 2002). Food is not just a means to an end but is intricately tied to the cultural ideals and practices of Tongans where eating is an act that allows those who eat to value and appreciate the gift and skill needed to produce the food. Thus, to refuse to eat is to offend the people involved in preparing the meal and to insult the effort and skill they have put into it (Young-Leslie 2002).

Food practices in Tonga have, in some respects, have remained relatively unchanged for fifty years. There are, of course, some marked changes but families, particularly in outer villages, continue to produce staple crops such as *talo*, ‘*ufi*, *manioke*, and *kumala* in their bush gardens. In ‘Eua and Talafo’ou, each family has a garden the men would tend to everyday, except Sunday. In ‘Eua, Stanley’s garden was abundant with *kumala* (kumara), *kape* (giant taro - see Figure 6.1), *manioke* (tapioca) and some maize (although, the latter was not so successful this year because of the higher temperatures). The *manioke* is the easiest of the crops to grow, it literally requires just putting the *manioke* stick into the ground and leaving it to its own devices, a rather sturdy crop in that sense and fitting of being dubbed ‘lazy man’s crop’ (Hau’ofa 1979) (see Figure 6.2). *Kumala* needs a bit more attention. During my fieldwork it was the time for building up the kumara on mounds to ensure that they grow well and to a decent size, to help protect the plant from the sun as it spreads right out during the day and to protect it against rats who like to burrow down and eat the crop (see Figure 6.3). The *kumala* will stay in the ground for four months before it is harvested, the ‘*ufi* and *kape* can stay for up to a year and the *manioke* stays for six months. Because the maize did not do so well, *manioke* will be planted in

between the *kumala* instead. The men can spend all day out at the bush, tending to the gardens and will eat the *niu* (coconut) around them or supplies brought by others who join them.



Figure 6.1. Kape (giant taro)
(Jacinta Forde)



Figure 6.2. Manioka (tapioca)
(Jacinta Forde)



Figure 6.3. Kumara mounds with maize in between
(Jacinta Forde)

In 'Eua, swidden agriculture is still used as the most effective way to clear bush for a garden. Surrounding Stanley's garden was another four acres or so of bush that he will clear in a year or two depending on the time he has to do it. It was a lot more overgrown than he would have liked but with more time being spent on other activities such as working at the sawmill and family duties, staying on top of the fallowed garden was sometimes challenging. The garden is used primarily to supply food for Stanley's immediate family and those of his brother and brother-in-laws. In addition to the food supplied by the gardens, pigs and chickens are reared back at Stanley's home. For Soane, in Kolonga, he too had a garden but also a few cows and a bull that he would use for ceremonial events. Pigs and cows were mainly for ceremonial purposes, though if needed, could be consumed. Traditional food such as the root crops, *puaka* (pork), *moa* (chicken), *ika* (fish), *pele* (green leaves), *niu* (coconut) and some fruit dishes such as *lassi* (pawpaw), continue to be consumed today but are often supplemented with imported food.

The effects of global warming have also had an impact on the ability of Tongans to produce sufficient amounts of crops for subsistence and for partaking in the market economy. Increased severe weather and the unpredictable length of seasons have meant that people are unable to plant at the usual time and as a result miss out on reaching the markets they need to make a living (Caritas 2014). The volatile weather has affected the growing cycles of crops, an example noted by both Amelia from Caritas and my family in Talafo'ou, was the breadfruit. Typically the breadfruit ripens in November and December but lately appears throughout the year. The size of the breadfruit is smaller and this can also be seen with other fruits such as mango. I was surprised when my cousin climbed a huge mango tree and all that fell down was a mango no bigger than a lemon (see Figure 6.4). Granted it was the tail end of the season, but according to my cousins, they are not as large as they once were. Likewise, the pineapple. As we stopped on the side of the road on our way back to Talafo'ou from the capital, I noticed that all the pineapples lined up, stacked on top of each other, were much smaller than what I remember ten years ago.



Figure 6.4. Mangos
(Jacinta Forde)

Other issues that arise due to the unpredictable seasons and weather are an increase in weeds and pests. While during wet seasons insects are less of an issue for root crops, they are bearing smaller crops, and in the drier seasons insects thrive on

the leaves, eating all the way down to the root. Because of these new obstacles to producing crops, people have had to come up with new initiatives to ensure they produce enough for the market. One initiative is to plant crops that are diverse and flood resistant. Another is not so much a new initiative but an option that began during the time of the squash boom. This is the use of pesticides and herbicides. While this 'solution' helps in warding off the pests and insects and in some cases generates more produce of a much larger size, there have been adverse effects on people's health (Caritas 2014).

One morning, at the crack of dawn, I heard the familiar footsteps of Lama shuffling around the house getting ready to go to the bush. This time, though, he was also getting a large fertiliser spray bottle ready, the kind that is strapped onto your back and you pump using a stick attachment on the side. As he was mixing the right amount of fertiliser to water ratio, my mum asked if he had a mask. His response is apparently a popular one. He gets too hot and cannot breathe properly with a mask over his face so he prefers to just get it done. Kina shrugged as if to say it is a losing battle, he never listens. What was most concerning about Lama's actions and why my mother insisted he wear some sort of protection while spraying, was that his two brothers had died from suspected fertiliser poisoning. According to a number of people in the village, the associated death rates with the use of fertilisers were rather alarming. Considering the increased use of fertilisers to combat the unpredictable environmental factors and the attempt to produce bigger and better crops, it is worthwhile looking at the connection between fertilisers and NCDs, in particular diabetes.

Swaminathan (2013) reviewed a number of studies that looked at the correlations between the use of pesticides and diabetes. In the last fifty years the use of pesticides has increased fifty fold. While certain types of pesticides such as organochlorine and organophosphates have been banned in North America and Europe, these same pesticides are often discarded and used in developing countries like the Pacific. Over fifty percent of poisoning cases in developing countries are a direct result of contact with organophosphates (Swaminathan 2003). One study by Montgomery et al. 2008 (cited in Swaminathan 2003) concluded that exposure to

high rates of organophosphates can lead to “overstimulation and down regulation of muscarinic acetylcholine receptors, thereby reducing insulin production, leading to hyperglycaemia” (2003:1269). Other studies have also found a positive correlation to high exposure and inducing insulin resistance as well as a noticeable association with elderly people and those who were overweight (although, it is noted that the latter needs further investigating). It is evident that the effects of global warming and the pressure of making it in a market economy has forced the hands of farmers and local producers to use pesticides in order to counter these negative impacts. Unfortunately, research is beginning to highlight the health costs of such a choice.

The rise of imported food has increased steadily. New Zealand has been sending its meat off-cuts to the islands in the form of mutton or lamb flaps for the past few decades. These cuts were quickly absorbed into the Tongan diet and have since become a staple and even more so today, a delicacy that most Tongans love. The high fat and salt content in meat flaps make them incredibly low in nutritional value, despite this it is a food that continues to dominate most dinner tables in Tonga. In addition to meat flaps, there has been an increase in tinned food such as fish and beef (corned beef), frozen chicken and a number of sweet treats from New Zealand, Australia, America, and more recently an increasing number of imports from The Republic of China (Tongan Department of Statistics 2011; Tongan Department of Statistics 2014). Similarly to meat flaps, corned beef has also become a prestigious food of sorts and it is always included in significant ceremonial events particularly in the form of *lupulu*; corned beef, onion, coconut cream wrapped in a (young) taro leaf (see Figure 6.5). During my stay, the mix of traditional and imported food was the norm for lunch or dinner. Set meals times were not so rigid and usually breakfast was skipped or on the run and lunch could merge into dinner with a late supper, perhaps. Table 1 is a summary of the food eaten during my fieldwork and later noted by various family members during the month of July (the food in bold are the imported products consumed).



Figure 6.5. Preparing lusipi
(Jacinta Forde)

Table 1. Summary Food Diary During Fieldwork

Breakfast	Bread and coffee with condensed milk (or powdered milk) or leftovers from dinner or Maggi two-minute noodles or weethix or nothing
Lunch	<p>Fresh fish (fried), store bought chicken (often boiled, sometimes in coconut milk), pork (only once did we have all three meats at one lunch, other times it would be one or two)</p> <p><i>Lassi</i> (Pawpaw) raw or cooked with coconut milk to make a sauce like soup for the <i>kape</i> to be dipped into.</p> <p><i>Haka</i> of <i>hoppa</i>, <i>kape</i>, ‘<i>ufi</i>, <i>manioke</i> (sometimes all of the root crops would be present, at other times at least two of them)</p> <p>Mutton soup (made with <i>sipi</i>)</p> <p><i>Umu</i> – <i>lusipi</i>, <i>lupulu</i>, <i>talo</i>, <i>manioke</i>, ‘<i>ufi</i></p> <p>Coconut water and coconut flesh (when out in the bush)</p> <p>Salmon, bok choy, coriander</p> <p>Beef burger from takeaways and potato fries</p>
Dinner	Bread and hoppa or faikekai or topai (with sugar), or canned fish/beef and cooked banana, or leftover lunch. Drinks: powdered cordial or milo
Snacks	Popsicle, cabin bread, Maggi noodles , <i>vaini</i> (fruit), <i>otai</i> (fruit drink made with coconut milk and seasonal fruit)

Imported food is embedded in Tongan culture in much the same way as it is in many other Pacific island countries. McLennan discusses this idea in her paper on Nauru and explains that imported foods were “tasty, convenient and linked to social status” (2016:5). The latter can also be said about imported food in Tonga as demonstrated by the importance of having *lusipi/pulu* at any important feast. This is linked to the idea of affluent people affording more prestigious food in the form of foreign imported food. Different foods hold different values such as the *puaka toho*, the largest pig that is mostly fat but is the most prestigious and will always be offered at royal events and other prestigious ceremonies. Yam is a food that is highly prestigious also, unlike its counterpart the *manioke* that, as aforementioned, is considered ‘lazy man’s crop’ and not held in as high esteem. While McLennan (2016) describes the shift in prestige and status from fresh produce to brand-named food in Nauru, the status of gifting fresh produce remains of high importance in Tonga but the addition of brand-names have begun to infiltrate the scene. This was brought up in my interview with Akilisi Pohiva, January 24, 2015, “Our people [start to] look at imported stuff as superior or better”. The extent of exhibiting ones status has expanded to include not just food but the latest western gadgets, clothes and cars. As described by Siaola (interview with author, January 27, 2015), Tongans are very competitive, “even if I don’t have any money but if I see next door is having a car, I will try next month to having a car”. Almost everyone has a mobile phone in Tonga and the continued remittances from family members overseas tend to include things such as iPads, iPhones, laptops, video games and so on. This makes it a lot easier to gain access to these goods and, for some, increase their need or desire to have the best of the best.

This desire for commodities and food brands is what Besnier (2011) refers to as *conspicuous consumption*. If we look again at the consumption of cars, there is a need for cars, not just a want, and this is expressed by people I spoke to and those in Besnier’s work. It was argued that people needed the car to take the children to school. Mele explains one possible reason for this need,

In my younger days we didn’t go to school using vehicles unless you stay in the villages and have to come by bus. The majority of us would walk. For

me, I just live near the royal palace and I used to walk from there to Tonga High School. Nowadays, my kids do not walk to school, we still live at the same place and that's because of security things because there are issues that happened, raised at the school of the safety of children especially girls. Men picking them up, so ah, we are fortunate we have, the majority of families in Tonga now have vehicles where they can take their kids to school. (Interview with author, January 19, 2015).

Besnier (2011) goes further by highlighting that public transportation and walking is often met with disdain and shame resulting in a belittling of those families whose children use it. The kind of car one has is very important and as discussed, size matters. When my mother and I were picked up from the airport, my great uncle Lama, was extremely upset because the van we were picked up in could not be dignified as a car, and he was ashamed that his Tesei and her *palagi* daughter would be put through such an atrocity. Despite our assurances that it was perfectly fine, never again would we be allowed to travel in such a car. Lama made it clear he had two cars sitting outside his house and if they were not going to be used to pick up his family, what were they good for? Distance was not an issue either; in fact when my uncle would visit his father he would drive to his house despite the fact that he lived less than a kilometre away. And, going down to the beach, which was almost right outside the front door, also required the use of a car.

Another more common sighting around the island now is the large houses scattered around. I distinctly recall the last time we were in Tonga, there was one large mansion of a house sitting empty. It stood out to us because of its sheer size and the peculiarity of it in that it did not fit the landscape. Every other house we had seen was modest and some barely more than a few bits of wood, hastily thrown together. Now, huger, mansion type houses were more evident and noticeable throughout, even grander than that one house so many years ago. Besnier (2009) describes this phenomenon as a part of *conspicuous consumption* and is a visible claim to social importance as opposed to the traditional importance of rank. Being able to buy a large SUV or afford to build a large house or dine at fancy restaurants alongside those of rank, allows commoners to level ranking. Commoners can sit as high as an elite in their big SUV or wait in their car rather than on the side of the road like the 'riff raff'.

Commoners can live in large houses; no longer is the largest dwelling in Tonga the royal palace. The introduction of new restaurants has meant that in a culture where money is typically dealt with inconspicuously, that is, any exchange of money is often very discrete, people now very publicly open their wallets and pull out their money with a kind of pride at these restaurants. After all, they are seated at the same level as an elite because rank does not matter in restaurants and even being able to eat out at these very western establishments exhibits social importance (Besnier 2009; Besnier 2011).

While the use of imported food has increased in the daily preparation of meals, the preparation of food has also changed. Out of convenience and efficiency of time, some processes have been substituted for a contemporary alternative such as the use of tinfoil over banana leaf, frying food or boiling, instead of the *umu*. Further changes include the decrease in the consumption of fish and an increase in the consumption of meat. Meat is becoming the main dietary protein, as a result of the introduction of *sipi* and the substantially increasing price of fish. The *umu* is not used as often as it was in the past. With the family in Talafo'ou an *umu* was prepared every Sunday. This was something that the head of the house, Lama, insisted upon. Every other day they could prepare the *haka* but Sunday was for the *umu*. Cooking a *haka* (boiling food) is very different to the *umu* (underground) in several ways. First, in regards to longevity, the food cooked in the *haka* is only good for a day, or in the summer only a couple of hours. However, in the *umu*, food can stay fresh for up to two-three days without spoiling. Also, the time labour intensity differs between the two where the *haka* requires less work and time than the more labour intensive *umu* (see Figure 6.6).

The many ways in which the banana leaf were utilised are now not so common anymore. The role that banana leaves played in cooking is often replaced by tin foil. For example, *lu sipi/pulu* was previously wrapped with banana leaf and cooked in the *umu* (see Figure 6.7). Now, the final product is wrapped in tinfoil. Sometimes, the 'traditional tin foil' is still used because there is a distinct difference in taste. The effort involved in using banana leaves, however, out weighs the preference for traditional taste, and people increasingly substitute tinfoil given the

busier days and the pressures of wage work, Convenience and time was mentioned by Lord Vaea as a reason for why some Tongans have moved away from the traditional ways of food preparation, “[traditional food] it’s more difficult to cook, the availability of a lot of the food stuffs at stores is better to buy and we seem to be buying a lot of foreign stuff rather than our local”.



Figure 6.6. Preparing the umu
(Jacinta Forde)



Figure 6.7. Traditional 'tin foil' (lu sipi wrapped in banana leaf)
(Jacinta Forde)

As well as changes in the preparation of food, the supplementation of imported foods to meals has increased over the years. Traditionally, the meals were made up of starch vegetables, meat or fish (more so fish), perhaps some *pele* or *lu* and fruit. These days, all or some of these foods are served in conjunction with either bread, rice, more high in fat meat such as *sipi* or *masima* (corned beef) and often the method of frying is used. Tinned fish is also a popular choice because of its cheap price tag and quick preparation time. A lot of local fishermen will catch the fish for the day, sell them for top dollar and go and buy tinned fish or a frozen chicken for their own dinner. Mele 'Amanaki, a food technologist and former employee of the Ministry of Agriculture, Forestry, Food and Fisheries (MAFFF) discussed this and contrasts the food habits across three generations:

If we go back to lets say 40 years time that would be our parents time eh, and then 20 years time would be our younger days and today. Forty years ago here in Tonga a lot of people's diet is based on the natural food or the traditional food, very minimal of the imported foods or processed foods... So in my younger days we would eat processed food so for example in our parents time it would be instead of bread we have what we call *manioke*, that's what they normally eat for breakfast, um, in our younger days it's bread, nowadays our kids are eating weetbix, cereals and bread. And they don't eat what our parents ate, but in our younger days we ate bread plus the *manioke*. So, you can see the changes in the habits of eating. And more increasingly now um processed foods, canned stuff. And not only because there's more of imported foodstuff coming into Tonga, the fresh foods that our parents normally eat are more expensive nowadays. So, the fisherman would go fishing and come and sell their fish for very high value and then they go and buy the *katai'ika* the tinned fish or the chicken meat. I'd say, ten years ago I'd say when it's fish day, it is fresh fish that I buy, now I can't do that every week. It's very expensive. A packet that you buy, normally that was \$5 a string now it is \$30. If you compare \$30 that you are going to eat in one meal with your family with a \$4 chicken, one kilo of chicken, it is much more inexpensive to go and buy the fatty stuff. Then it comes to how you cook it, the majority of Tongans like the flavours that's in the fat, in the skin. (Interview with author, January 19, 2015).

The economic status of families impacts their consumption choices greatly. The increasing pressures of the market economy and staying competitive often means that a family's nutritional well being can be compromised. Interestingly, while the families that I stayed with had been overseas to New Zealand, Australia or America at some point, their food preferences had not changed significantly. They would, for the most part, eat traditional meals with the more common additions such as tinned fish, beef and so on. When I went to Nuku'alofa to stay with a cousin and older Aunty, born and raised in Tonga and for most of her adult life lived in New Zealand, it was evident that living overseas had influenced their diet heavily. Fresh vegetables featured considerably, imported products such as cereals, spreads, and smaller portion sizes. It is worthwhile to note, that this family was in a much better position financially and living in the capital meant that access to fresh vegetables and large supermarkets that shelved more imported goods was much easier. The socio-economic status of people obviously plays a large part in regards to consumption. It was noted by several of the people I interviewed that it was the effects of the economy and their current situation financially that determined the kind of food they would buy. Akilisi Pohiva discussed how the financial constraints Tonga has faced, and continues to face, has had a direct impact on the kind of imports that have been sent there, "It's very unfortunate, because we can't afford to buy better quality meat so they can only afford fatty meat, mutton flap and other meat from New Zealand. So, they [New Zealand] sell first class to Asian and European market". He highlighted the constraints people are faced with when they live in poverty. The food they can afford is not necessarily of any nutritional value. Instead, the cheaper, fattier and unhealthier kinds of food are consumed and contribute to the unhealthy lifestyles many Tongans live (Interview with author, January 24, 2015).

Gewertz and Errington (2010) discuss the notion that the preoccupation with meat flaps from Pacific island countries, including Tonga, is not because it is solely responsible for the current NCD crisis as there are plenty of other fatty foods that are consumed and contribute to this. Rather, unlike some of the other foods that have sociocultural meanings and are not seen as off-cuts 'dumped' on the islands as an afterthought, flaps hold no real sociocultural meaning and so "become the repository

not only of health concerns but also of postcolonial anxieties” (Gewertz and Errington 2010:146)

Furthermore, as Tonga is a part of the World Trade Organisation (WTO) and must adhere to the requirements of deregulation, it is unlikely that the government will do as Fiji did in 2000 and ban meat flaps (Gewertz and Errington 2010). The meat flaps tie Tonga to New Zealand and letting that tie go runs the risk of losing the further support of a security blanket, of sorts. There are limited alternatives to affordable protein in Tonga and ensuring the continued import of meat flaps may be a way that the government can placate their people. When I spoke to Mele she alluded to this notion and explained that when there was a push for the banning of meat flaps into Tonga one argument government representatives put forward was that it is the people’s choice. The government were not going to be the ones to take away that choice. Instead, rather than risk the wrath of the larger donor countries or a possible uprising of their people, the idea of educating the consumer was emphasised (Interview with author, January 19, 2015).

One could also say the same for the kind of cars that are imported. Barely road worthy for New Zealand or Australian roads, these cars are bought by Tongans because they are affordable and allow them to engage in modernity through this kind of conspicuous consumption (Besnier 2011) (see Figure 6.8). One’s trash is another’s treasure and Tongans take these unwanted goods and refashion them to meet their own needs.



Figure 6.8. Cars in Tonga
(Jacinta Forde)

6.2 Lifestyle

Lifestyle is more than “the way in which a person lives” (Oxford 2015) it is intricately tied up with various economic factors such as income and occupation but also includes non-economic factors such as status-seeking, cultural norms and the environment (McLennan 2015). Throughout the discourse of socio-medical and health disciplines, the term ‘lifestyle’ has been adopted to describe at risk behaviours. This positivist interpretation looks at these behaviours as discrete components that are separated from each other rather than seeing them as interacting parts of a whole. As such, factors such as the impact of economical, socio-cultural, historical and political contexts are not taken into account and an isolated problem may be solved but, more than likely, only temporarily. The isolated lifestyle factors focussed on by health disciplines are often of a medical nature and emphasise healthy behaviours and fitness. However, the notion of ‘healthy behaviour’ comes from the perspective of the biomedical paradigm that is heavily influenced by western beliefs. For many Tongans and other Pacific islanders, healthy behaviour can be more than just biological and is intrinsically tied up with the social. The way someone feels is linked not only to the biological side of things but a large part is also rooted in their social relationships.

This is similar to the connection Tongans have with spirits and the role spirits play in reducing social conflict and maintaining healthy social relationships within families and communities.

Furthermore, social exchanges are important and Tongans are a very social people who enjoy spending much of the day visiting each other and talking. This was something I noted almost immediately. In all three places I stayed, going to visit someone or having visitors come over and chat was a daily activity and one enjoyed by all. The group of ladies that would weave with Anti were often heard enjoying each other's company and stories. Sedentary activities such as these have always been a part of Tongan culture. For women it is an activity that is considered to be morally and socially appropriate demonstrated through the production and deployment of tapa or fine mats for gifting (Young-Leslie 2004). There is an emphasis on social connectedness and self when women come together to make their textiles. The women's cultural capital, "the accumulated knowledge and interpersonal connections that translate through the workings of social networks, into an enhanced social reputation or status" (Addo 2013:66) is embedded in the making and exchange of fine mats and tapa and adds to their social capital when reciprocated with praise, prestige and other *koloa* (valuables). Historically, women would get together in a group known as *kautaha* and create textiles for a central chiefly woman patron. It was an honour for commoner women to be a member in *kautaha* and along with this prestige it also allowed women to exchange their wealth with others in distant villages. This also emphasised the idea that these were modern women, engaged in influential exchanges and relationships in distant places (Addo 2013). With the increased pressure to partake in a cash economy, the *kautaha* has been replaced with *taulālanga*. This incorporates the same values as its predecessor but no longer are these *koloa* for a chiefly woman patron, instead the focus is on production and each woman gets to keep a textile for themselves at the end of the season. The social interaction and chance to be in each other's company, remains just as important as the textiles themselves (Addo 2013).

There is a distinct difference in the lifestyles of men and women in Tonga. As mentioned above, it is culturally appropriate for women to be sedentary and, for the

most part, they perform their daily activities and jobs in a seated position (Young-Leslie 2004). However, men traditionally have more physically demanding jobs, tending to gardens and performing the heavier tasks at home. The activeness of men is also demonstrated in Tongan dance, particularly the *lakalaka* and *soke* where they dance enthusiastically around the almost still woman, gracefully dancing using her hands and subtle hip and head movements. Athleticism is generally more associated with males also, with sports such as rugby included in most school curriculums. Volleyball seemed to be a popular sport around the villages in Talafo'ou. Most nights the young boys, and some girls, would practice at dusk and every Friday there was a competition. Yet, things such as wage employment, gaining prestigious social positions or acquiring titles often see these men becoming a lot more sedentary and the recipients of various food gifts (often high in calories and fat content) resulting in a more 'unhealthy' lifestyle (Young-Leslie 2004).

The pressures of partaking in the cash economy have seen a change in the lifestyles of Tongans. Living a subsistence way of life, while once feasible, is now taking a backseat to the urgency of keeping up with paying for education fees, clothes, flights, social and familial obligations. Wage work is not that easy to come by in Tonga, and even if one does have waged employment, it may just barely cover the essential costs. There has been an increase in the migration of family members overseas to make money to send back to the islands. This has also affected family structures and current trends in family size are much smaller than they used to be. A larger family with varying ages of children is desired so the children can help with chores, labour and income. Urban families and those with children born overseas are considered selfish, greedy and badly behaved. They are perceived to have lost the value of sharing because they are more individualistic and small families do not need to share to the same extent as larger ones. Fundamental values of family structures are threatened by the spatial spread of families rather than the close social unit it once was. This resonates with the thoughts of the interviewees in New Zealand about the adverse effects migration has had on family dynamics and in turn the weakening of Tongan social structure. However, for some, migration is the best answer to having a chance at succeeding in the demanding market economy. Thus, it is common for

families to be engaged in various economic ventures at one time within the formal or informal economy.

In all three families I stayed with, there was at least one person (typically male) who was in employed wage work. In 'Eua, Stanley had the sawmill, in Talafo'ou Fa'au had an office job, and in Nuku'alofa Lisa worked for Her Royal Highness (HRH). However, the families also partook in the informal economy as well as numerous other ventures. This includes activities such as making *kiekie* for people in Tonga and the diaspora overseas, creating crafts to sell at markets particularly when a cruise ship came, or selling items sent over from family in the form of remittances to be sold at the *fea'*.

I was asked to join Anti at the Tofoa *fea'* one Saturday. At five o'clock in the morning, I was awoken and we packed up the people mover with all of the goods her sister had sent from America. We arrived with many others at around six o'clock and as we drove in slowly we were surrounded by a lot of dust being disturbed by the cars slowly making their way to each stall to unload. There are large bundles on each table as you go down the aisles, covered with tarpaulin and tied down (see Figure 6.9). These are the boxes of goods or chairs that people leave at the market that they are sure will be ok and not a major loss if damaged or stolen. Once we find Anti's stall, we begin to unload the car and start hanging the boxes and boxes of clothes. Anti is very particular about which clothes take pride of place. Some other clothes stalls do not take so much care, instead people can rummage through the piles of clothes they have in large boxes. As well as clothes, anti has some dvds, video games, personal hygiene products, and some household products. These she lines up neatly on the table. A couple of Tongan mats are brought out and laid on the floor so we can sit and wait for the customers to come by. Everyone surrounding the stall is friendly and chatter starts between the ladies. Behind Anti's stall and one stall to the right is Anti's sister-in-law who persuaded Anti to start going to the *fea'*. Nola sells children's clothes and some hand-made jewellery. The crowds are relatively slow and people slowly walk the aisles, looking for a bargain. Interestingly, I noticed that there is no bargaining that occurs. Unlike in many other markets or bazaars I have been to in Asia and even New Zealand, bartering did not seem to be a feature of this *fea'*.

However, as Besnier (2011) points out, the lack of bartering is not unusual as it is considered *fakama* (shameful) to bargain. As I walked around the different stalls I noticed that a lot of the goods were American with a few from New Zealand and Australia. It seemed apparent that the prestige or status of American apparel and other products was held in high esteem. I agree with Besnier's suggestion that the *fea'* gives common folk the chance to engage in modernity at an affordable rate. That is, just coming to the *fea'* and engaging in the environment itself, can give one the feeling of being part of modernity and “maintain a link with a desirable world that transcends the boundaries of the local context” (Besnier 2011:94).



Figure 6.9. Tofoa Fea' on a Saturday morning
(Jacinta Forde)

These activities help families to meet their financial needs while simultaneously being able to continue to partake in the non-capitalist social institutions that are essential to maintain social relationships. However, a lot of these jobs still involve very little movement or physical activity and this can further impact ones health. Increasingly, people are consuming outside of the home and buying from take-away food joints, some splashing out on restaurants, or others buying from those who have made a meal in their own home and go around their village selling it to others. One example of the latter was in the late afternoon while I was at my uncles house, a woman called from outside. My uncle went to investigate and she was selling *faikekai* – a sweet dish, much like *topai* but with a sweet caramel sauce made of coconut milk and sugar (see Figure 6.10). My uncle and his family had spent the day at the port selling their crafts and were too tired to cook, so gratefully paid for six servings. This was something I did not witness last time I was in Tonga, but according to my uncle was very common lately.



Figure 6.10. Making Faikekai
(Jacinta Forde)

Given how important food is to the Tongan culture and its role in strengthening social relationships between family and community, this shift to consuming food from outside sources will no doubt start to have an impact on this aspect of Tongan culture. The process of preparing a meal involves the whole family in some way whether it be catching the food, harvesting it, preparing it, preparing the *umu*, or roasting the pig, it is done as a collective and the sharing of the meal is just one aspect of this much larger process. If you take away that process of connecting and sharing by buying food from outside, it is likely that sharing on a large scale (as is usually the case where extended family will come for the meal) will diminish because the cost to feed such a large number would be exorbitant. Thus, more than not (and from what I observed) people will more than likely buy food for their immediate family only.

Further, families are employing others to work for them as a nanny or gardener because they are too busy with working in waged employment. The young family I went to visit with my Auntie Tupou in Fasi consisted of a young girl, three years old, and her mother and father. Both parents worked at the airport and they had a nanny to look after the young girl. This can be described as “commoditization of social relations” (Besnier 2009:247) where some Tongans are buying goods and services rather than accessing these through the traditional structures of reciprocity and obligation, thus gradually breaking these structures down.

As aforementioned, families engage in multiple modes of production in order to make ends meet while also trying to fulfil social obligations. This was evident in the families I stayed with where various strategies and opportunities were taken to make money. Each family engaged in numerous ventures such as going to the *fea*, producing tapa and fine mats to sell overseas, tending to the garden for family consumption and if need for cash, waged employment in the city, tutoring children, working in a sawmill, selling crafts, making school uniforms or *puletaha* and selling them, utilising the huge sawmill truck for transporting other large items for others. This characteristic, the prestige attached to consumption and the gradual commoditization of social relations is what Besnier (2009) describes as characteristic

of an emergent middle-class in Tonga. The anxiety to balance modernity and tradition can be seen across classes and rank. While the middle-class have a desire to engage in both, for the poor they are reliant on the traditional structures of reciprocity and do not have the means to consume as many modern commodities. As for the elite and those in power, they must find ways to ensure Tonga's traditions are upheld while bringing Tonga into modernity, not only through policies but also through their own actions.

An example of this sometimes contested balance is the recent changes within the church. A steadfast fixture of Tongan life is the church. As discussed in chapter five, religious beliefs have played an integral part in Tongan culture and livelihoods. Feasts and food tributes were offered to gods to appease them and ensure a bountiful season or a good life and these customs remain important today in the heavily Christian archipelago. Church obligations are incredibly important to Tongans and a lot of the time families will give all they have. However, within some denominations changes have been made and a more western approach has been adopted when preparing feasts. 'Ofa recounts that for years, feasts consisted of layers and layers of food, high in sugar and fat, lots of fizzy drinks, decorated with cigarettes in vases and sweets. Now, there is only one layer of food, a few dishes and no cigarettes in sight. 'Ofa credits this to the work the MOH have been doing with church leaders in providing programme initiatives to promote health among their congregation (Interview with author, January 20, 2015).

Not only is the style of feasts changed but also the fierce tradition that Sunday is a holy day when no shops are opened, people stay in their homes and do not visit the beach, clubs or pubs. This day for family and reflection is being 'threatened' by the increasing pressure of modernisation. At least once a month a large cruise liner will dock at Nuku'alofa and hundreds of tourists will pile out of the huge ship and enjoy the tourist attractions. More and more people are choosing Tonga as a holiday destination. There has been a steady increase of tourists from 35,167 in 2003 to 48,188 in 2013, with the exception of 2008 that saw 50,462 tourists the year of the coronation of George Tupou V (Tongan Department of Statistics 2011). There are a number of ex-patriots that live in Tonga also. The most recent data from the 2011

census had the number of ex-patriots at 2,542 an increase from 1,766 in 2006 (Tongan Department of Statistics 2011). This increasing number of tourists has been a boost for the tourist industry and there are a number of small legitimate tourist companies around the island and others, less legitimate, seizing the opportunity to make a few *pa'anga*.

I discovered first hand just how important Sunday is when I discussed with my cousin Leka (who had come from Melbourne) the possibility of going to the beach after church on one of the hotter days during my fieldwork. We both thought this was a great plan and I proceeded to get ready and waited. I ended up waiting all day because it was eventually pointed out to me that no one goes to the beach on Sunday. So, it was with slight concern and surprise that when I stayed in Nuku'alofa with my cousin Lisa (from New Zealand) she suggested we go to Pangaimotu on Sunday. Lisa explained that Pangaimotu is a small island not far from Nuku'alofa (see Map 2), a fifteen-minute boat ride, and is a resort targeted for *palagi* ex-patriots (see Figure 6.11). That weekend, two cruise liners had docked which was unusual but due to a storm at sea it diverted one to Tonga earlier than scheduled which meant the other had to stay an extra night. Thus, the two liners arrived Saturday evening and were present Sunday. Shops remained closed, though a few tourist companies did offer their services for the 'stranded' guests. As such, Pangaimotu was very popular, a 'godsend' for one of the ships patrons. Once we arrived and settled in, it became clear that this island getaway on a Sunday was not just for *palagis*. A number of Tongans and their families were also enjoying their time on the beach. One family my cousin knew said they were there because they had a family member visiting from overseas and wanted to do something fun. This illustrates the tension between Tonga embracing more modernisation (and with it western ways) while trying to maintain tradition but still take part in capitalist ventures. The need to take family members from overseas out and about is indicative also of the anxieties and pressure felt to make sure a good time is had and that Tonga is capable of offering the same kind of excitement that its overseas counterparts boast. Visitors are treated extremely well and this again highlights the importance of social relations and kinship ties that will

no doubt come into play at various times for local Tongans who may call on the diaspora to show them the same courtesy (the fundamentals of reciprocity).



Figure 6.11. Pangaimotu
(Jacinta Forde)

When we left Pangaimotu, we went to meet up with some of Lisa’s colleagues. One colleague is from a well-known Tongan family, his friend was the coach for the national rugby sevens team and another friend was a property manager. We organised to meet at a private fishing club on the wharf. A very discrete club that was well hidden between industrial buildings. Here, alcohol was served and it was an elite club for members only, names were on a registered list and it had unusual hours based on the number of patrons that showed up. Again, it was said that this place was open for *palagis* who wanted a drink on a Sunday. According to my party, very few Tongans knew of this place. Later that evening it was evident that the Tongans who did know were of rank, as a noble entered with his entourage and enjoyed the club’s offerings. It was clear that this club was exclusive to those of high rank, social status or expatriots. A middle-class citizen would unlikely ever step into the club, unless as a member’s guest. This is in contrast to Pangaimotu where the majority of people there were middle-class Tongans or foreigners. The fishing club emphasises to me the

concept of traditionalism whereby the elite implore commoners to live traditional lifestyles and yet they indulge in western ideals themselves.

The increasing pressures and influence of modernisation and globalisation have affected the lifestyles of Tongans. The kind of work they participate in has much more of a commodity driven motivation to it. Men are moving away from the labour intensive jobs of working in gardens and providing solely for family consumption but extending now to also include the market economy and even more so waged labour in urban centres in Tonga and overseas. Women are also moving to urban centres for waged labour or selling *koloa* overseas. The increase in consumption has also impacted the kind of food that is eaten and the shift in the prestige from traditional crops to imported branded goods. Increasingly, lives are getting busier, there is not enough time to grow and maintain a garden to provide for a family, people cannot rely on the generosity of relatives, and thus the convenience of eating out or buying the more convenient and often cheaper imported food is necessary for some families constrained by their socio-economic standing (Hau'ofa 1979). Consequently, this is having dire consequences on the health of the nation.

7 Health

It is evident that changes have occurred in Tongan culture in response to modernisation and globalisation. The changing lifestyles discussed in the previous chapter have had an adverse effect on the health of the people. In this chapter I look at the disconnect between health messages and culture and the difficulties that arise because of wage labour, changes in food, perspectives on health care and poverty.

Lifestyle choices, globalisation, rapid economic growth, urbanisation and changes in the world food system all contribute to the increase in obesity, diabetes and the rising non-communicable diseases (NCDs) prevalent in Tonga and many other Pacific islands (Colagiuri, et al. 2002; Finau, et al. 1983; Foliaki and Pearce 2003; McLennan and Ulijaszek 2014; WHO 2014). Over the past couple of decades various studies have been conducted in Tonga, which highlight the alarming rate of NCDs. The most notable of these includes the early work of Finau, et al. (1983) and more recently Colagiuri, et al. (2002) and the STEPS report compiled by the Tongan Ministry of Health (MOH) and the World Health Organisation (WHO) in 2004 and 2012. Table 2 shows that over the course of four decades the prevalence of diabetes in Tonga has increased by 26.9% from 7.5% in 1973 to 34.4% in 2012 (WHO 2014).

Table 2. Prevalence of Diabetes in Tonga by Gender

Year	Male	Female	Both genders
1973**	5%	9.8%	7.5%*
2002^	12.2%	17.6%	15.1%*
2004°	16.3%	16.6%	16.4%
2012°	29.7%	38.6%	34.4%

* overall age-and sex-standardised prevalence

** fasting blood glucose ≥ 6.7 mmol/L

^ fasting blood glucose ≥ 11.1 mmol/L

° capillary whole blood value ≥ 6.1 mmol/L

In each study, women had a higher rate of diabetes than men. This is often associated with women's jobs being typically less labour intensive and more sedentary (McLennan 2015; Young-Leslie 2002; Young-Leslie 2004). The gender

disparity in diabetes rates is likely to change. The increased urbanisation across most of Tonga has meant that some men are now employed in more sedentary jobs rather than manual labour in working in gardens and rural areas. While some of these men may still have a garden to tend to, it is not their priority, and some men have younger family members tend their gardens for them.

For example, in Talafo'ou, the employment dynamics were mixed and the intensity of activity each person did varied depending on their role in the family and their work obligations. The head of the household, Lama, 80 this year, would get up every morning at the crack of dawn, attempt to rouse his grandsons and would hop on his red bicycle and make his way to the bush. Given that it was the summer holidays when I was there, the grandchildren had no school and could potentially help their grandfather. Even so, only one grandson would consistently help. The middle child of Anti, Sio was Lama's helper. Her oldest son was training to be a mechanic and would only help when he really had to, and her youngest son, Tangi, was still in High School and did domestic jobs rather than help in the bush. During my stay, a nephew was also present, Leka. Brought up by Lama and Kina, Leka lived in Australia with his father but had come back to Tonga to help out his grandparents for a couple of months. Leka would help out in the garden but also did a lot of preparing of food and was often in charge of the *umu*. Kina stayed at home and made sure everything was in order. There was also Lama and Kina's youngest son, Felisiano, who has Down syndrome. Felisiano could do small chores but for the most part stayed near his mother except for the days he would attend his special school in the city. While everyone at home had their designated jobs to keep the household running smoothly, Anti's new husband, Fa'aui had a job in the city working for the Ministry of Education Examination Unit. Fa'aui's status within the family and around the village was high because of this position. Having a nine to five job for a sector of the government was very prestigious. It seemed as if the value of having a well-respected job was as valued as having a title. However, even with the prestige attached to his job, Fa'aui would often help out where needed around the house such as cooking or helping to prepare the *umu*. Likewise with Siaola who has had a title passed down to him from his grandfather, *Ma'u Kakala*. Siaola is held in high regard by many in and

out of the village. Despite his rank, he still helps his parents when they need it but has admitted that he is not as active as he once was. He no longer coaches his son's rugby team and said that he finds himself being invited more and more to meals at people's houses whenever they need advice or help (all while giving his round belly a good slap).

Out of all the members of the household, it appeared that the older male generation had the healthiest lifestyle as evidenced by physical labour and activeness. They also tend to have slimmer and more athletic physiques. The younger generations typically engaged in wage employment or are pursuing education, both of which took them away from the home. Not only that, but alcohol and cigarettes are very popular among a lot of younger males. This is a consequence of the ease in acquiring alcohol and cigarettes in Tonga because of increased imports from overseas. A problem the minister of police, Tu'i'onetoa, expressed in his interview, January 18, 2015.

Of course they are now freely drink the young boys. When I was young you are not allowed to buy liquor only people who have license can buy liquor. Now you can buy liquor from grocery store, as long as you have age you can buy (18). But of course in my old days you don't have money to buy liquor but they use homebrew eh, they use homebrew. Now, I think the drinking here in Tonga is getting worse. Because women and boys are drinking now, the culture before if you can see a women drink that's a bad girl, now nobody cares, they drink, it's just become normal. I can see that, in the beginning of the year already two deaths from violence. One from Lapaha, probably one of your cousin's [haha]. The one in Lapaha is associated with alcohol the one in Nautoka also had alcohol involved but it was a domestic and about infidelity.

Kava ceremonies occur frequently and every now and then Lama would attend, having made a shed for kava ceremonies beside the house. Some of the younger males would attend two or three times a week. Again, Tu'i'noetoa made a point about the increase in the *kava* parties of young males. He too made a small dwelling during his campaign so the young men could have a place to drink kava. He explains how *kava* drinking has changed since he was young,

When I was young, what we do is go to a homes of a girl and ask of her parents. But now we don't do that now. Now, there are certain ladies of the village and they pay the lady fifty *pa'anga* for the night and she will serve the kava. If there is no lady, they don't drink kava much [haha]. If they don't drink the kava here in Talafo'ou, they'll go to Nautoka, see now they can, mobility is good eh. Good roads and they have the cars, they go. So, I built this place for them. (Interview with author, January 18, 2015).

While more young men are frequenting *kava* parties more often, the *kava* itself is not affecting their health negatively; rather it is the behaviour that is associated with the parties. There is still research being undertaken to establish the health issues (if any) associated with drinking *kava*, though there are claims that it lowers Body Mass Index (BMI) and causes malnutrition. However, Malani (2002) claims that *Kava* itself is not responsible for this but the fact that people do not eat during or after drinking it. Furthermore, typically the health of the drinkers is already compromised by other existing factors. Aporosa argues (interview with author, October 12, 2015) that it is not *kava* but the personal choices that these men are making that are resulting in their poor health, laziness and disgruntled family members. One of the young men in Talafo'ou who attended *kava* parties and would sleep for most of the next day. He is large and it takes a lot of persuading to get him to help others in the garden or with other labourious jobs. However, in 'Eua, my uncle Stan would also frequent *kava* parties till the small hours of the morning. He would still manage to get up (relatively early, considering the time he got in) and go straight out to the garden and work.

'Eua illustrated a different picture with most of the family participating in tending to the garden on a daily basis. The garden in 'Eua is much larger than in Talafo'ou and everyone, including in-laws and uncles, would help Stan prepare the kumara, harvest it and then prepare it. The men in 'Eua had much slimmer bodies, and I saw very few overweight men. My uncle also runs the sawmill where he employs a lot of members of the extended family as well as men from the village. This is the only source of income coming into the 'Eua household and it is an arduous and manually intensive job. This could account for the difference in men's bodies between the two villages/families. Despite this, diabetes, gout and high blood

pressure are still prevalent in ‘Eua and within the family, particularly with the women. Matavai was diagnosed with diabetes in 2003 after cutting her toe and it did not heal. In 2010 she was given pills to lower her cholesterol because she had high blood pressure. This led to her eyes becoming glycaemic and she came to New Zealand to get treatment. Since then, she continues to see her doctor and take her medication and watch what she eats. But, as aforementioned, if there is a big feast, she will often indulge and think about the consequences later. For the most part of her day she will sit and make things for the house such as *tafales* or prepare some of the food. Her adopted daughter helps around the house and with cooking. Matavai’s sister-in-law also has diabetes, high blood pressure and gout. However, unlike Matavai, Keka continues to eat everything, corned beef, lots of meat from China (sausages, *sipi*, *masima*) and her gout flares up regularly, yet she does not choose to change her diet. I argue that this could be because the illness is not internalised. An avenue I explore later in the chapter.

7.1 Traditional Health Care

In Tonga, sickness can be divided into two types; *Mahaki faka-Tonga* (Tongan sickness) and *Mahaki faka-palagi* (Western sickness). Poltorak (2010) and Wright and Breitenbach (1994) explain that Tongans see sickness as being associated with bad luck, *mala*, and good health with *manu*, good luck and success. If someone is ill it is often thought that they have done something bad to offend God (both Christian and previously the traditional gods) or the spirits, *tevolo*. This is a reason why some Tongans do not pay much attention to prevention healthcare messages because one’s destiny is perceived to be in the hand of God. Thus, if one falls ill it is seen as a result of having done something bad or a disruption in the social order of things. As such, a traditional healer who is in tune with social practices and norms within the village and embodies the essence of God is more likely to understand, through their knowledge and expertise, what remedy would heal the ailment or social disruption. As described in chapter five, the blend of traditional beliefs with Christianity has created a syncretism where traditional beliefs have been absorbed into Christianity and the ideals of society have remained the same such as the importance of social

harmony and good social relations. Spirits remain a pertinent figure in society and it is this duality that exists with the religions that helps to determine the course of action to counter the social disruption or illness.

Poltarak (2010) writes extensively on healers and their powers. Healers usually hold a Christian ethic, and are but mere instruments as their power comes through God, mirroring earlier beliefs that *mana* is bestowed on a person by a god. Thus, like *mana*, the power of healing cannot just be passed on, but the knowledge of a healer can be passed onto their kin. The efficacy of their successor is dependent on whether the efficacy is delivered through the power of God. However, more recent non-communicable diseases such as diabetes do not fall into a clear-cut category of *mahaki faka-Tonga* or *mahaki faka-palagi*. As a result, a wound that is related to diabetes may be treated traditionally because the symptoms of diabetes were (and to some degree still are) largely unknown to Tongans. Thus, a normal wound on a leg, if traditionally treated, would have boiled leaves applied to it, but one that is diabetic and, if treated traditionally, would likely develop sepsis and have to be amputated (Poltarak 2010).

Traditionally, western therapies were seen as inefficient in treating *mahaki faka-Tonga* and only a healer would suffice. Today, for some, this may still be the case, but from what I observed in my time at Talafo'ou, using both simultaneously was common. A traditional remedy would be sought initially and if, after several different avenues were explored, it was not effective, a doctor would be consulted. For some, they would take the medicine prescribed for them and still use traditional remedies to help the healing process along too. However, as noted by a couple of my participants, access to customary healers in the more urbanised island group of Tongatapu and to an extent also in 'Eua, was not as common as it once was. When I asked to speak with the village's healer, my uncle explained that the role of a healer is no longer village based, but instead has shifted to individual families. The knowledge of remedies appears to be similar to folk or home remedies that parents and grandparents pass onto their children. Participants explained that they were more inclined to go to the clinic because it was easy to access, rather than consult a renowned healer. This situation differed to the one described by the academics in

New Zealand who believed that healers were still prominent. However, I suggest that the impact of globalisation and the increased migration and movement between Tonga and beyond has resulted in an increasing disconnection between people, their families and the wider community. Transnationalism has meant that more second and third generation Tongans are being educated overseas and bring back their ideas and initiatives with them. These modern ideas and knowledge of health issues typically deem western biomedicine the better option when treating sickness. Science can now determine the cause of illness rather than turning to 'blame' spirits and social discord. This in itself is concerning, given that the social structure of Tongan society is underpinned by family and the spiritual needs of a person are essential in their overall well-being. It seems that the space that has developed within families through the increasing diaspora has affected the collective nature of society and emphasises a more individualistic system where the focus is purely the immediate family and their needs, reflecting a much more western paradigm.

When Aunty Kina got a sore eye she tried various different leaves to soothe it. She would get one of the grandkids to pick the leaves for her and she would roll them in her hands to soften them and then squeeze the liquid from them into her eye. After two days of the same routine but with different leaves, she eventually tried some eye drops from the pharmacy but continued with the leaves at the same time. It took four to five days and her eye was healed. When I asked what had happened, her daughter joked and said she had obviously annoyed one of the ancestors and they had poked her in the eye. Small wounds would often be treated with leaves. The youngest family member, Tangi, fell while riding his bike and scraped the inside of both of his legs. His mother got together the leaves she needed and gave them to Tangi to apply to his wounds. First he squeezed the liquid out, much like his grandmother had, and then dabbed the leaves on the injury. His mother told him to repeat that throughout the day. However, when Tangi was sick with a fever, he was given medicine from the pharmacy, mainly Panadol, and was kept inside to rest for three days. It seemed that for mild ailments or injuries, natural remedies were sought, but for the more serious conditions pharmaceutical products or a visit to the clinic was necessary.

Despite the fact that for the most part people would go to a clinic, the status of visiting a traditional healer seems to me, to still be of value. I think it very much depends on the generation. The older generation seemed to give more weight to the traditional practices while the younger generation seem to see modern medicine as better but still have respect for traditional practices given that the latter can do more than just heal the physical. It can also have an impact on the spiritual and social well being of the person. I think that one is not considered by all as necessarily entirely 'better' than the other, rather they are in different categories and it depends on what is needed whether they are considered superior to each other or not. Furthermore, participants told me that the situation in the outer islands is quite different; healers still have a role within villages and are more likely to be the first point of contact. They commented that this was as a result of the difficulty in accessing hospitals or clinics in their remote location. For some participants, the efficacy of customary healers is questionable but as Lord Vaea points out,

They [customary healers] are preferred because the more remote you are you can't call up a doctor or you can't go to a hospital. So a healer is preferred and is well respected in the village. Or in remote communities up north because he's there he provides some sort of assistance whether it's accurate or not is a different matter, but he's there, so he's acknowledged. A lot of them would feed you, give you some stuff, some herbal stuff and then later they find out it wasn't right but the patient needs that. The patient needs to be fussed over and that's what the healers do. They have a look at it, they say it's something else but it's ok. How often do you get a doctor to fuss over you? And this is it. Or you have to pay doctor. So the ordinary patient prefers the healer whether he's right or wrong, he feels he's been looked at and I think that's a key issue. (Interview with author, January 19, 2015).

This idea of being "fussed over" is important in a society where social connectedness is paramount and an individual's social roles and attachments are more important than the individual themselves. Again, maintaining healthy social relations and believing that the people around you care for you and your well-being is more attractive than going to visit a doctor in an environment that does not facilitate this same kind of community and respect one may be accustomed to.

7.2 Health Messages

With the ever-increasing cases of NCDs and international and local pressures, the government and the Ministry of Health have been obligated to take action. In 1995 the Tonga Healthy Weight Loss programme was set up by the Tonga National Food and Nutrition committee. This had the full support of the government, local businesses, community groups and the King who later in 1997 would initiate his own Healthy Lifestyles Programme to encourage an awareness and improvement in the four major contributing risk factors to the rise in NCDs; unhealthy diet, lack of exercise, harmful alcohol intake and tobacco smoking (Engleberger, et al. 1999). The Healthy Weight Loss programme consisted of three separate competitions that lasted between four and six months. Participants would register and weigh stations were located around the island for regular weigh in sessions. Despite the good intentions of the programme, there were complex issues that surrounded it such as participants who lost weight gained it all back and then some, the lack of funds, co-ordination, reliable equipment and the almost foreign concept of 'healthy weight' had not taken a hold in the country yet and impacted on the participants results (Engleberger, et al. 1999). One could also look at the misfit between cultures as a reason for the failure. The messages were underpinned by WHO guidelines, which are very much of a western construct. The concept of 'health' is discussed further on but it is this cultural misunderstanding that could have had a negative impact on the programme. While Tongans have a competitive streak they are a modest people who do not like to undress in front of people, let alone weigh themselves in public. Other hindrances included the difficulty of affording healthy food and social obligations to attend feasts. The class element once again crops up, given that a programme such as this would require costs in order to participate. Shoes, appropriate attire, food and travel costs are extra luxuries that many Tongans cannot afford. However, greater awareness of nutrition and fitness did occur and the atmosphere and attitude that surrounded the programmes was positive and encouraging (Engleberger, et al. 1999).

The MOH have run a number of health campaigns to raise awareness and encourage healthier lifestyle choices. Ten years ago, Vaiola Hospital in the capital

established the Non-communicable Disease (NCD) Prevention and Control Unit that focuses on primary prevention. Their aim is to target members of the general population who do not have diabetes by promoting healthy living. This stage of prevention is considered to be the most difficult by ‘Ofa because it is trying to change behaviours and attitudes which is no easy feat.

We are trying to promote healthy living, healthy lifestyle. But you know, that’s the most difficult area of prevention. But that’s what we’re doing now, we’re working together not just us ourselves from health but we are working together in partnership with stakeholders. And we already assigned my staff to various settings in the community. There is one for the church, one for school and there is one for workplaces. (Interview with author, January 20, 2015).

The initiative to work alongside the National Church Leader Forum is one that ‘Ofa views as integral to aiding in the success of increasing awareness and changing the attitudes of Tongans in regards to a healthy lifestyle. Tongans hold the church in extremely high regard, 98% of the population are Christian and 87% of people belong to the top five religious affiliations; Free Wesleyan Church, Roman Catholic, Latter Day Saints, Free Church of Tonga and Church of Tonga (Tongan Department of Statistics 2011). These different religious denominations are perceived by the MOH as a gateway to the community that allows health messages to reach even more of the general population. The various church leaders in conjunction with the MOH established one such message: *Hafakamoui* - to save a life. The church is a major focus of the Tongan way of life and feasting is a huge part of this. ‘Ofa recounts the amount of food that would be present at a church feast ten to twenty years ago.

Before, if you were here before in the past ten to twenty years, you know the church function where feast is involved, you can see when they provide food for the church congregation, you can see, especially, at their annual conference that’s a big event in every churches here in Tonga, eh. You know when you look at how they prepare the foods, they put it in layers on layers of food. All various types of food, where you get the junk food, all the unhealthy, all the fat even salt, sugary. But now, if you see what they prepare now, most recently, they prepare it in a more westernised style. Just one layer

or even just a few dishes of food, very healthy. They now avoid junk food, because before they have the soda drink, it was more of a decoration, even with the cigarettes they put it in a vase, it's like a decoration, the sweets, that's how they did it before. But now, you no longer see that junk food. It's good. You can see that there are some changes. (Interview with author, January 20, 2015).

This change, 'Ofa says, is a result of the MOH working together with church leaders and implementing 'Church Health Coordinators' who can be representative of the various denominations and coordinate with the MOH to provide programmes or initiatives within the church to promote health throughout the church's congregation.

Establishing a presence within the community through the church, schools and the workplace is a positive step in regards to the ministry trying to change the attitudes of the Tongan people when it comes to healthy living. However, it is vital that the concept of 'health', as it is understood by Tongans, is examined to ensure that the messages the MOH are trying to get across are relevant to the community. There are complexities that arise due to wage labour, changes in food consumption, the quality of imported goods, traditional healers and poverty. The health messages disseminated need to take into consideration the time constraints people may have because of their nine to five job. This affects some men's ability to tend to gardens let alone make time to be active to stay healthy. This is compounded by the fact that many Tongans are living in poverty and if they are working in any kind of wage labour which detracts from being able to cultivate crops to feed the family, it also means that affording healthier food options is not feasible.

Furthermore, given that grocery shelves are being flooded with low-nutritional food stuffs from overseas with very little regulation, the healthy choices available to people is limited. Moreover, the importance of traditional healers should not be overlooked, particularly as in some areas of the country they are still consulted and valued. They embody the importance of social well being, a priority over the physical well being of oneself. Another complexity is the gendered nature of messages. Radio messages often target the housewife who is stereotyped as doing all the cooking. However, in my experience, it is usually young men (teenagers) who are expected to cook or prepare their own food and for the household too. In Talafo'ou,

the boys played a significant role in gathering food, tending to the garden and preparing food, particularly the *umu* on Sunday. Not to say that cooking was entirely a male role, certain cooking jobs are gendered such that Anti would prepare the *lu* inside and the boys would prepare the *umu* outside. Considering the disconnect between messages and culture, working alongside healers as well as church leaders could help with ensuring that the message is not strictly from a biomedical paradigm, rather a holistic perspective that takes into account the many complexities present within Tongan society and culture.

As Wright and Breitenbach (1994) argue, any health education message, in order to be successful, needs to be culturally relevant. There needs to be an understanding of how Tongans think about what they eat, the exercise they undertake and what meaning they give to health and bodies. Food is a symbol of wealth and weight is seen as strength. In Tonga, a large body symbolises prestige and status (Young-Leslie 2002). So rather than promote the idea of ‘losing weight’ which would imply losing one’s status, Wright and Breitenbach suggest promoting ‘losing fat’ and ways to feel more energised. However, their idea of substituting food for low-fat alternatives and introducing glucose monitoring systems while feasible in America where these substitutions are readily available, may not work so well in Tonga, where healthy imported food is likely to be much more expensive than in the United States. Also, the Tongan emigrants this study is targeted at are unlikely to be able to afford their recommendations either. Tongans who go overseas to find a better job often find themselves in the same, if not a worse off situation, than when they were back home. They have difficulties in gaining employment and a place to live. Relying on relatives is common but given the everyday struggles of living in a capitalist society, the generosity of relatives is limited, as they too must make ends meet. This is compounded by the fact that the community support found in Tonga lacks the same prominence overseas. As such, emigrants can find themselves isolated and unlikely to reach out to a programme that holds no socio-cultural relevance to them.

Ironically, this study was conducted in the United States, a society that is struggling with the ever increasing obesity rates itself. Around the same time as this study a U.S. Department of Agriculture (USDA) survey was conducted and found

that Americans were eating more grain products, mixtures of meat such as hamburgers and frozen dinners, less dark green vegetables, more non-citrus juice and fizzy drinks and levels of physical activity had declined (Borrud, et al. 1996). There has been a downward trend toward saturated fats, but an increase in the intake of sugar. As such, the recommendations given by Wright and Breitenbach (1994) seem to be a revised spin on the western understanding of losing weight which may have more traction for an American audience than a Tongan one.

Young-Leslie (2002) emphasises the importance of understanding the Tongan concept of 'health. She argues that: "as a concept, 'health' is more semantically variable and polyvalent than Tongan health professionals seem to recognise and [that] the term used to translate 'health' - *mo'ui le lei* - is being re-invented to refer to cultural ways of being a good member of society, rather than its more restricted medical application" (2002:1). This resonates with the idea that spiritual and sociological needs are valued more than biological needs. Fulfilling obligations and maintaining good social relationships is the hallmark of good health. Any 'biological' issue with a person is due to some sort of social discord rather than medical. The MOH have made a concerted effort to ensure their promotions and health messages are culturally specific and relevant to Tongan people. They, for instance, involve community members such as church leaders and village chiefs who can contribute to and design the appropriate health promotion methods. It is still, to some extent, a very medical discourse that does not take into account the complexity of traditional social practices.

Similar to the women in Kauvai that Leslie-Young (2002) interviewed, and for those that I met, the definition of a healthy lifestyle promoted by the MOH does not often match the definition Tongans themselves give. In Kauvai, the villagers were selective with the parts of a health message they would adopt and/or adapt. People would do things to please the doctor or nurse but would still do what they saw fit on other occasions. This was evident in Talafo'ou and 'Eua and with the participants I spoke with who discussed how they would take the pills they were given by the doctor but when there was a social obligation or celebration where they were present, they would ignore the messages of eating healthy and partake indulgently in the feast.

This could be compared to the behaviour of people who go on diets. Quite often they will ‘fall off the wagon’ and binge eat then start a new, even better diet with faster results. However, a marked difference between those who binge eat and Tongans who indulge during a feast, is that ultimately people tend to diet to look better, it is more vanity driven. For Tongans, it is more to do with social relations and fulfilling obligations to partake in feasts. To refuse food is to offend the person who has made it and to isolate one’s self from their social relationships.

Maintaining social obligations and relations is seen as a healthy way of life and more important than biomedical definitions. As argued by Young-Leslie, health messages, “Attempt to impart a rather verbatim transliteration of western biomedical ideas about mothering, food...‘healthy’ equals ‘freedom from illness’ and biological processes are privileged over social relations” (2002:8). This corresponds with the observations of Vaka who noted the cyclical nature of the Tongan health system where social and spiritual needs are privileged over biological. Good health is associated with good social relationships, rather than ‘freedom from illness (Interview with author, October 29, 2014). Young-Leslie emphasises how the body is a reflection of status and healthy social relations. Body form is indicative of good, strong family values. So, the large body demonstrates this, whereas, losing weight or being small indicates a problem of sorts such as family distress, individual illness or loneliness because “social weight is demonstrated physically” (Young-Leslie 2002:6). It is evident that Tongan cultural constructions of health emphasise ideals and practices in line with the most important aspects of *anga-fakatonga*. The health model, thus, needs to incorporate these ideals and “reflect the fact that villagers are active agents who manipulate, re-interpret and ignore messages as they see fit” (Young-Leslie 2002:10).

This chapter has highlighted the complexities with trying to connect health messages and cultural understandings of health along with mitigating socio-cultural factors that influence the decisions and actions of Tongans. The MDG Acceleration Framework (MAF) discusses the importance of grassroots solutions; empowering farmers, producers and women and acknowledging the agency Tongans have when considering their health to help combat NCDs. It also highlights the many obstacles

that are prevalent and it is clear that there must be support and encouragement from the macro and micro level (Tonga 2013).

8 Conclusion

In the last few decades, there have been significant changes in Tonga, politically, economically and socially. There is a plethora of literature that has documented these changes and some of the effects they have had on Tongans and *anga-fakatonga*. This thesis has focused on Tongans negotiating the relationship between tradition and modernity and the impact of this on their lifestyle. Economic and political factors, social obligation and social institutions contribute to the changes that have occurred within the Tongan culture in response to the increasing presence of modernisation and globalisation.

Anga-fakatonga is alive and well in Tonga and in its diasporas. For some, tradition is a way to hold onto the past, to what was once pure, right, and divinely prescribed. For others, it is something that is fluid and adaptable, changing with the influence of outside, and in some circumstances local, influences. I discuss in chapter five the changes in traditional culture and religious practices that occurred around the 19th century. Despite the strong influence and hold Christianity has over most of Tonga, there is a kind of syncretism that has transpired and the belief in the efficacy of spirits is still prevalent for most Tongans. McGrath discusses the important role the spirits continue to play in regards to maintaining social control and “offering pragmatic solutions for ordinary problems like illnesses” (2003:42). I go further to suggest that spirits help to mitigate the transition from traditional to modern society. Spirits are invoked when the unexplainable needs an explanation. If certain aspects of modernity are considered uncharted waters, certain outcomes brought about by it are more easily explained by the work of spirits. In some respects, they could be likened to a placebo, where people believe spirits have the efficacy to soothe the pain or fear of the unknown by providing a rationalisation for anxieties brought about through modernisation. Thus, they are able to cope with the unexplainable and as such spirits continue to have a strong presence in Tongan lives. The ideals of Christianity also mirror and reinforce the power of the spirit where if one does not live in a just and holy way, thus causing social discord, then one will not enter paradise or may suffer the wrath of God; akin to the spirits of the old.

The central role that religion has in Tongan culture is evident throughout Tonga and in the large diasporic communities in New Zealand, Australia, the US and elsewhere. Maintaining a good relationship with God, nature and society is reinforced through (among other things) reciprocity, performing ceremonial rituals, sharing and feasting. However, where these activities were typically practiced in a collective manner, the demands of the market economy have meant that people have had to change their approach to some activities. For some, they no longer have the time to dedicate to such events because of wage work. Priorities have shifted to a more individualised take on certain things, and the increase in imported food has resulted in the efficiency and ease of preparing meals outweighing the nutritional value. As such, the lifestyle and health of Tongans has been adversely affected. Many authors have addressed this issue throughout the Pacific (Colagiuri et al. 2002; Evans 2001; Foliaki and Pearce 2003; Gewertz and Errington 2010; Hughes and Lawrence 2005; McLennan and Ulijaszek 2014; Snowdon 2014; Snowdon and Thow 2013; Young-Leslie 2002; Young-Leslie 2004) but the work of Besnier (2011), McLennan (2016) and Young-Leslie (2002; 2004) resonated the most with my analyses.

Something that was quite confrontational while I was in Tonga was the competitive undertone that seemed to be present in a lot of the actions of the participants I followed. Status is important in Tonga, which has always had a very hierarchal structure with the Monarch at the top. One's status can be demonstrated in a variety of ways and one way is through the kind of food one produces and shares at ceremonies or feasts. Traditionally, *'ufi* and *puaka* were among the most prestigious food but more recently with the presence of modernisation, imported goods have a new kind of status. McLennan (2016) discusses this shift and the prestige that has been attached to imported food and its association with affluence. However, it is not only food that can symbolise status but also cars, the latest technical gadgets, clothes and so on. I noticed that most people in Tonga had a smart phone of sorts, some an iPad and some people now have access to the Internet at home. The latter is still not that common and I perceived the prestige attached to it to be quite high. *Conspicuous consumption* is the term Besnier associates with this phenomenon. The need to 'show off' in a sense that you have some wealth that your neighbour does not. This was

evident during my research; the number of cars important to show that a family is well off, the achievements of family members overseas or the titles they had, or the kind of food served at meal times.

Gewertz and Errington (2010) point out that food such as *sipi* (meat flaps) hold no real sociocultural meanings, yet, they are considered a delicacy (to many Tongans) and despite its reputation as low in nutrition and a contributing factor to the ill health of Tongans, it remains an important feature of the Tongan culinary repertoire. Gewertz and Errington (2010) propose that it is linked to postcolonial anxieties, which I suggest is a result of Tonga's ties with New Zealand and perhaps not wanting to let that tie go. The meat flaps are still some sort of protein that they can easily have access to that is not overly expensive, unlike the now expensive cost of fish. I postulate further that considering the opposition to following in the footsteps of their neighbour, Fiji, and banning the flaps, the government can use flaps in some way to placate their people. Amelia noted this also in her interview when she said that one argument that the government presented was that they cannot take the choice away from the people. Instead, education was suggested so that the public could make an informed choice.

Besnier (2011) also discusses anxiety and how Tongans are anxious about modernity and all it entails. The need to be a part of the market economy but also fulfil social obligations is a balancing act that can be difficult to manage. Partaking in activities such as selling goods at the *fea* is one way that people are engaging in a cash economy but at the same time are able to maintain good social relationships and strengthen kinship ties through the remittances sent over in the form of the goods for their family member to sell. However, there is still the pressure to 'keep up with the Joneses' when it comes to revelling in the more western kind of activities that is alluring particularly to the middle-class and elite. Changes in the perceived importance and sacredness of Sunday is already taking a hold in the capital with resorts remaining open and private fishing clubs emerging to cater to the needs of foreigners and by proxy, Tongans who wish to be included in the effects of globalisation and the attraction of being able to show others you have the means to indulge just like the *palagis*.

In addition, economic status has a huge impact on the ability of Tongans to follow through with, or afford, advice from health experts or even academics who have come up with alternative ideas to ‘losing weight’ and pursuing healthier life choices (see Wright & Breitenbach 1994 and Young-Leslie 2002).

In the final chapter, I also suggest that the effects of globalisation and the individualisation inherent in capitalism has seen a shift in the importance put on customary healers (at least in the more urbanised areas of Tonga). For most of the participants I spoke to, there was a sense that the perceived efficacy of healers today is not given as much credence as its modern counterpart, clinics. Yet, the familiarity of healers and the type of care they give people is seen by some to be more important than being treated at a clinic. Having the undivided attention of a healer reinforces one’s social connectedness.

In earlier works (Bloomfield 2002; Tottenham 1999; Wright & Breitenbach 1994; Young Leslie 2002; Young-Leslie 2004) a common theme was the lack of relevant and effective health messages. During my time in Tonga it was evident that the Ministry of Health has changed tactics and is attempting a much more culturally relevant approach. Changing attitudes is a primary focus of the ministry as it tries to tackle the increasing number of Tongans being diagnosed with NCDs. However, as I argue, it is imperative that the Tongan concept of health is understood so that the messages can be effective. Being healthy is not confined to the physical definition but also ones social health. Young-Leslie (2004) concurs with this notion and suggests that the message not be an exact western replica that sees biological processes as more important than social relations. Certain parts of a health message can be taken on board also, illustrating the agency in which the people have when it comes to their health and how they identify with it. I highlight this with examples of people who have diabetes and gout and do not perceive the sickness as part of them or their body, per se. This is particularly evident when they are at a feast, ceremony, or even a small family gathering and choose to partake in the festivities, knowing they can take a pill to deal with the problem later.

I have demonstrated in this thesis the importance of looking at cultural change in a holistic manner by incorporating all aspects of society. The economy, politics, environment and social factors are embedded and intertwined in Tongan culture. Thus, a phenomenon in one undoubtedly has a ripple effect on the others. As such, globalisation, capitalism and modernisation have all had huge impacts on Tongan culture and traditions. My analysis concurs with that of Addo (2013), Besnier (2011), McLennan (2016) and Young-Leslie (2002) which emphasises the struggles Pacific Islanders engage in to balance a life where social obligations and participating in a capitalist economy are equally possible without compromising cultural beliefs and personal well-being. I also highlight the constraints and acknowledge that the socio-economic standing of individuals and families certainly goes a way towards determining how, and even if, they can manage this balancing act. The effect of these economic constraints on lifestyles is an often glossed over subject in health campaigns. I have also shown the on going importance of traditional beliefs, their place in modernity, and argued that in the case of spirits and healers in particular, their existence is crucial for people to be able to reduce the anxieties of engaging with both capitalist and traditional obligations.

Tongans exemplify the agency that indigenous groups often demonstrate whereby capitalist notions are taken on board and refashioned in such a way that traditional values and institutions remain an important aspect of life, though in some cases, in a different form. There remains, however, a precariousness people must contend with in their everyday life as they negotiate this balance. This precariousness is not limited to social structures but is also evident in bodies, especially the bodies of women as victims of diabetes. Acknowledging this fragility, and taking into consideration all the factors that have a role in influencing and shaping Tongan lives, is essential when looking at the impact that modernisation and development have had on the lifestyle and health of contemporary Tongans.

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10 Appendices

10.1 Appendix A: Ethics application (University of Waikato)

UNIVERSITY OF WAIKATO
FACULTY OF ARTS & SOCIAL SCIENCES

**HUMAN RESEARCH ETHICS COMMITTEE
APPLICATION FOR ETHICAL APPROVAL**

1. **NAME OF RESEARCHER:** Jacinta Forde
2. **PROGRAMME OF RESEARCHER:** Anthropology
3. **RESEARCHER FROM OFF CAMPUS:** N/A
4. **TITLE OF RESEARCH PROJECT:** The extent to which changes in culture and lifestyle, in particular health, exercise and diet, have had an impact on Tongan society.
5. **STATUS OF RESEARCH PROJECT:** MSocSci ANTH594-14C
6. **FUNDING SOURCE:** Masters Study Award & University of Waikato Masters Research Scholarship
7. **NAME OF SUPERVISOR:** Dr Fiona McCormack & Assoc. Professor Michael Goldsmith
8. **DESCRIPTION OF RESEARCH PROJECT**

a) Justification

The last couple of decades have seen an abundance of literature emerge on the effects development, modernisation and globalisation has had on the culture of Pacific Islanders. There has been a particular emphasise on the alarming rate at which non-communicable diseases and related

complications have increased, presumably due to changes in lifestyles (Tottenham, 1999; Poltorak, 2010; Evans, Sinclair, Fusimalohi & Liava'a, 2001; Wright & Breitenbach, 1994; Foliaki & Pearce, 2003).

A shift from a subsistence way of life to accommodate the pressures of a cash economy is associated with an increase in imported food from overseas that is typically less nutritious and is higher in fat (Evans, et al., 2001). People have less time, and less desire, to conduct subsistence agriculture and there has also been a decline in physical health due to the more sedentary orientation of new occupations. The rate of obesity and diabetes in Tonga has risen rapidly over the years and continues to grow. Diabetes, its clinical symptoms and related complications are not commonly known to most Tongans. Knowledge of diabetes is implicated in the choice of treatment and whether or not to approach a traditional healer or visit the hospital with 'westernised' treatments (Wright & Breitenbach, 1994; Poltorak, 2010).

The proposed research will investigate customary healers in Tonga, Tongan attitudes, beliefs and feelings regarding Western medical practices and, similarly, Tongan cultural understandings of diabetes. This "grass-roots" data will be linked to current information in regards to the rate of diabetes, the medical care available, current political schemes or projects in place and educational policy relating to promoting a healthy, diabetes-free, lifestyle.

b) Objectives

The aim of my research is to investigate the contradictory effects globalisation and modernisation has had on the people of Tonga, particularly in respect to illness and health. I will explore the link between shifting away from a traditional way of life and increasing ill health. I will focus, in particular, on diabetes, and more generally the cultural understandings of non-communicable diseases and their various treatments. I will look at the "fit" between these understandings and current health promotion.

c) Method(s) of information collection and analysis

This research will largely be based on qualitative data acquired through the method of participant observation and supplemented with open-ended interviews. Secondary sources such as journal articles, original documents or artefacts will also be used to support any themes or issues that present themselves during fieldwork. Following the collection of all the necessary

data, I will transcribe interviews and conduct a thematic analysis of the data collected during my fieldwork.

Participant Observation

I intend to spend four weeks conducting fieldwork in Tonga, using the method of participant observation to research the behaviour of members of my family in regards to work, leisure activities, diet, exercise and health. I will stay with different members of family in different parts of Tonga; Nuku'alofa, 'Eua, and Vava'u, for up to one week on each island and immerse myself in daily activities, gathering and preparing food, helping with children, housework, exercise, and attending any community activities such as church, sports events, or ceremonies . I will record day-to-day interactions, observations, and informal conversations by writing field notes on a daily basis which will help to highlight any themes that may need to be looked at in greater depth later or important questions that may need to be addressed (Fontein, 2013; Bryman, 2012).

Participant observation is a qualitative research method wherein the researcher *is* the primary tool and the research emphasises the culture being entered. Understanding culture as the context of research makes it a valid qualitative approach to research (Lecompteand & Schensul, 1999; Jorgensen, 1989; Bryman, 2012). As stated by Okley (2012) “knowledge can be acquired through the total experience, not primarily through the role of detached questioner” (p.80) and as a participant observer I will be able to understand and make meaningful observations of my surroundings. Therefore, the risk of inaccurate observation is greatly reduced when one participates because as Jorgensen (1989) explains “the researcher gains through subjective involvement direct access to what people think, do, and feel from multiple perspectives” (p.56). Furthermore, participating allows for family to go about their normal routine and the behaviours of participants are more likely to be ‘natural’ than ‘socially acceptable’ (Spradley, 1980; Okely, 2012; Jorgensen, 1989).

Open-Ended Interviews in New Zealand

I will begin my research in New Zealand by conducting 4-6 open-ended interviews with Tongan leaders/professionals from the Tongan community such as Dr. Okusitino Mahina, Dr. Malakai Koloamatangi, and family members. Each interview will last approximately one hour but may be subject to change to accommodate the needs of the participants. Participants

will be given an information sheet (Appendices A & B) outlining the purpose of the study and the main themes to be discussed. These interviews will be more like conversations and I will have greater flexibility to adjust the direction of the discussion to other areas of interest or significance as they present themselves from the interviewee's responses. These will guide me in the construction of further interviews to be conducted in Tonga.

The main themes discussed in the interviews will include:

- Changes in Tongan culture (perceived to be positive/negative)
- Changes in lifestyle i.e. diet, exercise etc.
- Traditional Tongan and modern western methods of healthcare
- Cultural knowledge of diabetes
- Access to traditional customary healers and medicines
- Access to western-styled medical facilities, staff and medicine

Open-ended Interviews in Tonga

I will also conduct 6-8 open-ended interviews with healthcare professionals in Tonga, traditional healer(s), Tongan government representative(s), and Noble(s). These interviews will last 30 minutes to an hour. An interview schedule is attached outlining some initial questions I would like to address (Appendices E - G) and each participant will be given an information sheet (Appendices A & C) outlining the purpose of my study and the proposed topics we will discuss.

Data Analysis: Ethnography

Once I have completed collecting my primary data through fieldwork and interviews, I will begin transcribing the interviews which will take between 50-70 hours (Bryman, 2012) and then concentrate on the thematic analysis of the fieldwork data along with the data collected through secondary sources.

d) Procedure for recruiting participants and obtaining informed consent

I intend to initially approach my family members in order to gain access as a participant observer in Tonga. I will also approach family members in New Zealand, as well as use the contacts I have at the University of Waikato to gain access to other Tongan professionals/leaders in New Zealand and in Tonga. It is hoped that family members will know of other potential participants such as traditional healers, healthcare professionals and/or

nobles that they could help put me in touch with for open-ended interviews. This process is known as snowball sampling (Bryman, 2012).

I will contact participants via telephone calls, email or face-to-face and each participant will be given an information sheet, consent form and interview schedule (Appendix A-G).

e) Procedures in which participants will be involved

While I conduct the method of participant observation, it is hoped that participants will behave as they normally would on any given day. They have the right to refuse to participate and if a participant refuses within a household I will approach another family unit.

All participants involved in open-ended interviews will have the opportunity to discuss any other topics they see relevant to the research and which may not be included in the interview schedule. They also have the right to refuse to answer any question they are not comfortable with or topic they would not like to discuss.

Interviews will be recorded with a digital recorder unless participants request otherwise. Participants will be informed that they have the right to decline being recorded or have the device stopped at any time during the interview.

I will organise a time and place for the interviews to take place that is suitable for the participants. In case that meeting with them in person is not possible, the alternative of a phone, skype or email interview will be offered.

f) Provide a copy of any research instruments to be used for, or any guidelines relating to, the collection of information from or about people

See appendices.

9. PROCEDURES AND TIME FRAME FOR STORING PERSONAL INFORMATION AND OTHER DATA AND MAINTAINING CONFIDENTIALITY OF PERSONAL INFORMATION

All personal information and raw data will be stored on a computer protected by a password that will be changed on a weekly basis, stored in a locked cupboard and handled only by me and seen by myself and my supervisor.

Once recordings have been transcribed and analysed the digital recording will be deleted from the recording device and computer.

Participants can choose to either be identified or to be anonymous. If participants choose to be anonymous, I will preserve their anonymity as far as possible but it is impossible to guarantee it fully. I will not use their name in the write up of the report and I will use pseudonyms (fake names) if necessary. Family members will be given a confidentiality agreement signed by my mother (translator) and myself that any sensitive information divulged will remain strictly confidential and used only if relevant and necessary to my research (Appendix H).

10. ETHICAL AND LEGAL ISSUES

Outline any ethical and legal issues together with proposed solutions under the following headings, as applicable:

a) Access to participants

Many of the participants are drawn from my family networks. I will also use publicly accessible information to find the names of Tongan professionals in New Zealand who may wish to participate. In addition, I will utilise the technique of snowball sampling to gather other participants. Everyone who chooses to participate will be given an information sheet and consent form and a suitable time for conducting the interview will be organised

b) Informed consent

I will ensure that all participants are well informed about my research and the ethical procedures involved. I will inform participants in the participant observation as far as possible about my research, they will also receive an information sheet for their records and I will verbalise my research project to anybody who asks (Appendix A). Those who will be interviewed will also receive an information sheet (Appendix B & C) and interview schedule (Appendix E - G) as well as two consent forms one of which will be retained for my records (Appendix D). An information sheet will also be translated into Tongan for those who do not speak English (Appendix I). For some participants who may be identifiable due to the kind of position they hold in the community or family connections, participants will be given the choice to either be identified or to be anonymous. If they choose the latter, I will emphasise that it is impossible to guarantee complete anonymity but that I will endeavour to preserve their anonymity as far as possible by using pseudonyms if necessary and not use any identifiable quotes in the write up of my report. My contact details and those of my supervisors will be on both information sheets and consent forms if participants wish to ask a question about the research.

c) *Potential risk to participants*

The publication of my thesis could cause some participants - particularly family members - stress if there is sensitive information in regards to diabetes, lifestyle, or health in general presented. To ensure they are unidentifiable I will not publish any identifiable quotes and interviews will be analysed and discussed in relation to themes. Participants will also be able to withdraw from the research up to three weeks after participating/being interviewed. I will ensure to verbally remind participants of this and it is included in the information sheet and consent form.

d) *Publication of findings*

Participants will be informed that the purpose of this research is to complete the requirements of a Masters thesis. Three hard copies will be produced and one online submission. Findings may also be used in presentations or for future journal article publications.

e) *Conflict of interest*

There is the issue of my dual role as kin and researcher. There are two main issues with this. First, relatives may feel obliged, or otherwise feel compelled, to participate and second, relatives will not take me seriously as a researcher. I will attempt to mitigate both issues. For instance, by keeping information sheets and consent forms formal and making it explicit that their participation is completely voluntary. Also, when conducting interviews I will ensure the session is more formal with little or no distractions, and the tools of a researcher will be present such as a digital recorder, notepad and pen, and interview schedule.

Another potential issue is the role of my mother as my translator. I will brief her about the importance of keeping all information confidential and will have a confidentiality agreement written up which the translator, researcher and participant can sign (Appendix L).

There is the potential that some members of the family may not wish to talk about their personal experiences or topics that may be sensitive because of the fear it will be 'leaked' to the rest of the family in the form of gossip. This may be mitigated by the confidentiality agreement and my assurance to use pseudonyms where possible and that no identifiable quotes will be included in the report to maintain confidentiality.

f) *Intellectual and other property rights*

Responses and answers of the interviews remain the property of the participants. Participants have the right to request a transcript of their interview, with my comments, be sent to them by email or post. Participants have the right to withdraw or change any responses up to three weeks after participating. They may also request some information be excluded. The option to receive a copy of the findings will also be indicated on the consent form (Appendix D).

g) *Intention to pay participants*

I do not intend to pay participants but a small 'koha' may be presented.

h) *Any other ethical or legal issue*

Participants who are officials have a higher risk of being identifiable. In this case, I will make sure the participant is aware of the risk and give them the opportunity to withdraw. If they agree to participate I will endeavour to keep their identity as confidential as possible, unless they stipulate otherwise.

i) *The Treaty of Waitangi/Cultural Sensitivity*

I am aware of the Treaty of Waitangi and am confident of my personal knowledge of Tongan culture and having a translator will enable me to treat all participants in a culturally appropriate way.

11. ETHICAL STATEMENT

State

- a) I adhere to the ethical principles of the Association of Social Anthropologists of Aotearoa New Zealand. This code stresses informed consent, truthfulness and protection of participants and is summarised in the following paragraph:

“Anthropologists’ bears responsibility for the good reputation of the discipline and its practitioners, they owe a commitment to candour and to truth in the dissemination of their research results and in the statement of their opinions as students of humanity. Their paramount responsibility is to their research participants where they must do everything in their power to protect their physical, social, and psychological welfare and to honour their dignity and privacy” (ASAANZ)

- b) Signature of applicant/s, and chief supervisor required.

12. WEBSITE

This document may be found at www.i.waikato.ac.nz >Human Research Ethics, where there is other information relevant to applying for the ethical approval of research.

.....
.....
Signature of Applicant #1

Date

.....
.....
Signature of **Chief Supervisor**

Date

Information Sheet

**UNIVERSITY OF WAIKATO
FACULTY OF ARTS & SOCIAL SCIENCES**

“The changes in culture and lifestyle that have had an impact on Tongan society”

I am an Anthropology graduate student at the University of Waikato. As part of my Masters thesis I am undertaking a research project about *the changes in culture and lifestyle that have had an impact on Tongan society*. The aim of my research is to gain some insight into the extent to which these changes have impacted, in particular, on health, exercise and diet, through the research method of participant observation and open-ended interviews. I am interested in your views about what you think are the main changes to Tongan culture and society over your lifetime. I am also interested in what you think about the kinds of healthcare, education about health, and health policies in Tonga. And, whether you think these are able to address the changes that have happened in Tongan society during the same period.

Open-Ended Interviews

I would like, if possible, to interview you. The interview will last about one hour and you will be able to bring up any topic that you think will be important to my research. I hope to record the interview so that I can better remember what you say, but I don't have to use a voice recorder if you prefer not to.

Participant Rights

Your participation in this research is completely voluntary. If you choose to participate, you have the right to:

- Refuse to answer any particular question(s).
- Ask any question(s) about the research at any time during your participation.
- Withdraw from the research up to 3 weeks after the interview.
- Decline to be audio-recorded and have the recorder stopped at anytime.
- Request that any material be erased.
- Choose to either be identified or kept anonymous.

Confidentiality

You can choose to either be identified or to be anonymous. If you choose to be anonymous, I will preserve your anonymity as far as possible but it is impossible to guarantee it fully. I will not use your name in the write up of the report and I will use

pseudonyms (fake names) if necessary. In my written work I will not use any identifiable quotes or discuss any sensitive topics with others outside of the interview. My translator, Tesei Forde, has also signed a confidentiality agreement that ensures information not be disclosed to others. All written notes will be transferred to a computer as soon as possible, along with transcriptions and other information. The computer will be protected with a password that will change frequently and which only I will have access. My supervisors and I will be the only people to see the interview data.

This research project has been approved by the Human Research Ethics Committee of the Faculty of Arts and Social Sciences. Any questions about the ethical conduct of this research may be sent to the Secretary of the Committee, email fass-ethics@waikato.ac.nz, postal address, Faculty of Arts and Social Sciences, Te Kura Kete Aronui, University of Waikato, Te Whare Wananga o Waikato, Private Bag 3105, Hamilton 3240.

Results

The results of my research will be used to complete my Masters thesis. Four copies will be produced, one of which will be accessible online. The findings may also be used in presentations or journal publications.

If you would like to take part or have any questions in regards to the research project, please feel free to contact me:

Jacinta Forde

jmf33@waikato.ac.nz
TBA (Tongan number)
Researcher

Dr. Fiona McCormack

fio@waikato.ac.nz
+64 7 838 4080 extn. 8271
Supervisor

Assoc. Professor Michael Goldsmith

mikegold@waikato.ac.nz
+64 7 838 4080
Supervisor

Information Sheet

UNIVERSITY OF WAIKATO
FACULTY OF ARTS & SOCIAL SCIENCES

“The changes in culture and lifestyle that have had an impact on Tongan society”

I am an Anthropology graduate student at the University of Waikato. As part of my Masters thesis I am undertaking a research project about *the changes in culture and lifestyle that have had an impact on Tongan society*. The aim of my research is to gain some insight into the extent to which these changes have impacted, in particular, on health, exercise and diet.

Open-Ended Interviews

I would like to conduct open-ended interviews that may last up to an hour. The interviews are like an informal conversation. I am interested in your views on what the biggest changes to Tongan culture have been, your experience and knowledge of the kinds of healthcare, education, and/or policies available in Tonga and what you see as important to address any problems that have arisen because of these changes. You are welcome to discuss any other topics you may deem relevant to the research that I may not have thought of.

Participant Rights

Your participation in this research is completely voluntary. If you choose to participate, you have the right to:

- Refuse to answer any particular question(s).
- Ask any question(s) about the research at any time during your participation.
- Withdraw from the research up to 3 weeks after the interview/participant observation.
- Decline to be audio-recorded and have the recorder stopped at anytime.
- Request that any material be erased.
- Request to either be identified or to be anonymous.

Confidentiality

You have the right to request to either be identified or to be anonymous. If you choose the latter, I will attempt to preserve your anonymity as far as possible but it is impossible to guarantee it. Your name will not be used in the write up of the report. I will use pseudonyms (fake names) if necessary. All written notes will be transferred to a computer as soon as possible, along with transcriptions and other information. The computer will be protected with a password that will change frequently and which only I will have access. My supervisors and I will be the only people to see the raw data.

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Supervisor

Assoc. Professor Michael Goldsmith

mikegold@waikato.ac.nz
+64 7 838 4080
Supervisor

Appendix C: Information Sheet – Healthcare Professionals, Government Officials &
Nobles in Tonga

Information Sheet

**UNIVERSITY OF WAIKATO
FACULTY OF ARTS & SOCIAL SCIENCES**

“The changes in culture and lifestyle that have had an impact on Tongan society”

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Open-Ended interviews

I would like to conduct an open-ended interview with you that will last about an hour. Attached is an interview schedule outlining some questions/themes I would like to address.

During the interview you are welcome to discuss any other topics you may deem relevant to the research that we may not have covered.

Participant Rights

Your participation in this research is completely voluntary. If you choose to participate, you have the right to:

- Refuse to answer any particular question(s).
- Ask any question(s) about the research at any time during your participation.
- Withdraw from the research up to 3 weeks after the interview/participant observation.
- Decline to be audio-recorded and have the recorder stopped at anytime.
- Request that any material be erased.
- Request to be identified or to be anonymous.

Confidentiality

You have the right to request to either be identified or to be anonymous. If you choose the latter, I will attempt to preserve your anonymity as far as possible but it is

impossible to guarantee it fully. Your name will not be used in the write up of the report and I will use pseudonyms (fake names) if necessary. All written notes will be transferred to a computer as soon as possible, along with transcriptions and other information. The computer will be protected with a password that will change frequently and which only I will have access. My supervisors and I will be the only people to see the raw data.

This research project has been approved by the Human Research Ethics Committee of the Faculty of Arts and Social Sciences. Any questions about the ethical conduct of this research may be sent to the Secretary of the Committee, email fass-ethics@waikato.ac.nz, postal address, Faculty of Arts and Social Sciences, Te Kura Kete Aronui, University of Waikato, Te Whare Wananga o Waikato, Private Bag 3105, Hamilton 3240.

Results

The results of my research will be used to complete my Masters thesis. Four copies will be produced, one of which will be accessible online. The findings may also be used in presentations or journal publications.

If you would like to take part or have any questions in regards to the research project, please feel free to contact me:

Jacinta Forde

jmf33@waikato.ac.nz
TBA (Tongan number)
Researcher

Dr. Fiona McCormack

fio@waikato.ac.nz
+64 7 838 4080 extn. 8271
Supervisor

Assoc. Professor Michael Goldsmith

mikegold@waikato.ac.nz
+64 7 838 4080
Supervisor

**UNIVERSITY OF WAIKATO
FACULTY OF ARTS & SOCIAL SCIENCES**

PARTICIPANT CONSENT FORM

Research Aim: To investigate the extent to which changes in culture and lifestyle, in particular health, exercise and diet, have had an impact on Tongan society.

I have received a copy of the Information Sheet describing the research project and understand that:

- My participation is voluntary.
- I can ask further questions about the research at any time during my participation.
- I can withdraw my participation at any time up to three weeks after the interview.
- I do not have to answer questions unless I am happy to talk about the topic.
- I can stop the interview at any time.
- I can ask to have the recording device turned off at any time.
- The researcher will, to the best of her ability, keep my identity confidential in the presentation of the research findings.
- All information will be stored and secured in a locked cupboard or computer accessible by password.
- The researcher and her supervisors will be the only people to see the raw data.
- I can request to be identified or kept anonymous but that total anonymity cannot be guaranteed.

When I sign this consent form, I will retain ownership of my interview, but I give consent for the researcher to use the interview for the purposes of the research outlined in the Information Sheet.

Please complete the following checklist. Tick [✓] the appropriate box for each point.	YES	NO
<i>I wish to remain anonymous.</i>		
<i>I wish to view the transcript of the interview.</i>		
<i>I wish to receive a copy of the findings.</i>		

Participant :	_____	Researcher :	Jacinta Forde
Signature :	_____	Signature :	_____
Date :	_____	Date :	_____
Contact Details :	_____	Contact Details :	_____
	_____		_____
	_____		_____

Appendix E: Interview Schedule – Tongan Customary Healers

Open-Ended Interview Schedule

This schedule outlines some of the topics I would like to discuss with you during our interview. You do not have to answer every question and feel free to discuss any other topics you consider relevant to the research not covered in this schedule.

1. What are the biggest changes you have seen in recent years in regards to the health of Tongans and Tongan culture?
 - What do you see are the reasons behind these changes?
2. Has there been a change in the kind of illnesses you treat now compared to maybe 20-50 years ago?
 - What kind of change?
3. What is your understanding of diabetes?
 - Did diabetes ‘exist’ before?
4. If someone comes to you with symptoms of diabetes, how would you treat them?
5. What do you see as the causes of diabetes?
6. How do you view the hospital care in Tonga?
7. What are the major differences between how you treat your patients and how the hospital may treat them?
8. Can western practices and traditional Tongan practices work together?
 - How/Why not?

Appendix F: Interview Schedule – Tongan Healthcare Professionals

Open-Ended Interview Schedule

This schedule outlines some of the topics I would like to discuss with you during our interview. You do not have to answer every question and feel free to discuss any other topics you consider relevant to the research not covered in this schedule.

1. What are the biggest changes you have seen in recent years in regards to the health of Tongans and Tongan culture?
 - What do you see as the reasons behind these changes?
2. What facilities/medicine/treatment/education is provided in Tonga for diabetes?
3. How do the hospital and healthcare professionals view traditional healing?
4. What are the biggest obstacles you face as a nurse/doctor when treating patients?
5. Are there any new types of conditions presenting for treatment compared to years ago?
6. Has diabetes been a problem in the past?
7. Who is most susceptible to diabetes?

Open-Ended Interview Schedule

This schedule outlines some of the topics I would like to discuss with you during our interview. You do not have to answer every question and feel free to discuss any other topics you consider relevant to the research not covered in this schedule.

1. What are the biggest changes you have seen in recent years in regards to the health of Tongans and Tongan culture?
 - What do you see as the reasons behind these changes?

2. What is being done to address the issue of obesity and the increasing number of Tongans with diabetes? (*e.g. schemes, drugs, education, funds, clinics, community programmes etc.*)
 - What are the current schemes that are in place? Any future schemes forecast?
 - What kind of drugs are available? From where are they sourced?
 - What kind of education is available about diabetes and other related illnesses?
 - Are there any community programmes or clinics?
 - What are the obstacles (if any)?

3. Do you think the attitudes of Tongan's toward their health and their way of life will ever change? (*incl. body image, nutrition, exercise etc.*)

Appendix H: Confidentiality Agreement

Confidentiality Agreement

It is understood and agreed to that the below identified discloser of confidential information may provide certain information that is and must be kept confidential. To ensure the protection of such information, and to preserve any confidentiality, it is agreed that

1. The Confidential Information to be disclosed can be described as and includes:

Any information in regards to sensitive family issues, relationships, feelings or opinions about others in the family, or health problems that the interviewee divulges in confidence to the researcher (Jacinta Forde) and translator (Tesei Forde).

2. The researcher and translator agree not to disclose any confidential information obtained from the discloser to anyone without prior consent from the identified discloser.

3. If any of the provisions of this Agreement are found to be unenforceable, the remainder shall be enforced as fully as possible and the unenforceable provision(s) shall be deemed modified to the limited extent required to permit enforcement of the Agreement as a whole.

WHEREFORE, the parties acknowledge that they have read and understand this Agreement and voluntarily accept the duties and obligations set forth herein.

Recipient of Confidential Information (Researcher and Translator):

Name: Jacinta Forde & Tesei Forde

Signature:

Date:

Discloser of Confidential Information:

Name:

Signature:

Date:

(Adapted from: <http://www.ipwatchdog.com/tradeseecret/simple-confidentiality-agreement/>)

**UNIVERSITY OF WAIKATO
FACULTY OF ARTS & SOCIAL SCIENCES**

***"Ko E Ngaahi Liliu 'I He 'Ulungaanga Fakafonua Mo E To'ongamo'ui 'Oku 'Iai
Ha'ane Faka'ai'ai Ki He Sosaieti 'O Tonga"***

'Oku ou lolotonga fakakaungatamaki he 'Univesiti 'o Waikato 'i he tafa'aki ako ki he 'ulungaanga fakafonua mo e sosaieti, pea ko e konga 'o 'eku ako ki hoku mata'i tohi MA 'oku ou fai ai e ki'i fakatotolo ko 'eni 'o kau ki he ngaahi liliu 'oku hoko ki he 'ulungaanga fakafonua mo 'e nau to'ongamo'ui 'a e sosaieti 'o Tonga. Ko e taumu'a 'o e ki'i fakatotolo ni ke ma'u ha visione pe ko ha fakakaukau 'oku toe fa'ataa ange ki he ngaahi liliu ko ia kuo hoko,,, ka e tautautefito ki he ngaahi liliu 'oku hoko ki he Tu'unga Mo'uilelei, Fakamalohisino o e Kai pe me'atokoni. Pea 'e fou pe 'eni 'i hono sio'i mo ha faka'eke'eke fakatu'upakee (open-ended interviews) 'o kinautolu 'e fie kau ki he fakatotolo ni, 'i he 'e nau agafai angamaheni (normal life) pe 'a nautolu kae 'ikai ke 'uluaki fa'u mo fokotu'utu'u ki mu'a. 'E fu'u mahu'inga kia te au 'a ho'o sio (views) pe vakai ki he ngaahi liliu lahi taha kuo 'osi hoko ki he 'ulungaanga fakafonua 'o Tonga. Ko e anga ho'o to'ongamo'ui mo ho'o tui (beliefs) ta'e toeveiveiua ki he tu'unga Mo'uilelei (health) mo e Ako (education) pea mo ha ngaahi lao 'oku fokotu'u 'i Tonga mo ia 'oku ke sio 'e 'aonga ke fai ha sio kiai ki ha fa'ahinga palopalema 'oku mapuna hake tu'unga he ngaahi liliu ko 'eni kuo hoko.

Kapau 'e lava pe teke loto fiemalie ki ai, teu fokotu'utu'u pe ha fa'ahinga faka'eke'eke fakatu'upakee nai pe ta'epalani'i mahalo nai na'a a'u pe 'o houa 'e taha. Kae kehe lolotonga 'o 'eta faka'eke'eke teke tau'ataina kakato pe koe keke toe vahevahe mai mo ha ngaahi 'ulu'i taumu'a 'oku ke pehe 'oku totonu ke kau 'i he 'eta faka'eke'eke ka na'e 'ikai ke ta lave ki ai 'i he fakatotolo ni.

Tokotaha Faka'eke'eke Mo 'Ene Totonu

Ko ho'o loto ko ia keke kau pe 'ikai ki he fakatotolo ni, 'oku ke tau'ataina pe, kapau teke fili keke kau ki ai, pea 'oku 'iai ho'o totonu keke :-

- ke 'oua teke tali ha fa'ahinga fehu'i 'oku 'ikai teke loto ki ai.
- 'eke ha fa'ahinga fehu'i 'o kau ki he fakatotolo ni ha fa'ahinga taimi pe lolotonga ho'o kau ki he fakatotolo ni
- fakafisi mei he fakatotolo ni 'o a'u pe ki he uike 3 ho'o kau ki he fakatotolo ni
- fakafisi pe ta'ofi hano lekooti letioo pe tepi ha fa'ahinga taimi pe 'oku ke loto ki ai

- tamate'i ha fa'ahinga me'a ne lekooti ki mu'a

Ala Falala'anga Pe Fefalala'aki

'Oku ou tui mo fakapapau heni ki he lelei taha 'oku ou ma'u, ko e kotoa e ngaahi me'a mo ho'o kau ki he fakatotolo ni 'e malau'i ia mo ta'e'ilo ki ai. He'ikai teu faka'aonga'i ha ngaahi kupu'i lea pe me'a ne talanoa'i pe ngaahi fetalanoa'aki pelepelengesi mo kinautolu 'i tu'a he faka'eke'eke. Ko 'eku toko taha liliu leaa, Tesei Forde, 'oku ne 'osi fakamo'oni foki mo ia he aleapau ni kuopau kene fakapapau'i he'ikai ke mama ki tu'a e ngaahi fakamatala mo ha ngaahi me'a ki ha taha kehe. He 'ikai 'asi ho hingoa 'i ha ngaahi lipooti 'e tohi 'a mui, pea teu faka'aonga'i pe ha ngaahi hingoa heliaki 'oka fiema'u. Koe ngaahi talakae tohi moe tohinima kotoa 'e hiki kotoa ia ki he komipiuta he taimi vave taha pe fakataha mo e ngaahi fakamatala kotoa pe, pea ko e komipiuta ko ia 'oku malu'i ia 'aki e ngaahi fika fakapulipuli(password) pea 'e lava pe ke liliu ma'u pe ka ko au pe teu 'ilo ki ai pe ma'u ha mafai ki ai. 'A ia ko au pe mo 'eku kau tokoni te ma 'ilo ki he ngaahi me'a 'oku lekooti.

Ko e fakatotolo mo e fekumi ko 'eni 'oku ou fai, kuo fakangofua ia mei he Human Research Ethics Committee of the Faculty of Arts and Social Science. Kapau 'e 'iai ha fie'ilo pe fehu'i fekau'aki mo e makatu'unga mo e mo'oni'ime'a 'o e fakatotolo ko 'eni pea 'oku 'ataa keke tohi ki he Sekelitali 'o e Komiti 'i he 'imeili ko 'eni, fassethics@waikato.ac.nz pe ko e tu'asila ko 'eni 'i lalo, FACULTY OF ARTS AND SOCIAL SCIENCES, TE KURA KETE ARONUI, UNIVERSITY OF WAIKATO, TE WHARE WANANGA O WAIKATO, Private Bag 3105, Hamilton 3240.

Ola

Ko e ola 'o 'eku fakatotolo ni, 'e faka'aonga'i ia ke fakakakato'aki hoku mata'itohi MA, ko e tatau 'e 4 'e paaki, ko e taha 'e lava ke mamata'i pe hu ki ai he ngaluoape (online) pea ko e ngaahi ma'u fakamatala pea mo e 'ilo fo'ou, mahalo na'a lava mo ia ke faka'aonga'i ki hono faka'ali'ali (presentation) pe ko e ngaahi media 'a e papilika (journal publication).

Kapau 'oku fie fehu'i pe 'iai ha me'a teke fie'ilo ki ai 'o kau ki he ki'i fakatotolo ni, pea ke kataki 'o fetu'utaki mai ki he ngaahi fetu'utaki ko 'eni.

Jacinta Forde

jmf33@waikato.ac.nz

TBA (Tongan number)

Researcher

Dr. Fiona McCormack

fio@waikato.ac.nz

+64 7 838 4080 extn. 8271

Supervisor

Assoc. Professor Michael Goldsmith

mikegold@waikato.ac.nz

+64 7 838 4080

Supervisor

Participant :	_____	Researcher :	Jacinta Forde
Signature :	_____	Signature :	_____
Date :	_____	Date :	_____
Contact Details :	_____		

10.2 Appendix B: Letter of formal approval (University of Waikato)

Philosophy Programme
School of Social Sciences
Faculty of Arts and Social
Sciences
Te Kura Kete Aronui
The University of Waikato
Private Bag 3105
Hamilton 3240
New Zealand

Phone +64 7 838 4466 ext
6131
E-mail
rmwalker@waikato.ac.nz
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THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato

Jacinta Forde
Dr Fiona McCormack
Associate Professor Michael Goldsmith

Anthropology Programme

25 September 2014

Dear Jacinta

Re: FS2014-34 The extent to which changes in culture and lifestyle, in particular health, exercise and diet, have had an impact on Tongan society.

Thank you for sending me your amendments. This letter is to confirm that you have formal ethical approval.

I wish you well with your research.

Kind regards,

Ruth Walker
Chair
Faculty of Arts and Social Sciences Human Research Ethics Committee.

10.3 Appendix C: Ethics Memo

Department of Anthropology
Faculty of Arts and Social
Sciences
*Te Kura Kete Aronu*The
University of Waikato
Private Bag 3105
Hamilton, New Zealand

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THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato

MEMO

To	Dr. Julie Barbour (FASS Human Research Ethics Committee)	From	Jacinta Forde
CC	Dr. Fiona McCormack	Date	11 December 2015
Subject	Notification of additional research reporting		

Dear Dr. Barbour,

In addition to the research activities for which I received ethical approval (FS2014-34), I also generated a three-post blog to report my research activities and early findings to my participants.

During the course of my fieldwork in Tonga in January of this year, I started an online blog that supplemented my fieldnotes and was co-developed with research participants. This blog outlined some of the activities I participated in with my research participants and some of their views and opinions on the topics we talked about. Photos were also included that I had taken. In total there were three posts, each post a summary of the week's events. The largest co-contributor was my key informant, Siaola Tangifua.

The blog came about on site and in conjunction with participants. As such, it became a way of disseminating the themes that were evident throughout my research to the participants. It also gave them an opportunity to read my feedback as well as give their own feedback on my observations. All research participants had access to the blog. Once my fieldwork in Tonga ended, the blog ceased to be used and cannot be publicly accessed.

Kind regards,

Jacinta Forde

10.4 Appendix D: Ethics application (Tonga)

APPLICATION FORM FOR ETHICAL APPROVAL OF HEALTH RESEARCH PROJECT (TONGA)

PART I : BASIC INFORMATION

1. Full Project Title **The extent to which changes in culture and lifestyle, in particular health, exercise and diet, have had an impact on Tongan society.**

2. Short Project Title **The impact of cultural change on Tongan lifestyles and health.**

3. Lead Principal Investigator's Name and Position **Jacinta Forde, Researcher.**

4. Address of Lead Investigator

389A Dey Street, Hamilton, NZ

Work ph
Home ph
Fax
E-mail

+642102670173 (NZ)
+6767710940 (Tonga)

--

jmf33@students.waikato.ac.nz

5. Lead Investigator's qualifications and experience in past 5 years (relevant to proposed research)

2012 - 2013: BSocSci in Anthropology

2014 - present: MSocSci in Anthropology (with a specific focus on the Pacific: ANTH594)

6. Co-Investigators' name(s) and position(s)

A Ma'ukakala - Nima Tapu

B Fa'au'i Taumolo - Senior Education Officer, Evaluation and Assessment Unit, Ministry of Education and Training.

7. Address of co-investigator A

Talafo'ou

Work ph
Home ph
Fax
E-mail

+6768701239
+67631365

--

mau_kakala@hotmail.com

8. Address of co-investigator B

Talafo'ou

	Work ph	+6767782854
	Home ph	
	Fax	
	E-mail	

9. Address of co-investigator C

N/A	Work ph	
	Home ph	
	Fax	
	E-mail	

10. Address of co-investigator D

N/A	Work ph	
	Home ph	
	Fax	
	E-mail	

11. Where this is supervised work

- 11.1 Supervisor's name
Position
Day time phone number

Dr. Fiona McCormack
HOD of Anthropology Dept. Waikato University
+64 7 838 4080 extn. 8271

11.2 Signature of supervisor (where relevant)

Declaration: I take responsibilities for all ethical aspects of the project.

Fiona McCormack

12. List any other Ethics Committees to which this project has been submitted and attach their letters of approval where available.

University of Waikato (Please see file attached to this email)

13. Proposed starting date (dd/mm/yy)	10/01/2015
14. Proposed finishing date (dd/mm/yy)	05/02/2015
15. Duration of Project (mm/yy)	1 month (in Tonga), 12 months in total
16. Proposed final report date (mm/yy)	15/07/2015

UNDERTAKINGS

1. In signing the application form, all applicants **UNDERTAKE** that they will:

Take all reasonable actions to ensure that the Ministry of Health (Tonga)'s contribution to the research is suitably acknowledged in all publications.
Ensure that all research papers (based wholly or partly upon the research will be forwarded to the Ministry of Health (Tonga) upon publication.
Not enter into any commercial enterprise that will, in any way, allow the commercial exploitation of any knowledge gained as a result of this research without first obtaining the Ministry of Health (Tonga)'s authority in writing.

I have read the conditions above and, if this application is successful, I agree to abide by them. I shall be actively engaged in the day-to-day control of the project.

Signature of Lead Investigator:  Date: 28/01/2015

2. In signing the application form, the **Head of Department UNDERTAKES** that, in relation to any Research resulting from the application, he or she will:

Not benefit personally from any equity interests (substantive or by rights, options or otherwise) as a result of the commercial exploitation of this research to be funded without first obtaining the Ministry of Health (Tonga)'s consent in writing.

I have read the undertakings detailed above and, if this application is successful, I agree to abide by them. I confirm that I have read and support this application and I agree to this research being carried by members of my department, and that all necessary licenses and approvals from my Department/Institution have been obtained.

Signature of Head of Department:  Date: 28/01/2015

PART II : PROJECT SUMMARY

PART II: PROJECT SUMMARY

1. Multicentre Proposals

1.1 Is this a multicentre study? (If no, go to question 2) Yes No

1.2 Has the protocol been submitted to any other ethics committees? Yes No

2. Scientific Assessment

Has this project been scientifically assess by independent review? Yes No
If yes, by whom? (Name and position) A copy of the report should also be attached.

If no, is it intended to have the project scientifically assessed, and by whom?

By Dr. Fiona McCormack, University of Waikato.

3. Lay Summary of Research (200 words maximum, in lay language)

(Include research objectives, principal methodologies, and potential health impacts)

The aim of my research is to investigate the extent in which the changes in Tongan culture and lifestyle have had an impact on Tongans lives, in particular their health. I will utilize the method of participant observation to conduct field research in Tonga within my family network. Gaining an inside look into how my family go about their day-to-day activities, the food they eat and how they prepare it, as well as having conversations with them about the past and now, will help to give me the rich data needed when doing ethnographic research. Participant observation along with semi-structured interviews with health professionals, government officials and nobles, will also help to give my findings more depth, as well as the use of secondary sources such as journal articles and literature already available.

Given the nature of my research, there is no foreseen health impacts for those involved, other than the possibility that this research raises more awareness about the potential impacts these changes in culture have had on Tongan's lives.

PART III: PROJECT DETACT

SCIENTIFIC BASIS

1. Aims of Project

1.1 What is the hypothesis/research question(s)?

Changes in Tongan culture have brought about massive change in lifestyle behaviours. To what extent have these changes in lifestyle, in particular health, exercise and diet, impacted on my family in Tonga and by extrapolation on Tongan society?
What have been some reasons for shifting away from a traditional way of life?
What are the effects these changes have had in a social and cultural context?

1.2 What are the specific aims of the project?

The aim of my research is to investigate the contradictory effects globalisation and modernisation has had on the people of Tonga, particularly in respect to illness and health. I will explore the link between shifting away from a traditional way of life and increasing ill health. I will focus, in particular, on diabetes, and more generally the cultural understandings of non-communicable diseases and their various treatments. I will look at the “fit” between these understandings and current health promotion.

2. Scientific Background of the Research

The last couple of decades have seen an abundance of literature emerge on the effects development, modernisation and globalisation has had on the culture of Pacific Islanders. There has been a particular emphasise on the alarming rate at which non-communicable diseases and related complications have increased, presumably due to changes in lifestyles (Tottenham, 1999; Poltorak, 2010; Evans, Sinclair, Fusimalohi & Liava’a, 2001; Wright & Breitenbach, 1994; Foliaki & Pearce, 2003).

A shift from a subsistence way of life to accommodate the pressures of a cash economy is associated with an increase in imported food from overseas that is typically less nutritious and is higher in fat (Evans, et al., 2001). People have less time, and less desire, to conduct subsistence agriculture and there has also been a decline in physical health due to the more sedentary orientation of new occupations. The rate of obesity and diabetes in Tonga has risen rapidly over the years and continues to grow. Diabetes, its clinical symptoms and related complications are not commonly known to most Tongan’s. Knowledge of diabetes is implicated in the choice of treatment and whether or not to approach

a traditional healer or visit the hospital with 'westernised' treatments (Wright & Breitenbach, 1994; Poltorak, 2010).

The proposed research will investigate customary healers in Tonga, Tongan attitudes, beliefs and feelings regarding Western medical practices and, similarly, Tongan cultural understandings of diabetes. This "grass-roots" data will be linked to current information in regards to the rate of diabetes, the medical care available, current political schemes or projects in place and educational policy relating to promoting a healthy, diabetes-free, lifestyle.

3. Participants

3.1 How many participants is it intended to recruit?

6 - 8 participants for open-ended interviews and two families in Tonga (*Eua and Talafo'ou).

3.2 How will potential participants be identified?

3.3 How will participants be recruited? (e.g. advertisements, notices)

Many of the participants are drawn from my family networks. I will also use publicly accessible information to find the names of Tongan professionals in New Zealand and Tonga who may wish to participate. In addition, I will utilise the technique of snowball sampling to gather other participants. Everyone who chooses to participate will be given an information sheet and consent form and a suitable time for conducting the interview will be organised (Appendices A & B)

I will contact participants via telephone calls, email or face-to-face and each participant will be given an information sheet, consent form and interview schedule (Appendices A - E).

3.4 Briefly describe the inclusion/exclusion criteria of participants

Participants can choose to either be identified or to be anonymous. If participants choose to be anonymous, I will preserve their anonymity as far as possible but it is impossible to guarantee it fully. I will not use their name in the write up of the report and I will use pseudonyms (fake names) if necessary. Family members will be given a confidentiality agreement signed by my mother (translator) and myself that any sensitive information divulged will remain strictly confidential and used only if relevant and necessary to my research (See Appendix F).

Responses and answers of the interviews remain the property of the participants. Participants have the right to request a transcript of their interview, with my comments, be sent to them by email or post. Participants have the right to withdraw or change any responses up to three weeks after participating. They may also request some information

be excluded. The option to receive a copy of the findings will also be indicated on the consent form (See Appendix B)

4. Study Design

- 4.1 Describe the study design (Include methodology, methods for obtaining information as well as methods of analysis.)

This research will largely be based on qualitative data acquired through the method of participant observation and supplemented with open-ended interviews. Secondary sources such as journal articles, original documents or artefacts will also be used to support any themes or issues that present themselves during fieldwork. Following the collection of all the necessary data, I will transcribe interviews and conduct a thematic analysis of the data collected during my fieldwork.

Participant Observation

I intend to spend four weeks conducting fieldwork in Tonga, using the method of participant observation to research the behaviour of members of my family in regards to work, leisure activities, diet, exercise and health. I will stay with different members of family in different parts of Tonga; Nuku'alofa, Talafo'ou and 'Eua for up to one week on each island and immerse myself in daily activities, gathering and preparing food, helping with children, housework, exercise, and attending any community activities such as church, sports events, or ceremonies. I will record day-to-day interactions, observations, and informal conversations by writing field notes on a daily basis which will help to highlight any themes that may need to be looked at in greater depth later or important questions that may need to be addressed (Fontein, 2013; Bryman, 2012).

Participant observation is a qualitative research method wherein the researcher *is* the primary tool and the research emphasises the culture being entered. Understanding culture as the context of research makes it a valid qualitative approach to research (Lecomteand & Schensul, 1999; Jorgensen, 1989; Bryman, 2012). As stated by Okley (2012) "knowledge can be acquired through the total experience, not primarily through the role of detached questioner" (p.80) and as a participant observer I will be able to understand and make meaningful observations of my surroundings. Therefore, the risk of inaccurate observation is greatly reduced when one participates because as Jorgensen (1989) explains "the researcher gains through subjective involvement direct access to what people think, do, and feel from multiple perspectives" (p.56). Furthermore, participating allows for family to go about their normal routine

and the behaviours of participants are more likely to be 'natural' than 'socially acceptable' (Spradley, 1980; Okely, 2012; Jorgensen, 1989).

Open-ended Interviews in Tonga

I will conduct 6-8 open-ended interviews with healthcare professionals in Tonga, traditional healer(s), Tongan government representative(s), and Noble(s). These interviews will last 30 minutes to an hour. An interview schedule is attached outlining some initial questions I would like to address (Appendices C - E) and each participant will be given an information sheet (Appendices A) outlining the purpose of my study and the proposed topics we will discuss.

Data Analysis: Ethnography

Once I have completed collecting my primary data through fieldwork and interviews, I will begin transcribing the interviews which will take between 50-70 hours (Bryman, 2012) and then concentrate on the thematic analysis of the fieldwork data along with the data collected through secondary sources.

Describe any methods for obtaining information. Attach questionnaires and interview guidelines.

The main themes discussed in the interviews will include:

- Changes in Tongan culture (perceived to be positive/negative)
- Changes in lifestyle i.e. diet, exercise etc.
- Traditional Tongan and modern western methods of healthcare
- Cultural knowledge of diabetes
- Access to traditional customary healers and medicines
- Access to western-styled medical facilities, staff and medicine

(See also appendices C - E)

4.2 Who will carry out the research procedures?

The primary researcher, Jacinta Forde.

4.3 Where will the research procedure take place?

Nuku'olofa, Talafo'ou and 'Eua.

4.4 If blood tissue or body fluid samples are to be obtained, state type, use access to frequency, number of samples, total volume, means of storage and labeling length of proposed storage and method of disposal.

N/A

- 4.5 Will data or other information be stored for later use in a future study? **Yes** **No**

If yes, explain how.

Participants will be informed that the purpose of this research is to complete the requirements of a Masters thesis. Three hard copies will be produced and one online submission. Findings may also be used in presentations or for future journal article publications.

- 4.6 Will any samples go out of Tonga? **Yes** **No**
- If so where, and for what purpose?

5. Risks and Benefits

- 5.1 What are the benefits to research participants of taking part?

The benefits are simply that they can contribute to a study that hopes to add to the literature already out there about the increase of NCD's in Tonga with up-to-date information and data that will hopefully reach those in Tonga and outside of Tonga, informing them with validated information about this important issue.

- 5.2 How do the research procedures differ from standard treatment procedures? N/A

- 5.3 What are the physical or psychological risks, or side effects to participants or third parties? Describe what action will be taken to address and minimize any such risks or side effects.

The publication of my thesis could cause some participants - particularly family members - stress if there is sensitive information in regards to diabetes, lifestyle, or health in general presented. To ensure they are unidentifiable I will not publish any identifiable quotes and interviews will be analysed and discussed in relation to themes. Participants will also be able to withdraw from the research up to three weeks after participating/being interviewed. I will ensure to verbally remind participants of this and it is included in the information sheet and consent form.

- 5.4 What arrangements will be made for monitoring and detecting adverse outcomes? The researcher's contact detail in Tonga and in New Zealand will be on the information sheet and consent form. Participants will also write their details on these forms also so the researcher has the opportunity to get in touch after the fact.

- 5.5 Will any potential toxins, mutagens or textatogens be used? **Yes** **No**

If **yes**, specify and outline the justification for their use.

5.6 Will any radiation or radioactive substances be used? Yes No

5.7 What facilities/procedures and personnel are there for dealing with emergencies? **N/A**

5.8 Will any drugs be administered for the purposes of this study? Yes No

6. Expected outcomes or impacts of research

6.1 What is the potential significance of this project for improved health care for Tongans and non-Tongans and for the advancement of knowledge?

By utilising the indigenous knowledge of the elders within my family, previous themes discussed by other authors such as the work of traditional healers (Poltorak, 2010; Wright & Breitenbach, 1994), attitudes, beliefs and feelings towards Western practices and knowledge of diabetes can be expanded on. Up-to-date information in regards to the rate of diabetes, the medical care available and the current attitude toward their lifestyle can be researched and discussed through an anthropological perspective within the theoretical framework of the anthropological political economy. In turn, this new information can be made available to Tongans in Tonga and outside of Tonga to perhaps raise more awareness of the impacts that changes in their culture and lifestyle have had on their health and provide them with some further knowledge on how to tackle the issue of rising NCD's in the Tongan community.

6.2 What steps will be taken to disseminate the research results?

Participants will be informed that the purpose of this research is to complete the requirements of a Masters thesis. Three hard copies will be produced and one online submission. Findings may also be used in presentations or for future journal article publications.

PART IV : BUDGET AND USE OF RESOURCES

7. Budget

7.1 How will the project be funded?

Masters Study Award & University of Waikato Masters Research Scholarship.

7.2 Does the researcher, the host department or the host institution have any financial interest in the outcome of this research? If so, please give details.

No.

7.3 Will the researcher personally receive payment according to the number of participants recruited, or a lump sum payment or any other benefit to conduct the study? If so, please specify.

No.

7.4 What other research studies is the lead investigator currently involved with?

None.

8. Financial Costs and Payment to Participants

8.1 Will there be any financial cost to the participant? Give examples including travel.
None foreseen.

8.2 Will the study/drug/treatment continue to be available to the participant after the study ends?

Yes	No	Na
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If **yes**, will there be a cost, and how will this be met?

8.3 Will any payments be made to participants or will they gain materially in other ways from participating in this project? Yes No

If **yes**, please supply details.

9. Compensation for Harm Suffered by Participants

9.1 What type of injury/adverse consequence resulting from participation in the trials has the manufacturer or distributor undertaken to cover?

N/A

10. Information and Consent

Consent should be obtained in writing unless there are good reasons for the contrary. If consent is not to be obtained in writing the justification should be given and the circumstances under which consent is obtained should be recorded. Attach a copy of the information sheet and consent form.

10.1 By whom, and how will the project be explained to potential participants?

10.2 When and where will the explanation be given?

I will ensure that all participants are well informed about my research and the ethical procedures involved. I will inform participants in the participant observation as far as possible about my research, they will also receive an information sheet for their records and I will verbalise my research project to anybody who asks (Appendix A). Those who will be interviewed will also receive an information sheet (Appendix B & C) and interview schedule (Appendix E - G) as well as two consent forms one of which will be retained for my records (Appendix D). An information sheet will also be translated into Tongan for those who do not speak English (Appendix I). For

some participants who may be identifiable due to the kind of position they hold in the community or family connections, participants will be given the choice to either be identified or to be anonymous. If they choose the latter, I will emphasise that it is impossible to guarantee complete anonymity but that I will endeavour to preserve their anonymity as far as possible by using pseudonyms if necessary and not use any identifiable quotes in the write up of my report. My contact details and those of my supervisors will be on both information sheets and consent forms if participants wish to ask a question about the research.

10.3 Will a competent interpreter be available if required?

Yes.

10.4 How much time will be allowed for the potential participant to decide about taking part?

Participants have the right to withdraw or change any responses up to three weeks after participating. They may also request some information be excluded. The option to receive a copy of the findings will also be indicated on the consent form (Appendix B).

10.5 Will the participants be capable of giving consent themselves? If not, to whom will the project be explained and who will give consent?

In the situation that participants are not capable of giving consent, their guardian or a next of kin may be asked to give consent on their behalf. The project will be explained the same way to the alternative consenting person either in Tongan or English and written.

10.6 In what form (written, or oral) will consent be obtained? If oral consent only state reasons.

Information sheets and consent forms will be given to participants and explained in both English and Tongan (if necessary) by the researcher and translator (See appendix A - B)

10.7 Are participants in clinical trials to be provided with a card confirming their participation, medication and contact phone number of the principal investigator?

N/A

11. Confidentiality and Use of Results

11.1 How will data including audio and videotapes, be handled and stored to safeguard confidentiality (both during and after completion of the research project)?

11.2 What will be done with the raw data when the study is finished?

11.3 How long will the data from the study be kept and who will be responsible for its safekeeping?

11.4 Who will have access to the raw data and/or clinical records during, or after the study?

All personal information and raw data will be stored on a computer protected by a password that will be changed on a weekly basis, stored in a locked cupboard and handled only by me and seen by myself and my supervisor.

Once recordings have been transcribed and analysed the digital recording will be deleted from the recording device and computer.

The raw data will remain the property of the University of Waikato for upto 5 years after the completion of the Masters and accessed only by my supervisor or others with the authority within the Anthropological department.

12. **Ethical Issues**

12.1 Describe and discuss any ethical issues arising from this project, other than these already dealt with in your answer?

Participants who are officials have a higher risk of being identifiable. In this case, I will make sure the participant is aware of the risk and give them the opportunity to withdraw. If they agree to participate I will endeavor to keep their identity as confidential as possible, unless they stipulate otherwise.

Appendix A: Information Sheet – Healthcare Professionals, Government Officials &
Nobles in Tonga

Information Sheet

**UNIVERSITY OF WAIKATO
FACULTY OF ARTS & SOCIAL SCIENCES**

“The changes in culture and lifestyle that have had an impact on Tongan society”

I am an Anthropology graduate student at the University of Waikato. As part of my Masters thesis I am undertaking a research project about *the changes in culture and lifestyle that have had an impact on Tongan society*. The aim of my research is to gain some insight into the extent to which these changes have impacted, in particular, on health, exercise and diet. I am interested in hearing about your views on what the biggest changes to Tongan culture have been, your experience and knowledge of healthcare, education, and/or policies available in Tonga and what you see as important to address any problems that have arisen because of these changes.

Open-Ended interviews

I would like to conduct an open-ended interview with you that will last about an hour. Attached is an interview schedule outlining some questions/themes I would like to address.

During the interview you are welcome to discuss any other topics you may deem relevant to the research that we may not have covered.

Participant Rights

Your participation in this research is completely voluntary. If you choose to participate, you have the right to:

- Refuse to answer any particular question(s).
- Ask any question(s) about the research at any time during your participation.
- Withdraw from the research up to 3 weeks after the interview/participant observation.
- Decline to be audio-recorded and have the recorder stopped at anytime.
- Request that any material be erased.
- Request to be identified or to be anonymous.

Confidentiality

You have the right to request to either be identified or to be anonymous. If you choose the latter, I will attempt to preserve your anonymity as far as possible but it is impossible to guarantee it fully. Your name will not be used in the write up of the report and I will use pseudonyms (fake names) if necessary. All written notes will be transferred to a

computer as soon as possible, along with transcriptions and other information. The computer will be protected with a password that will change frequently and which only I will have access. My supervisors and I will be the only people to see the raw data.

This research project has been approved by the Human Research Ethics Committee of the Faculty of Arts and Social Sciences. Any questions about the ethical conduct of this research may be sent to the Secretary of the Committee, email fass-ethics@waikato.ac.nz, postal address, Faculty of Arts and Social Sciences, Te Kura Kete Aronui, University of Waikato, Te Whare Wananga o Waikato, Private Bag 3105, Hamilton 3240.

Results

The results of my research will be used to complete my Masters thesis. Four copies will be produced, one of which will be accessible online. The findings may also be used in presentations or journal publications.

If you would like to take part or have any questions in regards to the research project, please feel free to contact me:

Jacinta Forde

jmf33@waikato.ac.nz
+6767710940
Researcher

Dr. Fiona McCormack

fio@waikato.ac.nz
+64 7 838 4080 extn. 8271
Supervisor

UNIVERSITY OF WAIKATO
FACULTY OF ARTS & SOCIAL SCIENCES

PARTICIPANT CONSENT FORM

Research Aim: To investigate the extent to which changes in culture and lifestyle, in particular health, exercise and diet, have had an impact on Tongan society.

I have received a copy of the Information Sheet describing the research project and understand that:

- My participation is voluntary.
- I can ask further questions about the research at any time during my participation.
- I can withdraw my participation at any time up to three weeks after the interview.
- I do not have to answer questions unless I am happy to talk about the topic.
- I can stop the interview at any time.
- I can ask to have the recording device turned off at any time.
- The researcher will, to the best of her ability, keep my identity confidential in the presentation of the research findings.
- All information will be stored and secured in a locked cupboard or computer accessible by password.
- The researcher and her supervisors will be the only people to see the raw data.
- I can request to be identified or kept anonymous but that total anonymity cannot be guaranteed.

When I sign this consent form, I will retain ownership of my interview, but I give consent for the researcher to use the interview for the purposes of the research outlined in the Information Sheet.

Please complete the following checklist. Tick [✓] the appropriate box for each point.	YES	NO
<i>I wish to remain anonymous.</i>	<input type="checkbox"/>	<input type="checkbox"/>
<i>I wish to view the transcript of the interview.</i>	<input type="checkbox"/>	<input type="checkbox"/>
<i>I wish to receive a copy of the findings.</i>	<input type="checkbox"/>	<input type="checkbox"/>

Participant :	Researcher :
Signature :	Signature : Jacinta Forde
Date :	Date :
Contact Details :	Contact Details : +6767710940
_____	_____
_____	_____

Appendix C: Interview Schedule – Tongan Customary Healers

Open-Ended Interview Schedule

This schedule outlines some of the topics I would like to discuss with you during our interview. You do not have to answer every question and feel free to discuss any other topics you consider relevant to the research not covered in this schedule.

1. What are the biggest changes you have seen in recent years in regards to the health of Tongans and Tongan culture?
 - What do you see are the reasons behind these changes?
2. Has there been a change in the kind of illnesses you treat now compared to maybe 20-50 years ago?
 - What kind of change?
3. What is your understanding of diabetes?
 - Did diabetes 'exist' before?
4. If someone comes to you with symptoms of diabetes, how would you treat them?
5. What do you see as the causes of diabetes?
6. How do you view the hospital care in Tonga?
7. What are the major differences between how you treat your patients and how the hospital may treat them?
8. Can western practices and traditional Tongan practices work together?
 - How/Why not?

Appendix D: Interview Schedule – Tongan Healthcare Professionals

Open-Ended Interview Schedule

This schedule outlines some of the topics I would like to discuss with you during our interview. You do not have to answer every question and feel free to discuss any other topics you consider relevant to the research not covered in this schedule.

1. What are the biggest changes you have seen in recent years in regards to the health of Tongans and Tongan culture?
 - What do you see as the reasons behind these changes?
2. What facilities/medicine/treatment/education is provided in Tonga for diabetes and other NCD's?
3. How do the hospital and healthcare professionals view traditional healing?
4. What are the biggest obstacles you face as a nurse/doctor when treating patients?
5. Are there any new types of conditions presenting for treatment compared to years ago?
6. Has diabetes (and other NCD's) been a problem in the past?
7. Who is most susceptible to diabetes (and other NCD's)?
8. In your opinion, what do you think the attitude of Tongan's is towards diabetes and other NCD's?
9. What do you see for the future of Tongan's in regards to their culture and lifestyle?

Appendix E: Interview Schedule – Tongan Government Officials/Nobles

Open-Ended Interview Schedule

This schedule outlines some of the topics I would like to discuss with you during our interview. You do not have to answer every question and feel free to discuss any other topics you consider relevant to the research not covered in this schedule.

1. What are the biggest changes you have seen in recent years in regards to the health of Tongans and Tongan culture?
 - What do you see as the reasons behind these changes?

2. What is being done to address the issue of obesity and the increasing number of Tongans with diabetes? (*e.g. schemes, drugs, education, funds, clinics, community programmes etc.*)
 - What are the current schemes that are in place? Any future schemes forecast?
 - What kind of drugs are available? From where are they sourced?
 - What kind of education is available about diabetes and other related illnesses?
 - Are there any community programmes or clinics?
 - What are the obstacles (if any)?

3. Do you think the attitudes of Tongan's toward their health and their way of life will ever change? (*incl. body image, nutrition, exercise etc.*)

Appendix F: Confidentiality Agreement

Confidentiality Agreement

It is understood and agreed to that the below identified discloser of confidential information may provide certain information that is and must be kept confidential. To ensure the protection of such information, and to preserve any confidentiality, it is agreed that

1. The Confidential Information to be disclosed can be described as and includes:

Any information in regards to sensitive family issues, relationships, feelings or opinions about others in the family, or health problems that the interviewee divulges in confidence to the researcher (Jacinta Forde) and translator (Tesei Forde).

2. The researcher and translator agree not to disclose any confidential information obtained from the discloser to anyone without prior consent from the identified discloser.

3. If any of the provisions of this Agreement are found to be unenforceable, the remainder shall be enforced as fully as possible and the unenforceable provision(s) shall be deemed modified to the limited extent required to permit enforcement of the Agreement as a whole.

WHEREFORE, the parties acknowledge that they have read and understand this Agreement and voluntarily accept the duties and obligations set forth herein.

Recipient of Confidential Information (Researcher and Translator):

Name: Jacinta Forde & Tesei Forde

Signature:

Date:

Discloser of Confidential Information:

Name:

Signature:

Date:

(Adapted from: <http://www.ipwatchdog.com/tradeseecret/simple-confidentiality-agreement/>)

UNIVERSITY OF WAIKATO
FACULTY OF ARTS & SOCIAL SCIENCES

*"Ko E Ngaahi Liliu 'I He 'Ulungaanga Fakafonua Mo E To'ongamo'ui 'Oku 'Iai
Ha'ane Faka'ai'ai Ki He Sosaieti 'O Tonga"*

'Oku ou lolotonga fakakaungatamaki he 'Univesiti 'o Waikato 'i he tafa'aki ako ki he 'ulungaanga fakafonua mo e sosaieti, pea ko e kongā 'o 'eku ako ki hoku mata'i tohi MA 'oku ou fai ai e ki'i fakatotolo ko 'eni 'o kau ki he ngaahi liliu 'oku hoko ki he 'ulungaanga fakafonua mo 'e nau to'ongamo'ui 'a e sosaieti 'o Tonga. Ko e taumu'a 'o e ki'i fakatotolo ni ke ma'u ha visionē pe ko ha fakakaukau 'oku toe fa'ataa ange ki he ngaahi liliu ko ia kuo hoko,, ka e tautautefito ki he ngaahi liliu 'oku hoko ki he Tu'unga Mo'uilelei, Fakamalohisino o e Kai pe me'atokoni. Pea 'e fou pe 'eni 'i hono sio'i mo ha faka'eke'eke fakatu'upakee (open-ended interviews) 'o kinautolu 'e fie kau ki he fakatotolo ni, 'i he 'e nau agafai angamaheni (normal life) pe 'a nautolu kae 'ikai ke 'uluaki fa'u mo fokotu'utu'u ki mu'a. 'E fu'u mahu'inga kia te au 'a ho'o sio'(views) pe vakai ki he ngaahi liliu lahi taha kuo 'osi hoko ki he 'ulungaanga fakafonua 'o Tonga. Ko e anga ho'o to'ongamo'ui mo ho'o tui(beliefs) ta'e toeveiveiua ki he tu'unga Mo'uilelei (health) mo e Ako (education) pea mo ha ngaahi lao 'oku fokotu'u 'i Tonga mo ia 'oku ke sio 'e 'aonga ke fai ha sio kiai ki ha fa'ahinga palopalema 'oku mapuna hake tu'unga he ngaahi liliu ko 'eni kuo hoko.

Kapau 'e lava pe teke loto fiemalie ki ai, teu fokotu'utu'u pe ha fa'ahinga faka'eke'eke fakatu'upakee nai pe ta'epalani'i mahalo nai na'a a'u pe 'o houa 'e taha. Kae kehe lolotonga 'o 'eta faka'eke'eke teke tau'ataina kakato pe koe keke toe vahevahe mai mo ha ngaahi 'ulu'i taumu'a 'oku ke pehe 'oku totonu ke kau 'i he 'eta faka'eke'eke ka na'e 'ikai ke ta lave ki ai 'i he fakatotolo ni.

Tokotaha Faka'eke'eke Mo 'Ene Totonu

Ko ho'o loto ko ia keke kau pe 'ikai ki he fakatotolo ni, 'oku ke tau'ataina pe, kapau teke fili keke kau ki ai, pea 'oku 'iai ho'o totonu keke :-

- ke 'oua teke tali ha fa'ahinga fehu'i 'oku 'ikai teke loto ki ai.
- 'eke ha fa'ahinga fehu'i 'o kau ki he fakatotolo ni ha fa'ahinga taimi pe lolotonga ho'o kau ki he fakatotolo ni
- fakafisi mei he fakatotolo ni 'o a'u pe ki he uike 3 ho'o kau ki he fakatotolo ni
- fakafisi pe ta'ofi hano lekooti letioo pe tepi ha fa'ahinga taimi pe 'oku ke loto ki ai
- tamate'i ha fa'ahinga me'a ne lekooti ki mu'a

Ala Falala'anga Pe Fefalala'aki

'Oku ou tui mo fakapapau heni ki he lelei taha 'oku ou ma'u, ko e kotoa e ngaahi me'a mo ho'o kau ki he fakatotolo ni 'e malau'i ia mo ta'e'ilo ki ai. He'ikai teu faka'aonga'i ha ngaahi kupu'i lea pe me'a ne talanoa'i pe ngaahi fetalanoa'aki pelepelengesi mo kinautolu 'i tu'a he faka'eke'eke. Ko 'eku toko taha liliu leaa, Tesei Forde, 'oku ne 'osi fakamo'oni foki mo ia he aleapau ni kuopau kene fakapapau'i he'ikai ke mama ki tu'a e ngaahi fakamatala mo ha ngaahi me'a ki ha taha kehe. He 'ikai 'asi ho hinga' 'i ha ngaahi lipooti 'e tohi 'a mui, pea teu faka'aonga'i pe ha ngaahi hinga heliaki 'oka fiema'u. Koe ngaahi talakae tohi moe tohinima kotoa 'e hiki kotoa ia ki he komipiuta he taimi vave taha pe fakataha mo e ngaahi fakamatala kotoa pe, pea ko e komipiuta ko ia 'oku malu'i ia 'aki e ngaahi fika fakapulipuli(password) pea 'e lava pe ke liliu ma'u pe ka ko au pe teu 'ilo ki ai pe ma'u ha mafai ki ai. 'A ia ko au pe mo 'eku kau tokoni te ma 'ilo ki he ngaahi me'a 'oku lekooti.

Ko e fakatotolo mo e fekumi ko 'eni 'oku ou fai, kuo fakangofua ia mei he Human Research Ethics Committee of the Faculty of Arts and Social Science. Kapau 'e 'iai ha fie'ilo pe fehu'i fekau'aki mo e makatu'unga mo e mo'oni'ime'a 'o e fakatotolo ko 'eni pea 'oku 'ataa keke tohi ki he Sekelitali 'o e Komiti 'i he 'imeili ko 'eni, fassethics@waikato.ac.nz pe ko e tu'asila ko 'eni 'i lalo, FACULTY OF ARTS AND SOCIAL SCIENCES, TE KURA KETE ARONUI, UNIVERSITY OF WAIKATO, TE WHARE WANANGA O WAIKATO, Private Bag 3105, Hamilton 3240.

Ola

Ko e ola 'o 'eku fakatotolo ni, 'e faka'aonga'i ia ke fakakakato'aki hoku mata'itohi MA, ko e tatau 'e 4 'e paaki, ko e taha 'e lava ke mamata'i pe hu ki ai he ngaluope (online) pea ko e ngaahi ma'u fakamatala pea mo e 'ilo fo'ou, mahalo na'a lava mo ia ke faka'aonga'i ki hono faka'ali'ali (presentation) pe ko e ngaahi media 'a e papilika (journal publication).

Kapau 'oku fie fehu'i pe 'iai ha me'a teke fie'ilo ki ai 'o kau ki he ki'i fakatotolo ni, pea ke kataki 'o fetu'utaki mai ki he ngaahi fetu'utaki ko 'eni.

Jacinta Forde

jmf33@waikato.ac.nz
 TBA (Tongan number)
 Researcher

Dr. Fiona McCormack

fio@waikato.ac.nz
 +64 7 838 4080 extn. 8271
 Supervisor

Participant :	_____	Researcher :	Jacinta Forde
Signature :	_____	Signature :	_____
Date :	_____	Date :	_____
Contact Details :	_____		

Appendix H: Consent Form - Translated

UNIVERSITY OF WAIKATO
FACULTY OF ARTS & SOCIAL SCIENCES

PARTICIPANT CONSENT FORM

Research Aim: To investigate the extent to which changes in culture and lifestyle, in particular health, exercise and diet, have had an impact on Tongan society.

TAUMU'A E FAKATOTOLO:- Ke fakatoto'I ke toe loloto ange pe ko fe 'a e ngaahi liliu kuo hoko ki he 'ulungaanga fakafonua mo e to'onga mo'ui tautautefito ki he mo'ui lelei, fakamalohisino mo e me'atokoni, pe ko e ha ha'ane uestia 'I he sosaieti 'o e Tonga.

I have received a copy of the Information Sheet describing the research project and understand that:

'I he poloseki fakatoto ni kuo ma'u 'a e tatau mo hono ngaahi fakamatalaa pea 'oku ou 'osi mahino'I 'a hono ngaahi taumu'a 'o hange ko 'eni:-

- My participation is voluntary.
- Ko 'eku kau ki he fakatoto ni ko 'eku fili tau'atania(pe volenitia) pe ia 'a 'aku.
- I can ask further questions about the research at any time during my participation.
- Pea 'oku ngofua kia te au keu fehu'I ha fa'ahinga fehu'I lolotoange 'o fekau'aki mo 'eku kau ki he fakatoto 'oku fai.
- I can withdraw my participation at any time up to three weeks after the interview.
- 'E ngofua pe kia te au keu kaniseli pe ta'ofi 'eku kau atu ki he fakatoto ni 'I ha fa'ahinga taimi pe 'o a'u ki he vaha'a taimi ko e uike 'e tolu hili 'o hoku faka'eke'eke.
- I do not have to answer questions unless I am happy to talk about the topic.
- 'E ngofua pe kia te au ke 'oua teu tali ha ngaahi fehu'I tuku kehe kapau 'oku ou fiemalie keu lave pe lea 'o kau ki he taumu'a pe topiki ko ia.
- I can stop the interview at any time.
- 'E lava pe ngofua pe keu ta'ofi 'a e faka'eke'eke 'I ha fa'ahinga taimi pe.
- I can ask to have the recording device turned off at any time.
- 'E lava pe ngofua keu talaange pe kole ke tamate'I 'a e tepi lekooti pe me'a hiki 'I ha fa'ahinga taimi pe.
- The researcher will, to the best of her ability, keep my identity confidential in the presentation of the research findings.
- Ko e fatongia tu'upau ia 'a e toko taha faka'eke'eke, 'I he'ene lelei tahaa, kene tauhi mo malu'I ke malu 'a hoku ongoongo 'o ka fakaha pe lau 'a e ngaahi me'a ne ma'u mei he fakatoto ni.

- All information will be stored and secured in a locked cupboard or computer accessible by password.
- Ko e ngaahi ola mo e ngaahi me'a kotoa ne ma'u mei he fakatotolo ko 'eni,,, kuopau ke tauhi malu ia 'o loka'I 'I he kopate malu pe komipiuta kuo 'osi 'iai hano hinga fakapulipuli pe password 'oku 'ikai 'ilo ki ai ha taha tuku kehe 'a e tokotaha fakatotolo.
- The researcher and her supervisors will be the only people to see the raw data.
- Ko e tokotaha fakatotolo pe mo 'ene tokoni fale'I 'e ngofua kena sio he ngaahi fakamatala kuo tanaki mei he faka'eke'eke pe fakatotolo ni.
- I can request to be identified or kept anonymous but that total anonymity cannot be guaranteed.
- 'E malava keu fiema'u ke fakamo'oni'I ha me'a pe tuku pe ke 'oua na'a fakaha ha ngaahi me'a ka ko e taimi lahi 'oku 'ikai fa'a malava.

When I sign this consent form, I will retain ownership of my interview, but I give consent for the researcher to use the interview for the purposes of the research outlined in the Information Sheet. Ka hili 'eku fakamo'oni 'I he foomu ni, 'oku ou kei ma'u pe 'a e totonu ki he'eku fakamatala 'I he faka'eke'eke ni, ka 'oku fakangofua'I 'a e taha fakatotolo kene faka'aonga'I 'a hoku faka'eke'eke ki he ngaahi 'uhinga 'oku ha atu 'I 'olunga.

Please complete the following checklist. Tick [✓] the appropriate box for each point.	YES 'IO	NO 'IKAI
Kataki ka ke fakakakato 'eni pe tiki I he puha ho to'omatau		
<i>I wish to remain anonymous. 'Oku ou loto ke 'oua na'a 'ilo ha taha ko au.</i>		
<i>I wish to view the transcript of the interview. 'Oku ou loto keu sio mo lau 'a e ngaahi fakatotolo mo e faka'eke'ekee 'I he 'osi hoku f'aka'eke'eke.</i>		
<i>I wish to receive a copy of the findings. 'Oku ou loto keu ma'u ha tatau 'o e ngaahi fekumi pe fakatotolo ni.</i>		

Participant :	Researcher :
Signature :	Signature :
Date :	Date :
Contact Details :	Contact Details :
_____	_____
_____	_____
_____	_____

Appendix I: Interview Schedule - Translated

Open-Ended Interview Schedule

This schedule outlines some of the topics I would like to discuss with you during our interview. You do not have to answer every question and feel free to discuss any other topics you consider relevant to the research not covered in this schedule.

Ko e ngaahi me'a pe topiki 'e fokotu'u atu 'Oku ou loto ke vahevahe mo koe lolotonga e faka'eke'eke. 'Oku 'iai pe ho'o totonu tau'ataina 'a 'au ke 'oua teke tali ha fahu'I 'o kapau 'oku 'ikai teke loto ki ai ka 'oka 'iai ha ngaahi me'a pe taumu'a 'e felave'I pe tokoni kihe fakatotononi 'e lelei 'aupito keke lave ki ai.

1. What are the biggest changes you have seen in recent years in regards to the health of Tongans and Tongan culture?

Ko e ha e ngaahi liliu lahi taha kuo ke mataa pe sio ki ai kuo hoko ki he tu'unga mo'ui 'a e kakai Tongaa mo ho nau 'ulungaanga fakafonua he ngaahi ta'u kuo hili?

- What do you see are the reasons behind these changes?
- Koe ha 'a e ngaahi tefito'I 'uhinga ki he ngaahi liliu ko 'eni 'I ho'o vakai pe 'a 'Au?

2. Has there been a change in the kind of illnesses you treat now compared to maybe 20-50 years ago?

Kuo 'iai nai ha liliu 'I he ngaahi mahaki 'oku ke faito'o he taimi ni 'o fakatatau ki he ngaahi ta'u 'e uongofulu ki he nimangofulu kuohili ?

- What kind of change?
- Ko e ha e liliu ko ia?

3. What is your understanding of diabetes?

Ko e ha 'a e mahino 'oku ke ma'u 'o kau ki he Suka

- Did diabetes 'exist' before?
- Na'e 'osi ma'u e Suka ki mu'a?

4. If someone comes to you with symptoms of diabetes, how would you treat them?

Ka 'iai ha taha 'e ha'u kia koe mo e ngaahi faka'ilonga 'oku ne fokoutua pe ma'u 'a e Suka, koe ha ho'o faito'o pe me'a 'e fai ki ai?

5. What do you see as the causes of diabetes?
Ko e ha ho'ō vakai ki he 'uhinga 'oku ne fakatupu ai e Suka?

6. How do you view the hospital care in Tonga?
Ko e ha nai ha'ō vakai mo ha'ō fakamatala ki he ngaue 'a e falemahaki 'a Tonga ni?

7. What are the major differences between how you treat your patients and how the hospital may treat them?
Ko e ha ha faikehekehe 'I ha'ō faito'ō ha ni'ihi 'e koe pe, mo hano faito'ō ki nautolu 'I he falemahaki?

8. Can western practices and traditional Tongan practices work together?
'E lava pe malava nai ke ngaue fakataha 'a e faito'ō fakatongaa pea mo e faito'ō fakauesite pe fakapalangi ?
 - How/Why not?
 - Anga fefe/ Ko e ha 'e 'ikai lava ai?

Appendix J: Confidentiality Agreement - Translated

Confidentiality Agreement

It is understood and agreed to that the below identified discloser of confidential information may provide certain information that is and must be kept confidential. To ensure the protection of such information, and to preserve any confidentiality, it is agreed that

'Oku ou mahino'I pea loto ki ai ki he ngaahi ma'u'anga fakamatala kotoa 'I lalo mo e ngaahi alaa me'a kotoa 'e tauhi ia ke malu ke 'oua na'a mama ki tu'a. Ke fakapapu'I 'oku malu'I 'a e ngaahi ma'u'anga fakamatala kotoa mo tauhi malu ia 'o hange ko I a kuo fai ki ai 'a e felotoi.

1. The Confidential Information to be disclosed can be described as and includes:

Ko e ngaahi ma'u'anga fakamatala 'oku 'ikai loto ke fakahaha 'e fakamatala'I pehe ni atu ia:

Any information in regards to sensitive family issues, relationships, feelings or opinions about others in the family, or health problems that the interviewee divulges in confidence to the researcher (Jacinta Forde) and translator (Tesei Forde).

'Ilonga ha fa'ahinga ma'u'anga fakamatala pe talanoa ki ha palopalema fakafamili, pe vaa, pe ko ha ongo pe koha ngaahi fakakaukau fakatautaha ki ha ni'ihii 'I ha family, pe tu'unga mo'ui lelei pe palopalema pe fokoutua 'I he familiti 'e totonu ke tauhi ia 'e he toko taha fakatotolo(Jacinta Forde) mo e toko taha fakatonulea(Tesei Forde) ke 'oua na'a mama ki tu'a pe 'ilo ki ai ha taha.

2. The researcher and translator agree not to disclose any confidential information obtained from the discloser to anyone without prior consent from the identified discloser.

'Oku fokotu'u heni ko e tokotaha fakatotolo mo e toho taha fakatonulea kuo na loto mo fakamo'oni he 'ikai te na vahevahe 'a e ngaahi fakamatala kuo ma'u mei he kau faka'eke'eke ki ha taha tatau ai pe pe ko hai ta'e mau ha ngofua mei he toho taha na'e faka'eke'eke.

3. If any of the provisions of this Agreement are found to be unenforceable, the remainder shall be enforced as fully as possible and the unenforceable provision(s) shall be deemed modified to the limited extent required to permit enforcement of the Agreement as a whole. 'Okapau leva e iai ha ngaahi founa 'oe felotolotoi he 'ikai hano ola pe ikuna. Koe me'a leva 'e hoko koe toe feinga ha founa makehe ange ke lava ai ha felotolotoi fakakatoa kihe taumu'a 'oku fai ki ai ae feinga.

WHEREFORE, the parties acknowledge that they have read and understand this Agreement and voluntarily accept the duties and obligations set forth herein.

KO IA AI, 'I he vaha'a 'o e ongo tafa'akii kuo na 'osi lau mo mahino'I pea loto lelei mo tali 'I he felotoi tau'ataina pe 'a kita ki he ngaahi tu'utu'uni mo e ngaahi lao kuo fokotu'u atu 'I heni.

Recipient of Confidential Information (Researcher and Translator):

Name: Jacinta Forde & Tesei Forde

Signature:

Date:

Discloser of Confidential Information:

Name:

Signature:

Date:

10.5 Appendix E : Letter of formal approval (Tonga)

Tonga National Health Ethics and Research Committee



Kingdom of Tonga

Phone Number :(676) 23200 Ext. 1424

Fax: (676) 24291

Ministry of Health
P.O Box 59, Vaiola Hospital
Nuku'alofa, Tonga

Secretariat for the National Health Ethics and Research Committee

E-mail: sfkupu@health.gov.to

28th April 2015

Memorandum to:

Jacinta Forde
Researcher
University of Waikato
New Zealand

Subject: Amendments for Research Application (Ref# 190315.3) Acknowledged.

Details of the Project

Title: The extent to which changes in culture and lifestyle, in particular health, exercise and diet, have had an impact on Tongan society.

NHERC Reference #: 190315.3

MOH File#: MH 53:02

Principal Investigator(s): Ms. Jacinta Forde

Co-Investigator(s): Dr. Fiona McCormack (Primary Supervisor)
Ma'ukakala (Local Supervisor)
Fa'au Taumalolo (Local Supervisor)

The research application titled "*The extent to which changes in culture and lifestyle, in particular health, exercise and diet, have had an impact on Tongan society.*" was received on the 28th of January 2015 amended on the 11th of March 2015 and reviewed by the *National Health Ethics and Research Committee (NHERC)* on its regular meetings held on the 19th March 2015 in the Ministry of Health Tonga.

The following supplementary documents were also reviewed by the *NHERC*:

- o **Appendix A: Information Sheet – Healthcare Professionals, Government Officials and Nobles in Tonga**

Secretariat of the National Health
Ethics and Research Committee

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Tonga National Health Ethics and Research Committee

- Appendix B: Consent Form – Interviews
- Appendix C: Interview Schedule – Tongan Customary Healers
- Appendix D: Interview Schedule – Tongan Healthcare Professionals
- Appendix E: Interview Schedule – Tongan Government Officials/Nobles
- Appendix F: Confidentiality Agreement
- Appendix G: Information Sheet – Translated
- Appendix H: Letter of Confirmation (Ethical Approval from Waikato University)

We are pleased to inform you that ethical approval has been granted by the *NHERC* for the aforementioned titled research for a period of 1 year.

The ethical approval granted by the *NHERC* will expire on the 19/03/2016.

If you require an extension of the approval, you **must** request for an extension by contacting the *NHERC Secretary* (e-mail: sfkupu@health.gov.to) for an extension 1-2 month(s) prior to the expiry of the ethical approval granted. Extension of approvals are eligible for expedited review and approval.

As the enlisted Principal Investigator in charge of the overall management of the project in terms of its conduct and implementation, it is your responsibility to ensure that all research-related personnel involved in the project be notified of the following conditions set specifically for this project only.

Conditions

1. Amendments Required

After much deliberation, the *NHERC* has agreed that particular amendments should be made to the research protocol;

1.1 Inclusion of Local Investigator/Counterpart/Supervisor

It is favorable that a Local Investigator or Local Supervisor be included into your study. The inclusion of Local counterparts are primarily mandatory when conducting research here in Tonga, this is to help the principal investigator in contextualizing data and providing assistance and advice where needed and to ensure appropriate behavior and conduct is maintained especially cultural appropriateness. The local counterpart is important because that individual will be accountable to the *NHERC* for communications here in Tonga regarding your project and will be the focal point (indicated in participant information sheet/consent form) should any of the participants have any queries. Local counterparts are easier to contact for Tongan participants than foreign contacts. If you have an individual suitable for the position with credible standing here in Tonga than you are free to use them.

Tonga National Health Ethics and Research Committee

If not, we in the *NHERC* can allocate an appropriate individual in relation to the context of your study to assist you.

1.2 Translation of Certain Supplementary Documentation

The *NHERC* has agreed that a translated version of the supplementary documentations: Appendix B: **Consent Form – Interviews**, Appendix C: **Interview Schedule – Tongan Customary Healers** and Appendix F: **Confidentiality Agreement**. We have noted that an interpreter is present however; previous research endeavors conducted here in Tonga have raised issues with not contextualizing the questions and information sheets appropriately to individuals with limited English-speaking and understanding capacity. This has resulted in the research findings being misrepresentative to our Tongan context due to data being lost in translation. It is thus requested that you provide a translated version of the three supplementary documentations aforementioned. The *NHERC* believes some Tongan Customary Healers may need Tongan translations and as such Confidentiality Agreement and Consent Forms for them should be adequately translated and reviewed for appropriateness, the rest of the participants (Tongan Healthcare Professionals and Government Officials/Noble) should be well-versed in English.

*The *NHERC* requires you make these amendments prior to the commencement of your project. The amendments will not go through to the full Committee for review. These **conditions are mandatory** and if you do not make changes by the **19th of April 2015**, this ethical approval will not be valid. The amendments including the amended application **must be sent** to the *Secretary of the National Health Ethics and Research Committee* to review and approve of the amendments. The Secretary will notify the Committee that changes have been made accordingly and acknowledge the Principal Investigator having made appropriate amendments through an Acknowledgment Letter.

Amendments:

In light of *Condition 1(1.1 and 1.2)*, the applicant has submitted amended conditions accordingly and appropriately. The Amendments including the amended application form were received by the *Secretariat of the National Health Ethics and Research Committee* on the 23rd of April 2015 which have been reviewed and acknowledged. Amendments include:

- *The inclusion of Ma'ukakala and Fa'au'i Taumalolo as local counterparts/supervisors*
- *Adequate translations of Supplementary Documentation outlined in Condition 1.2*

This ethical approval letter does not overwrite the previous ethical approval except through the amendments, but rather this letter is merely an acknowledgement that the applicant has acted accordingly to the conditions set by the National Health Ethics and Research Committee on the 19th of March 2015.

Tonga National Health Ethics and Research Committee

2. Significant Changes to Research Protocol

You are required to notify the *NHERC* in the case of changes or amendments to the research protocol which was submitted for review including changes in the ethical approval/decision of/or modification(s) requested by other Ethics Committees involved with the project, the Storage and Use of Data, the Plain Language Statement and Consent Forms or of other supplementary tools or methods to be used in the project but were not mentioned or reviewed by the *NHERC*. It is your responsibility to contact and inform the *NHERC* of such changes, the *NHERC* will decide on the level of significance the changes impose and act accordingly. Should the changes be considered major and significant you will be notified and are **required** to re-submit the application with amendments.

3. Serious and Unexpected Adverse Events

All unforeseen/ serious adverse events **must** be reported to the *NHERC* immediately. These events include changes to the protocol and unanticipated project-related events that jeopardize the welfare of the participants and the staff (involved in the conduct of the project) which might affect the continuing ethical acceptability of the project. Failure to report any of these events will be considered a breach of research conduct and will result in the immediate suspension or termination of ethical approval and/or disciplinary action.

4. Ongoing Monitoring and Progress

The project is subject to monitoring by the *NHERC* at any time. Since the study is of short duration, a progress report may not be required. To maintain our records and keep it up-to-date you are requested to notify the *NHERC* on the conclusion/completion of the project. You are **required** to report if the project is discontinued before the expected date of completion.

5. Final Report

It is **mandatory** that a final report be submitted to the *NHERC* upon completion of the project. A copy of the final report **must** be submitted to the *NHERC* or the *NHERC Secretary*, in addition essential stakeholders.

Any data, records and results pertaining Tongan residents from the study remain a property of the *Ministry of Health Tonga* and copies may be kept by the researchers.

Failure to abide or comply by the following conditions will result in the immediate discontinuation or suspension of approval and/or disciplinary action.

If you have any queries or wish to discuss general matters relating to the ethical process of reviewing research applications/proposals please feel free to contact the *Secretariat of the National Health Ethics and Research Committee* (e-mail: sfkupu@health.gov.to or phone: (676) 23200 ext. 1424).

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Please note the *NHERC* does not make retrospective approvals and all recommendations are not based on static principles and morals but rather the *NHERC* makes approvals and commendations which are consultative and consensual in nature.

Please quote reference number: **190315.3** on all communications with the *NHERC* regarding this application and ethical approval.

We wish you all the best with your endeavors!

Malo 'aupito!



Sioape F. K. Kupu
Secretary of National Health Ethics and Research Committee
Ministry of Health Tonga.



28.04.2015
Date

10.6 Appendix F: Fisheries Management (Conservation) Regulations 2008 - Species Conservation and Management (Turtles)

1614

21. Winged pearl oyster

- (1) In this regulation “winged pearl oyster” means any mollusc of the species *Pteria penquinn*.
- (2) No person shall fish for, harm, have in his possession, sell or purchase any winged pearl oyster which is less than 20 centimetres in ambo-ventral length as illustrated in Schedule 7.

22. Black lip oyster

- (1) In this regulation “black lip oyster” means any mollusc of the species *Pinctada margaritifera*.
- (2) No person shall fish for, harm, have in his possession, sell or purchase any black lip oyster which is less than 11.5 centimetres in ambo-ventral length as illustrated in Schedule 8.

23. Inter-island Transfer of Pearl Oyster

- (1) In this regulation “pearl oyster” means “winged pearl oyster” and “black lip oyster”.
- (2) No person shall remove or take any pearl oyster for the purposes of transferring it between any of the island groups of Tongatapu, Vava’u, Ha’apai, ‘Eua, Niuatoputapu and Niuafo’ou except with the written authorisation of the Secretary and in accordance with such conditions as he may specify.

24. Turtles

No person shall –

- (a) disturb, take, have in his possession, sell or purchase any turtle eggs;
- (b) interfere with, destroy, or disturb in any way any turtle nest;
- (c) use a spear or spear gun for the purpose of capturing, killing or taking any species of turtle;
- (d) at any time fish, capture or destroy any male turtle the shell length of which is less than 45 centimetres as illustrated in Schedule 9;
- (e) fish for, capture, possess, sale or purchase, or destroy any turtle during the closed season specified in Schedule 12; or
- (f) fish, capture or destroy any Leatherback turtle of the species *Dermodochelys coriacea* as specified in Schedule 12;
- (g) possess or sell turtle meat out of the shell, unless it has been certified by an authorised officer that it came from a turtle of legal size;
- (h) at any time, fish, possess, capture or destroy any female turtle as specified in Schedule 12.

SCHEDULE 12
TEPILE 12

FISHERIES MANAGEMENT ACT 2002
LAO KI HE PULE'I 'O E TOUTAI 2002

(Fisheries Management (Conservation) Regulations 2008 – regulation 24, 25 and 42)
(Ngaahi Tu'utu'uni ki he Pule'i 'o e Toutai (Fakatolonga) 2008 – tu'utu'uni 24, 25 mo e 42)

CLOSED SEASONS
NGAAHI FAHA'ITA'U TAPUI

TURTLES
FONU

Local Name	English Name	Scientific Name	Closed season
<i>Hingoa faka-Tonga</i>	<i>Hingoa faka-Pilitania</i>	<i>Hingoa faka-Saienisi</i>	<i>Vaha'a taimi tapui</i>
Fonu tangata	Male Turtle (all species except Leatherback turtle)		August, September, October, November, December, January, February
Fonu fefine	Female Turtle	-	All year
Fonu-leta	Leatherback	Dermodochelys coriacea	All year

MULLET

FUA (KANAHE)

Kanahe or fua	Mullet	Mugilidae	1 June to 31 July
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FISH FENCES

PA IKA

Pa ika	Fish fence		1 June to 31 July
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SEA CUCUMBER AND BECHE-DE-MER

KIUKAMIPA TAHI MO E MOKOHUNU

Kiukamipa tahi	Sea cucumber		1 October to 31 March
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