Lund University International Master's Programme in
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**Masters Thesis**

# Social Learning and Waste Management: A Tongatapu Case Study

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# Abstract

In the debate on sustainability and humanity being faced with growing environmental concerns, many scholars are advocating for wider use of social learning models in order to successfully address complex challenges in a socially and ecologically sustainable way. The lively debate ranging from strong propositions for social learning approaches to relevant critiques of social learning encouraged this study.

Waste management is one of the examples of complex challenges our societies need to deal with and that increasingly calls for a broader approach, rather than focusing on narrow technical solutions only.

The study focuses on identifying limitations to social learning in waste management on Tongatapu, the main island of the Kingdom of Tonga. It contains an analysis of a number of limitations at different levels of social interaction that affect the success of social learning in waste management on Tongatapu. Analysis of challenges is separated into three analytical categories of 'stable' culture, 'dynamic' culture and education, all of which play a significant role in social learning.

This study indicates that an emphasis on participatory problem solving is unlikely to be sufficient, without a broader social awareness and understanding of the problem. It indicates the need to integrate the limiting effects of 'stable' culture when advocating for a social learning approach. Although the challenges may then appear to be considerably harder to overcome, the efforts will probably turn out to be more sustainable in the long term. Indeed such changes represent social learning by themselves.

This study helps to inform future efforts towards enabling and strengthen social learning in waste management on Tongatapu, as well as in Tongan environmental resource management in general. This research can perhaps inspire others in different context in order to get a better insight of how feasible it is to expect social learning to occur in a given context and lead towards generation of more sustainable solutions, and inspire research towards identifying possible ways of overcoming the limitations identified.

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# Contents

# Abbreviations

AusAID – Australian Aid

IWP – International Waters Project

MoE – Ministry of Environment

MoH – Ministry of Health

MoW – Ministry of Works

SPC –  Secretariat of the Pacific Community

SPREP – South Pacific Regional Environment Programme

TEMPP – Tonga Environmental Management and Planning Project

TOSWMP –  Tongan Solid Waste Management Project

WA – Waste Authority

# 1. INTRODUCTION

The Polynesian Kingdom of Tonga lies in the South Pacific. It consists of about 170 islands, 35 of which are inhabited. During the last 40 years, Tonga has experienced a great migration dynamics; a lot of people have gone abroad in search of better economic opportunities, and there has also been a considerable internal migration towards the main island of Tongatapu. Today around 60% of the resident population of approximately 100,000 people lives on Tongatapu, 40% of those live in the urban area of Nuku'alofa (Velde et al., 2007.)

A range of environmental problems have arisen in Tonga in recent decades, the majority of them related to modern development. The emergence of a cash economy brought new technologies and practices that have resulted in increasing consumption, population pressure and pollution that place unsustainable demands on natural resources (Pelesikoti, 2003).

Tongas current population is about three times bigger than what it was at the pre-European maximum. The traditional subsistence society generally practiced sensible environmental management of their resources, which were based on sound knowledge of natural processes. Conservation ethics were expressed through a number of customs such as taboos (Malm 2009.)

The standard of living as it is today can not be sustained by the reliance on Tongan natural resources only. It is based on transfer of resources from wealthier countries, be it through aid programs or remittances (Malm, 1999, 2007). Along with improvements in living standards, however, came the undesirable consequences of increasing waste generation and volumes of non-biodegradable waste, creating problems that were previously unknown (Malm, 1999; SPREP, 2006.) A State of Environment Report written in 1984 for South Pacific already exposes the problems related to solid and liquid waste in Tonga (SPREP, 1984).

Until recently Tongatapu had a generally inadequate waste collection and management system, with very limited waste minimization activities. A report commissioned by SPREP in 1999, concluded that solid waste management in Tonga had a low priority, it is under-resourced and ineffective and there was little enforcement of waste related regulations. There was no specific waste management legislation, apart from the clauses in various environmental legal provisions administered by a number of

Ministries and Departments (SKM, 1999.) Another problem outlined was poor understanding of human impacts on environment and general lack of data on state of environment. (IWP, 2010).

The old landfill site was not appropriately prepared or protected and posed significant problems related to health risks, contamination of the lagoon and fresh water lenses and loss of visual amenity (SKM 1999). Waste disposal has with time become an even grater issue.

A 2002 report on 'Priority Environmental Concerns' (SPREP, 2002) found that pollution from solid and liquid waste was the biggest environmental problem facing the country. The report recommended immediate measures to be taken to minimize the impacts of waste in order to protect the natural and human resources and. Following this the International Waters Project (IWP) project piloted a community-based waste reduction and protection of freshwater quality projects (IWP, 2010).

In 2004 AusAid agreed to fund the *Tongan Solid Waste Management Project* (TOSWMP) (AusAID, 2010). While the Tongatapu waste management facility has been upgraded into one of the most advanced of all South Pacific states, numerous challenges remain for maintaining the waste management facility beyond the project phase.

The complexity of socio-ecological problems, creates challenges that cannot be tackled with technical solutions alone. Waste management is one such example, where technical solutions tend to overshadow the necessity of developing a systemic social understanding of socio-ecological interconnections, and changing the behaviour and attitudes accordingly (Pahl-Wostl et al., 2008.)

Waste management is an increasingly complex challenge, since it involves all consumers of resources, who consequently become producers of varying levels of waste and toxicity. The degrading effects of different types of waste impact on various resources, such as land and soil, water, and directly or indirectly the human resources Therefore appropriate management is increasingly important for our health and general well-being and preservation of life-system services. In order to address problems in a meaningful way, a cooperation of  stakeholders is needed. This stresses the need for a more integrated approach.  Many scholars in various fields of research have been advocating for re-adjustment of our focus towards a wider use of social learning models to address these complexities in a sustainable, socially and ecologically acceptable ways.

This case study will investigate the barriers to social learning in household waste management on Tongatapu. For the purpose of simplicity the household waste management will be in following referred to as waste management.

# 2. THEORETICAL FRAMEWORK

The complexity of the challenges posed by the desire to understand the learning process is reflected in the existence of numerous models and theories of learning. They all reflect different underlying assumptions about the nature of learning and knowledge. What distinguishes between them are the learning contexts and motivations for learning. Social learning theories generally adopt a dynamic view that emphasizes the interaction between individuals and their environment (Muro & Jeffrey, 2008.)

The thesis denotes the investigation of concepts of social learning and consequently culture that the reasoning in this case study is influenced by (Moses & Kuntsen, 2007).

## 2.1. Social learning

Like sustainable development, the concept of social learning lacks a coherent theoretical foundation and thus holds various definitions and conceptualizations (Muro & Jeffrey, 2008).

The use of the concept of social learning stretches from psychological and pedagogical dimension, based primarily on the works of Bandura (1986); to the dimension of political science and social organization (e.g., Lave and Wenger 1991); and then further to the problem solving dimension, where it has been increasingly advocated as a useful and necessary interactive approach in resource assessment and management. Examples of problem solving dimension are social learning as means to support participatory planning in integrated water management (e.g. Pahl-Wostl et al., 2008), forest management, impact assessment (e.g., Webler et al.. 1995; Saarikoski, 2000), conservation planning and management, and participatory rural research (e.g., Rist et al. 2007) (Muro & Jeffrey, 2008).

### 2.1.1. Social learning in the problem solving dimension

The notion of social learning in this context generally coincides with the thrust for public participation and the growing impetus of sustainable development in political and public debates. Approaches such

as sustainability science **(**e.g., Kates et al., 2001) participatory integrated assessment (e.g., Rotmans, 1998) and natural resource management (e.g., Keen et al., 2005) involve the consideration that public participation is necessary in any attempt to build robust knowledge capable of dealing with the complex problems, and uncertainties of sustainable development (Tàbara & Pahl-Wostl, 2007).

The resource management approach mainly grounds social learning in the theory of culture as an adaptive sociocultural system (Pahl-Wostl et al., 2008).*[*]

Lave and Wenger (1991) developed a theory of situated learning that understands social learning as active social participation in the practices of communities and constructing identities in relation to these communities. Wenger (1998) conceptualizes this social phenomena as "community of practice".

Resource management literature refers to social learning as a collective process with emphasis on learning *with* each other, not only as a prerequisite for individual behavioural change but also for collective action (Muro & Jeffrey, 2008). This conceptualization agrees that social learning requires communication and participatory interaction of different actors. Individuals acquire 'meaningful' knowledge through these relationships. By engaging with each other, different peoples perspectives are likely to adapt to each other which potentially leads to shared knowledge and understanding of the world. Development of social and also technical skills and development of trust and relationships could form the basis for a common understanding of the problems concerned, creation of new ideas, and a sufficient level of consensus for the subsequent collective action to solving problems (Muro & Jeffrey, 2008; Bull, 2008.)

Although gaining widespread attention by explaining social change as a process of social learning more recently, this view has long been central to the German tradition of critical theory by J. Habermas. Special reference is often made to the concepts of communicative rationality and communicative action, which posits that people can solve complex problems through negotiation, co-operation, deliberation and agreement about a shared definition of the situation, leading to consensus. (Habermas, 1984, 1987). The implication suggested is that societies can learn to change to address socio-environmental problems (Muro & Jeffrey, 2008).

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\* The concept of culture will be further discussed in the analytical framework, once this research is problematised and it becomes apparent that culture will be central to analysis of this thesis.

The problem solving approach emphasizes the transformative power of effective dialogue and the growing capacity of diverse social entities to engage in a collective action towards the facing challenges. The purpose of social learning here is to move from multiple to shared cognition through a process that shapes not only what we do, but also who we are and how we interpret what we do. It shapes ones beliefs, attitudes and actions (Muro & Jeffrey, 2008). This statement implies than that culture plays an overarching role in social learning debate. The problem solving dimension aligns well with the concept of culture seen as a dynamic system, changing with social interactions.

Participatory processes are considered to be a device for fostering social learning by creating learning opportunities (Röling & Maarleveld, 1999). Researchers and practitioners in resource management, integrated assessment and sustainability science increasingly express the need to establish participatory learning environments and platforms, where individuals can meet, interact, learn collaboratively and take collective decisions (Keen et al., 2005). The emphasis usually lies on deliberation of enhancing environmental citizenship (Bull, 2008).

### 2.1.2. Social learning in psychological dimension

Psychological dimension refers to learning of individuals from social environment that surrounds them. It both depends on and affects social interaction and social-ecological perception. Many scholars debating on social learning in the context of resource management tend to emphasize that focusing on the individual is of limited value. Too narrow a focus on the personal aspects of learning fail to embrace the complexity of learning processes that occur in the governance of social-ecological systems (Tàbara & Pahl-Wostl, 2007).

'Social cognitive theory' (Bandura, 1986) discusses social learning in terms of observation and imitation of behaviours, attitudes and emotional reactions of others (Webler et al., 1995). This dimension aligns well with a conceptualization of culture*[*] as being 'static' and 'stable', passed down from one generation to another with little modifications in between, yet also goes beyond that by acknowledging the bi-directional influence between individual and environment ( Bandura, 1986). This approach describes social learning as learning *from* each other, rather than *with* each other as mentioned earlier. The theory emphasizes the interaction between the cultural environment and the

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\* The concept of culture will be further discussed in the analytical framework, once this research is problematised and it becomes apparent that culture will be central to analysis of this thesis.

individual as a cause of his/her own behaviour (Bandura, 1986). Individuals are seen as both products and re-producers of their own cultural environments and of their social systems (Muro & Jeffrey, 2008).

## 2.1.3. Social leaning and education

Another important dimension of social learning included in this study is education system and its support for critical thinking.

This study refers to Gramsci who proposed that social change towards a more democratic and thus participatory society would require prior collective intellectual effort. This rejects the voluntarism in believe that such change can occur spontaneously just by fostering participatory environments (Gramsci, Cited in Campbell & Coxon, 2005).

Similarly to Gramsci, Futa Helu a well known Tongan thinker and educator, held a vision geared against the mainstream education system that promotes only instrumental education aligned with economic needs of the country, as the mutual goal. He agreed that this 'hegemonic' doctrine hinges on the premise that society has a unified interest, whereas all that it really stands for is to promote specific interests of a particular group (Helu, Cited in Campbell & Coxon, 2005). For example the emphasis on economic development at the expense of socio-cultural and environmental programs (Scmelzer, 1991; Thaman, 2008). This does not promote critical thinking which Gramsci and Helu saw as a basis for active citizenry, participation and a prerequisite for democratic, reflective, adaptable and just society (Campbell & Coxon, 2005).

The education dimension also relates to Argyris and Schön's (1978) 'Double-loop learning' theory. This theory emphasizes transformative learning of individuals where the learner becomes aware of the assumptions and values that she holds and becomes capable of major shifts within the frames of reference (Tàbara & Pahl-Wostl, 2007). It refers to learners who are capable of critically reflecting on their purposes and rules of operation, in a way that reveals the limitations of their assumptions, theories and values they hold and thus enables internal transformation of perspectives (Muro & Jeffrey, 2008).

# 3. RESEARCH AIM AND QUESTIONS

## 3.1. Research aim

The main aim of this study is to investigate the limitations of social learning processes in relation to the creation of more sustainable waste management on Tongatapu, the capital island of the Kingdom of Tonga.

This research will contribute to a better understanding of barriers that are likely to arise when promoting social learning as a problem solving approach to waste management in Tongatapu and possibly also in a broader Tongan social learning oriented problem solving context. Additionally it will contribute to discussion on social learning and its feasibility in different cultural contexts. As such it will inform further research, debate and comparisons, leading to better understanding of complexities and feasibility related to social learning in waste management or other environmental management and governance contexts.

## 3.2. Research Questions

The overarching question to be answered in this thesis is: What are the barriers to effective social learning in relation to creation of more sustainable household waste management practices on Tongatpu?

To be more precise, the following sub-questions are posed:

a) What are the barriers arising from re-production of the existing 'stable' cultural environment on social learning?

b) What are the limiting factors for effective social learning at a more dynamic interactive level needed for effective participation processes and problem solving?

c) What are the barriers arising form the current education system that relate to social learning and more sustainable waste management?

# 4. METHODOLOGY

In this thesis I have adopted a qualitative research strategy with a constructivist perspective, by agreeing that scientific knowledge is acquired in a way that is affected by history, society, culture and the natural environment (Moses & Knutsen, 2007).

Although adopting constructivist position, I do not wish to push it into extreme. Here I refer to an idea of culture that is central to my research, where an extreme constructivist position could suggest that culture is an emergent reality in a constant and continuous state of construction and reconstruction. I follow Strauss et al (1973), that culture has a reality that persists and influences individuals perspectives as an 'objective' structure, yet it is neither an inert objective reality. (Strauss, Cited in Bryman, 2008).

## 4.1. Research design

This research is a case study that investigates three theoretical dimensions of social learning. It aims to explain the phenomena of social learning in a particular cultural context and with the focal area of waste management in Tongatapu. An in-depth case study usually requires the use of wide range of research methods (Yin, 2003). The term triangulation describes the use of more than one data gathering approach to the investigation of a research question in order to enhance confidence in the ensuing findings (Bryman, 2008). The data for this study is based on three data collection methods: literature, interviews and focus groups.

## 4.2. Data Collection Methods

### 4.2.1. Literature review

Since the study took place in a setting that I was beforehand quite unfamiliar with, it was essential to start with literature review in preparation for field work (Desai and Potter, 2006). Literature played and important role throughout the research.

This thesis required an understanding of Tongan culture. Since my time on the field was too short to engage in a long term ethnographic observation methods (Bryman, 2008). I covered these parts by

intensely studying other ethnographic studies.

The literature I have read came from academic articles, ethnographies, official document and historical accounts available in various libraries or in electronic libraries, as well as local literature that is not to leave out engagement with local knowledge and perspectives. Using such information is practically, ethically and theoretically important, since provides the 'different reality' of the given context. This can be views that are not usually included in dominant discourses, but are helpful in closing the knowledge gaps by capturing voices and values of local people (Desai and Potter, 2006). The publications I refer to here are various surveys and reports, books and popular press articles.

## 4.2.2. Interviews

Interview were conducted in semi-structured form.

The theme of interviews was focused on understanding:

a) Previously conducted awareness raising programs and their success in regards to peoples waste management practices and attitudes towards waste.

b) Examples of participation between relevant waste management agencies (private or governmental) and people/communities.

c) Challenges encountered by the newly established Tonga Waste Authority (WA) that is the central body dealing with domestic household waste and promoting waste minimization on Tongatapu. Barriers encountered by private waste management companies on Tongatapu.

d) Type of education systems, pedagogical methods and its implications for Tongan society

Not all themes were covered in each interview, but were employed accordingly to informants field of work, expertise and experience.

The semi-structured form of interviews allowed me to be flexible in the interview process and follow up on information that arose during the discussion. This approach allowed me to frame questions so that interviewee understood what I meant and allowed time for reciprocal understanding.

The TOSWMP project is fairly recent and has been in the Tongan hands only for about a year, while previously the project was under AusAID's mandate. This meant that the interviews provided the only means to gather information about the current state of affairs and deeper insights about the whole project, since there is a very limited body of literature available.

The selection of interviewees was of purposive snowball type, where people identified at the start would give provide contacts of other people of interest to the research (Bryman, 2008). Since Tongatpau is fairly small and people in official positions usually know each other, it is fairly easy to get contacts and proceed with information gathering. Interviewees were selected on the basis of their involvement in waste management related projects (IWP, TEMPP, TOSWMP), as part of the waste characterization survey team, design, implementation or current management of  TOSWMP, or any other aspect of waste management in Tongatapu.

The full list of interviews is provided in the Appendix II. The study uses general descriptions in order to respect the privacy of respondents.

### 4.2.3. Focus group

Second information gathering technique was focus groups which were conducted as *talanoa* sessions in conjunction with Tim Taylor.

The purpose of the focus groups was to get an understanding of what young people in Tonga see as being most influential on the way they behave, act and think. At the same time these sessions also served as an observation setting, where I could observe the interaction attitudes among the participants in the group.

*Talanoa* is a term common to many Pacific Islanders including Tongans (Fua, 2009.) It means "to talk (in an informal way), to tell stories or relate experiences, etc." (Churchward, 1959). As such it is a culturally appropriate tool of investigation and one that is in synergy with Pacific peoples way of life. It was used in order to create a discussion setting that is natural in Tonga and where participants would feel comfortable to discuss the topics introduced.

*Talanoa* is a less structured form of information gathering than a semi-structured interview. Instead of

focusing on questions, *talanoa* is based on an idea or topic that participants than discuss, critique and reflect upon, in order to conceptualize what they believe the topic to be about. It requires *fonango* or listening and feeling in order to 'understand the silence', which requires attentive observation. In its essence *talanoa* as a research tool is 'naturalistic', meaning that one needs to be in the participants context (Fua, 2009.)

By following these principles all *talanoa* sessions were held in environments where participants spend a lot of time; either at university's communal area or places where they usually socialize. The sessions were conducted in a circle. Refreshments were provided and participants were allowed to take time and discuss the introduced topics. Since I do not speak Tongan, but wanted participants to feel as natural as possible, discussion in Tongan was allowed whenever they felt they can't express themselves in English. This was then communicated back in a summarized form.

The list of focus groups is included with the list of interviews in Appendix II.

## 4.3. Analytical framework

General analytical technique applied in this thesis is descriptively building explanation of the potential limitations to social learning in Tongan cultural context regarding waste management.

This thesis follows the idea that social learning occurs on different levels and involves different processes of learning (Folke et al., 2005). These levels (individual, institutional, participatory/group) and are not exclusive and unrelated but rather complementary and interconnected. Limitation to effective social learning towards a more sustainable waste management system can occur on any or all of them.

Following the tri-dimensional conceptualization of social learning described earlier, the analysis is separated into three analytical categories of 'stable' culture, 'dynamic' culture and education, all playing significant role in social learning processes. *[*]

This thesis follows Kessing (1974) who argues that culture can either be conceptualized as a reference system based around core values, beliefs, perceptions and ideals within which reality is perceived and

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* A more in-depth discussion of Tongan culture is provided in Appendix III.

conveyed so that one can make sense of one's actions. He calls it ideational culture, but I will refer to this culture as 'stable' culture. It represents long-term stabilizing elements and transferable traits that trigger certain general types of social manifestation and practices. Such culture can be explained in terms of early socialization in childhood and in some social discourses, in terms of ethnic or religious background (Pahl-Wostl et al., 2008) and thus relates to the second theoretical dimension of social learning at individual level.

On the other hand culture can be conceptualized as a social arena of constant dynamic interaction, confrontation of various group cultures in society and can as such be modified in an active and conscious way by these social agents (Tàbara & Ilhan, 2008). This is the culture I refer to as 'dynamic' culture and relates to first theoretical dimension of social learning at problem solving level.

The two conceptualization of culture do not seem exclusive, but rather compliment each other in terms of identifying and explaining limitations to social learning. In the first case the stable culture is always socially constructed through time and does slowly evolve and change with social interactions, however the changes can be so slow that they give impression that culture is not changing at all (Helu, 1999). Defining culture as a sum of total social behaviours that are learned and passed on to the next generation, provides a very 'static' view, that neglects the bi-directionality of influence between individuals and cultural environment, and social dynamics over time. However acknowledging that cultural contacts and the interactions are real and effective, leading to modifications in the cultures concerned (Ibid.) this 'static' view nevertheless plays an important role when analyzing what are current limitations for social learning in a given society. However it is also acknowledged that the situation might change in the course of time and can change because of social learning.

The second 'dynamic' conceptualization is critiqued as taking too much of a 'voluntarist position' and neglecting the fact that ethnicity or a particular culture can be imposed. Culture can not be adopted and discarded at will, class structure is a good example. Furthermore cultural identity can be analyzed as a social construct, but can be experienced quite differently at the individual level. Culture as socially constructed phenomena needs to be tempered by an awareness of the specific historical and social context in which it is embedded and the the subsequent limitations on its modifications and fluidity. (Lee, 2003.)

The discussion in this thesis focuses on culture because it represents an important part of the social context and thus influences social learning (Pahl-Wostl et al., 2008). In Tonga the informal and formal social systems are closely intertwined, culture providing ideology for current political organization and social orientation. Additionally cultural norms can have the social force of law, although they are not law in a technical sense (Helu, 1999.) This is the description of a 'stable culture'. Yet culture is also important on the level of individual and/or group interactions where problem solving decisions are created. This culture can be referred to as 'dynamic' culture. These interactive participatory processes exist within, and are affected by, a given 'stable' cultural framework. At the same time they influence that 'stable' culture through the cultural dynamics ignited by social interactions within participatory processes for social learning.

In order to answer the research questions the analysis is separated in three parts, the first two relating to the above distinguished interpretations of culture and the third part on education.

1) The first part of the analysis is based on describing broader, 'stable' or 'static' cultural characteristics, that permeate Tongan society. The effects (negative or positive) of this culture are reflected at the level of communicative interactions in a participatory problem solving setting. This part will also attempt to explain the difficulties related to changing the bahviour and attitudes of individuals embedded in Tongan culture.

   This 'Stable' culture relates to Bandura's theory of social learning (1986), since it can be explained in terms of early socialization in childhood and in terms of ethnic or religious background (Pahl-Wostl et al., 2008).

   Socialization in Tonga, will be descrobed based on ethnographic literature review and some examples of its implications in relation to behaviour and attitudes to waste management, that were communicated through *talanoa* sessions and interviews.

   The analysis also folows Hofstede's (2001) cultural framework that is supported in a social learning context because it characterizes the proximity of different cultural groups and thus enables better understanding of barriers to inter-group communication. As such it is frequently used in environmental management and integrated assessment to capture the influence of cultural perspectives/ For example on management practices or the shaping of expectations of

future developments (Pahl-Wostl et al., 2008).

The different categories of Hofstede's (2001) framework encompass hierarchical, risk aversion tendencies, tendency of social orientations towards individualism and collectivism. These are general cultural categories that are highly relevant for understanding barriers to inter-group communication in Tongan society, which is then important for social learning in participatory problem solving dimension (Pahl-Wostl et al., 2008). I refer to literature in order to describe the cultural situation in relation to the categories relevant for this study. These are hierarchical, risk aversion and social orientation tendencies. Information obtained with field methods is additionally used to provide examples from waste management in Tongatapu to complement the theoretical description.

2) The second part of this analysis will investigate limitations at a more interactive level, looking into the participatory processes and learning opportunities that are unfolding in Tongatapu. This part acknowledges the diversity of group cultures in Tongan society and relates to conceptualization of culture as a dynamic and adaptive system, or 'dynamic' culture. Here the research is looking into limitations of the capacity of these diverse social groups to share understandings of the situation to articulate new solutions and act collectively in order to successfully address complex problems facing them. This part relates to the idea of social learning in problem solving.

In this part I am analyzing limitations based on the evaluated components of social learning in participatory processes employed in several studies, as suggested in Muro & Jeffrey (2008). These are: Building shared understanding and identification of common purpose; The transfer of factual information; Features of Participation Processes; Moral Development and Trust; and Learning about community capacity. They refer to how the nature and design of participatory process affects social learning.

3) The third part of analysis will identify main barriers arising from the way the current education system in Tonga is functioning. Since education represents a process of acquiring not only information, but also developing skills to think (cognition) and ways of knowing (re-producing certain ideological patterns).

Following Helu's ideas on education, the analysis is focused on three main roles education can play with regards to social learning for more sustainable waste management. These are: 1) encouraging systemic knowledge and understanding of socio-ecological systems; 2) using appropriate pedagogical methods to encourage understanding; 3) encouraging critical thinking and enhancing cultural sensitivity to develop critical understanding of society, which is a necessary prerequisite for active citizenry and participation.

# 5. ANALYSIS

## 5.1. Limitations for social learning - 'stable' culture

Social learning in this context refers to individual learning based on observation of others and their social interactions within a group through imitation of role models, following Banduras theory (1986). Learning processes contribute to construction of a society that becomes more or less capable to successfully engage in social learning at participatory problem solving level.

### 5.1.1. Socialization- a pathway to specific behaviour patterns

Given the complex social hierarchies of Tongan society, child socialization in Tonga is very intense learning process. It continues through life, although a period of life prior to socially recognized adulthood is particularly intensive and influential on shaping of individuals. Significant forms of learning in Tongan socio-cultural context involve *sio* (observing); *ala* (touching); *fanongo* (listening); and *ta* (performing) as demonstrated or instructed. Observation and imitation are important for learning particular social and practical skills as well as establishing an awareness for the demands of higher-status people. Learners are expected to express readiness to listen to instructions and respond obediently. Central to childhood socialization in Tonga is the notion of *poto* (social competence), which is posited as the opposite state of that of the children, which are conceptualized as *vale* (foolish, crazy), and therefore socially incompetent (Morton, 1996.)

The values that are particularly important in the socialization process refer to interpersonal relationships. Tongans emphasize the behavior associated with obedience (*talangofua*) and reciprocity. Ideally obedience is motivated by love (*'ofa*) and respect (*faka 'apa'apa*). These values are

correspondent to the relationships between chiefs and commoners, men and women, and between children and adults. *'Ofa* is based on ideology of reciprocal relations and mutual dependencies and is manifested though behavior of sharing, helping and serving. Ideally it should feature in all relationships, even between different social strata. As such it is seen as the counterbalance to unquestionable authority that otherwise dominates status relationships. Ideally reciprocity cuts across the social differentiations (determined either by status, seniority, gender and kinship relations), but in practice it is usually expressed in quite different ways (Morton, 1996.)

Morton (1996) suggests that bi-directionality of influence in the process of socialization is asymmetrical, which is especially obvious in language. For example children should only speak in certain respectful ways or remain silent otherwise. Power relations are thus very important in construction of ones identity. This asymmetry of influences can prevent flow of certain knowledge and understanding that children acquire in school. For example ideas about waste minimization, problems related to waste pollution etc. to older generations.

Child's behaviour in such instances can often be characterized as *kaimua* (being too smart for your own good) and thus ridiculed. An example of such behaviour was exposed during one of the focus groups. The participants related *kaimua* to the problem of littering, explaining that not long ago, the general practice was to do with the rubbish what people traditionally have done, "throw it wherever". If you made an effort to put waste in the rubbish bin, you were ridiculed for being a "smart-ass", or trying to be above yourself and others. This concept relates to the ideal of being a humble, modest person, that shouldn't act like you know better.

As pointed out by Helu (1999) people often continue to be affected by social inertia in keeping old practices even when they have long ceased to be functional or optimal for their well-being in the environment they live in. Such cultural traits reinforce resistance to change, although change might be desirable in terms of socio-ecological sustainability.

Tonga has seen large scale changes in consumption levels fairly recently. The majority of people were outside monetary economy until the 1950's, thus most of the exchange was still done in goods produced locally. The major shift in the consumer culture started in 70's and is still ongoing (Campbell, 1992.)

Schmelzer (1991) suggested that increasingly westernized type of development and education in Tonga, fails to deliver sufficient information and preparation for problems that follow modern development. Programs which have been initiated to protect environment and sustain natural resources are generally met with little compliance, because they are viewed as intrusions and imposition of foreign ideas, trying to change the "Tongan way" (Schmelzer, 1991).

According to the interviews with people who are engaged in waste minimization and awareness raising programs the behaviour of older people is harder to change, mostly because they believe they know 'the right Tongan way' (they already acquired *poto*) and thus new behaviour is not "Tongan way". Some interviewees implied that they have been targeting communities for years through people of the older generation, but now they are shifting thier focus to the youth, who are eager to learn and can pass knowledge down to their kids.

The socialization of children is a critical part of the construction and reconstruction of Tongan identity. Socialization however cannot be separated from broader social processes where wider social transformations effects ones believes and values (Morton, 1996).

### 5.1.2. Hofstede's cultural framework

Hofstede's (2001) cultural framework uses pre-designed characteristics to classify different cultures (Pahl-Wostl et al., 2008). It emphasizes the presence of an internal logic of cultural characteristics and ways in which these manifests (Tábara & Ilhan, 2008). It aims to capture the influence of the 'stable' cultural perspectives, for example on environmental management practices, or shaping of expectations for the future development of society (Pahl-Wostl et al., 2008).

Hofstede's framework helps with characterizing the proximity of different cultural groups, to better understand the barriers to inter-group communication in relation to social learning (Elfenbein & Ambady, 2003). This analysis covers the dimensions of risk aversion tendencies, social orientation (between individualism and collectivism) and hierarchical tendencies that are relevant to limitations for social learning, since they influence participation in governance and management practices .

***Risk Aversion***

Societies with high risk aversion tendencies emphasize formal institutions and governmental interventions, rather than innovating and risk taking. They are characterized as rule-oriented societies, that institute rules, laws, regulations and controls in order to reduce the amount of social uncertainty and public pressure. In such societies social learning and change are difficult since change and innovation are perceived as risks rather than opportunity (Hofstede, 2001).

Tonga has been a monarchy for the last 200 years. The King holds a leading role in promoting social change through various policies and governmental initiatives (Campbell, 1992). Formal institutions and governmental interventions, rather than innovation and risk taking of civil society, are turning the 'wheel of development'. This is not to say that innovation and risk taking does not happen, but it is rather limited to the 'whim and will' of government to lead the larger scale changes (Ibid.). By promoting 'modern' development, the King and the government are also seen as being responsible to tackle the problems that come along with it, like waste for example. Civil society is rather non-reactive to decisions in the government. (Ibid; Helu, 1999). However riots in 2006 are giving a clue that situation might begin to change. There are some proponents of democracy who believe traditions should not be allowed to hobble innovation (Tcherkezoff et al., 2006).

According to several interviews people in Tonga believe that government should take care of waste problems and pay for the services of waste collection, without any serious consideration about how they could contribute to solving the problem.

In 2003 a pilot project for composting was launched by IWP in the community of Nukuhetulu, which aimed at snow-balling the composting practice to other villages around the island and hopefully also to the urban area (Prescott, 2007). Two main reasons for the failure of the project were identified by MoE representative following up on the project. Firstly the lack of commitment from the Ministry of Environment to continue relations with the village and do its best to keep the practices ongoing, by continuing with their presence and support. The approach adopted was donor project based, with fixed time frame and funding. The commitment to carry on the project disappeared when the priorities and energy turned to new projects.

This exemplifies the problem related to aid dependence. Several interviewees suggested that projects of donor countries aiming to help with development of Tonga, usually have limited time frames, budget

and preferred objectives. On the other hand the receiver country has limited capacities, resources and sometimes even a lack of commitment to continue certain project further, especially if they are not seen as a priority.

The second problem named was about people's attitudes and behavior. The people are used to be paid for cooperating with various development projects; thus if you do not pay them they do not do it. Waste is also generally not seen as a priority. The prevailing attitude is to get rid of waste in the fastest and easiest way possible, which is by burning, dumping or burying. Composting on the other hand takes time and space, smells and attracts pests.

This example shows the degree of resistance to externally led change in Tonga even when people have been informed and demonstrated the benefits of a different behaviour.

### Social orientation (Individualism/Collectivism)

Individuality and individual rights are paramount in highly individualistic societies, while in collective societies group identities are more important. In general the social learning in collective societies will more easily lead to acceptance of shared goals. However there can be important differences between sub-groups, and socially shared perceptions of these groups may also be quite difficult to change (Pahl Wostl et al., 2008.)

In general Tongan culture is perceived to be more community oriented. Socialization processes in Tonga stress that ones individuality should always be seen against a collective background, by acknowledging the dependencies within and between social units of kin (Morton, 1996). As such Tongan culture seems to express a positive relation to social learning, for according to Hofstede (2001) societies like this will easier achieve the acceptance of shared goals.

Although most Tongans still perceive themselves to be a part of this reciprocal kinship culture, that demonstrates vigorous inter-dependencies within extended families, the ethos of Tongan life is adapting to new material possibilities (Campbell, 1992). Entry into a capitalist market economy and concurrently transitioning into a consumer oriented society is espousing tensions precisely because it doesn't align well with old social and political order. New values and priorities are entering the everyday system of Tongan lives, encouraging individualism and freedom of choice, related to liberal

market philosophy, as opposed to community inter-dependency (Tcherkezoff et al., 2006). Squatter settlement in Nukualofa can be seen as one of the examples signaling that traditionally strong social ties, where extended families would take care for each other, provide mutual support and safety nets in times of need, are changing and that new socioeconomic ordering is promoting a more individualistic behaviour (Campbell, 2003; ADB, 2004).

Social stratification gained new dimensions with the proliferation of business related middle class and educated elite (Morton, 1996). Status acquisition frees the individual from the wider matrix of kinship obligations. It gives a person the privilege of defining his relationship with the kin, rather then these relationship being defined for him (Marcus, 1978.) This very important modification of the social structure has produced a diversity of opinion, which wasn't encountered in traditional society (Tcherkezoff et al., 2006). People are becoming conscious of changes in values and relationships (Campbell, 1992).

There are two sides to the rise of individualism in Tonga in relation to social learning. The first one is more negative since it signifies the move from a collectively oriented society towards a more individualistic one, where according to Hofstede (2001) acceptance of shared goals and subsequent collective action, will be more difficult to achieve due to high diversity of views and opinions.

On the other side however a move towards more individualistic character in Tonga also symbolizes a push for changes in politics and social organization towards democracy (Tcherkezoff et al., 2006). Such democratic structures are then very important for a more democratic and egalitarian participatory process in problem solving also in relation to decisions in waste management. However some Tongans believe that the democratic system built on foreign model would result in dissension, where wealthy people, rather than people of moral principles will take over the parliament; or that traditional values of respect, love, inter-dependency and reciprocity, the core of Tongan peace and stability, will be lost when values become more individualistically oriented (Ibid.).

*Hierarchical tendencies*

According to Hofstede's cultural framework (2001) societies with high hierarchical tendencies and thus high inequality of power between people in society, have low transparency and trust, and high levels of nepotism and bilateral deals with very limited or no public participation in national decision making

and designing of development strategies. Unlike in many western societies where existing legal and socioeconomic structures are designed to ensure the interests of civil society, Tongan civil society is generally excluded from decision making or even relevant participatory representation (Helu, 1999).

For about two centuries Tongan governance has been monarchical, exhibiting high inequalities of power and wealth between the King, nobles and commoners. The society is also highly hierarchical within the kinship system of the commoners. The dichotomy between *'eiki* (elite) and *tu'a* (commoners) is central to Tongan notion of identity and also carries an important effect on child socialization and social relationships within kinship and kingship. The *'eiki* persons exhibit proper behaviour, while *tu'a* person are regarded as foolish and backwards. The behaviour and values characterized as *'eiki,* have become intrinsic to Tongan notion of ideal personhood. This ideal however promotes authority and dominance in the social hierarchy (Morton, 1996.)

There are dual tendencies in Tongan culture. On one side there are strong hierarchical tendencies, emphasizing authority and subordination, and on the other more egalitarian tendencies (Morton, 1996). In Tonga hierarchical tendencies dominate, yet the socialization processes stresses that one's individuality should always be seen against a collective background, thus acknowledging inter-dependance and reciprocity (Ibid.). In practice reciprocity can often be ignored or interpreted in specific terms, especially in the cross-cutting relationships between higher and lower rank. For example, higher ranking persons control the direction and meaning of discussion and guide the communication by advising and teaching, while the lower ranking person must listen and obey (Ibid.). This kind of behaviour then disables equal representation of opinions and can make participatory processes that aim to cut across social stratification, into oppressive and non-representative. This situation was discussed earlier in the section on socialization and will be discussed later in terms of communication between government, nobles and civil society through *fono*, a type of public participation.

This sort of cultural context will have negative effects on development of cross-sectoral participatory processes and social learning.

However even 'stable' cultural traditions that seem to hold high internal strength and survival value can become subject to forces that connect a given social context with wider arenas of meaning and power

26

(Helu, 1999). In a rapidly globalizing world, increasing speed, the direction and volumes of the flows of ideas, people and resources, the emergence of new identities are assured (White, 2002). The process of modernization brought about a greater variation in distribution of wealth, prestige and influence across society, obtained by non-elite class through education, employment and travel (Morton, 1996; Campbell, 1992). A center piece of this modification is the gradual erosion of distinction between chiefly and commoner people (Morton, 1996).

In the time of writing, Tonga is in fact going through major institutional changes in its governance system. The executive power of the monarch will be eliminated and the number of peoples representatives in the parliament will increase (CEC, 2009). It is still to early to say to what extent this representation will enable better consideration of people opinions and their participation in decision making and designing of national strategies. Reforming government alone is not an overarching solution, since people need to participate in making changes happen for the best of all (Moala, 2009). Morton (1996) suggests that what is essential for steering the social situation out of the current authoritarian hierarchical paradox is in fact a reexamination of cultural ideals. Nevertheless such a great political shift, represents an important opportunity for social learning at all levels.

Decision making in the process of Tongan Solid Waste Management Project (TOSWMP) transcended the bilateral deal with donors and government, by including public representatives in the decision making board. The political transformations can be interpreted as partly responsible for the emergence of more participatory oriented decision making process, however it has been complimented (or driven) by additional external pressure of donor countries aiming to orienting their projects towards better participation (AusAID, 2010).

Nevertheless the decisions taken by the TOSWMP board, do not reflect a deep understanding of public and private stakeholders. Even though the decision-making board consisted of representatives from MoE, MoW, MoH, a lawyer and two community representatives, the interviewees implied that cross-sectoral public representation was weak, since both community representatives were from women groups, thus representing only a part of civil societies interests and partially also because of the vested interest in economic opportunities arising from the project.

Interviews suggested that Waste Authority (WA) is at the moment facing challenges in their financial

model, devised by the board and reaffirmed with governmental consent. The problem arose after decisions was made that a universal waste collection fee will apply for all households on Tongatpau and the collection of fees will be done though women groups representatives for a respective area.

The problems exposed were: a) the TOSWMP having been too focused on training women groups rather than connecting more directly with communities to learn about thier capacity to negotiate and devise a suitable waste management strategy with emphasis geared towards minimization rather than collection; b) 'fairness' of universal fee, considering great variations of waste generation and payment capacities throughout the island, when greater income and affluence are closely related to greater waste generation; c) putting too much attention towards villages, while 70% of the Tonagtapu population lives in the city; d) social group preforming financial responsibility, beyond their scope and capacity, especially when exhibiting very low legitimacy by being newly formed for this particular  purpose, which was the case in urban areas, where many people are not connected to these groups at all.

Following the decisions made, the current situation in Tongatapu waste management is rather bleak. Interviews with people working for WA suggested that WA struggles to keep their operation going, by collecting only around 20% of what was supposed to represent their operational budget. The expected minimization of waste, after the awareness raising campaigns, did not eventuate so far causing concerns and problems at the landfill, since the first (and the only properly protected) landfill cell is filling up at a faster rate than expected.  The diminished project funds are not able to cover extensions. The future of WA and success of its operations is questionable, especially if the government or external donors fail to cover the financial losses or change the attitudes of people.

Interviews suggested that cross-cutting communities consultation should be encouraged on side of board consultations. An approach like that would allow communities to come up with their own communal payment as well as more appropriate waste management schemes. Two positive community examples were mentioned, where communities have managed to negotiate a well functioning schemes for raising collection fees. Lapaha and Veitongo collect their fees through town officers with help of various fund raising schemes. The most important factor here is a good relationship with the town officers and mutual understanding of the problem. It is not clear however whether their participation process also resulted in other types of learning about waste, such as potential of waste minimization. These examples illustrate how participation can reap positive outcomes if the participation conditions

for it are beneficial.

In the National Strategic Planning Framework 09 (PMO, 2009), strengthened community governance is listed as a priority, suggesting that community participation in complex problem solving and decision making might see a light of new opportunities.

Tongans have some very special features in their culture relating to women's social and material privileges through the *fahu* system, whereby sisters outrank their brothers. *Fahu* can be described as authority rank, including the right to demand goods and services, over her brothers, mother's brothers and other kin over whom a women has *fahu* status. This system then tempers the assertiveness and competitiveness on account of the mutual dependency between the two genders (men get the formal entitlements, while women hold the informal). Furthermore traditionally the nurturing role of men was considered normal and natural and was reinforced by their responsibilities to provide food, protection and support his family as well as sisters and children (Emberson-Bain, 1998.)

Today, however, women's status as wives takes increasing precedence over their status as sisters (Emberson-Bain, 1998). The overall effect are numerous challenges for women and their entitlements.

## 5.2. Limitations for social learning - dynamic culture

The thrust for public participation for sustainable development in political and public debates supports the dynamic view of culture. This is especially true in relation to social learning for resource management, where active participation of diverse stakeholders is seen as an equally essential part of solving resource management challenges through the development, dissemination and implementation of ecological knowledge and technical know-how (Pahl-Wostl et al., 2008).

The view derives from the work on socially constructed nature of identity or the social constructivist approach (Lee, 2003). Culture is understood as a dynamic and changing phenomena, negotiated, defined, organized and reproduced through social interactions. It can be described as a characteristic of a group, which may be much smaller than a particular ethnic society as a whole. Through social interactions each group develops its own specific cultural characteristics (Pahl-Wostl et al., 2008.)

Because of its sensitivity to capture cultural dynamics and with it the consequential changes and

paradigm shifts brought about by interaction of different cultural discourses within society, this approach inspires consideration that culture can be strategically guided by means of social learning (Pahl-Wostl et al., 2008). This suggests then that societies can learn to change so as to moderate problems to health and environment.

This part relates to the theory of situated learning that understands social learning as active social participation in the practices of communities, and construction of identities (bahviour, values, attitudes) in relation to these communities (Leve & Wenger, 1991). Social learning theorists suggest that culturally diverse groups or communities provide a foundation for sharing their knowledge and can together devise new ways of knowing, by shifting their initial beliefs and ways of knowing (Li et al, 2009). Social learning in this sense represents an action-oriented philosophy focusing on participatory processes and social change (Rist et al., 2007).

However many scholars (e.g., Keen et al.,2005) agree that social learning processes cannot be imposed upon actors, but rather require nurturing of learning opportunities. The practical implications of this for the potential role of social learning for waste management, is to promote and enhance their application by creating learning situations. This means establishing participatory learning settings, where participants can meet, interact, learn and design collective decisions (Muro & Jeffrey, 2008).

However when discussing challenges like waste management, one needs to consider whether existence of participation processes and spaces themselves implies that social learning will eventuate and contribute positively to a better waste management. In other words, the question is how well these spaces and participation processes cater for social learning to occur. There are numerous underlying factors that affect these processes and any effective learning outcomes. For example, are they broad enough, or do they engage all relevant stakeholders that can contribute to social learning? Other important considerations also include power relation, openness-accessibility of these spaces, control over procedures of interaction, discussion and learning, style of process and trust, and form of participation. (Sinclair & Diduck, 1995; Muro and Jeffrey, 2008.)

Waste management involves government, businesses, and every single household in the country; and carries important environmental and health implications. Therefore it is important to understand that long term, sustainable socially and environmentally appropriate solutions can only be devised with

general participation, education and compliance of all the actors involved. Social learning then needs to transcend across all sectors of society.

Following I will analyze limitations based on the evaluated components of social learning in participatory processes employed in several studies, as suggested in Muro & Jeffrey (2008). They refer to how the nature and design of participatory process affects social learning.

### 5.2.1. Building shared understanding and identification of common purpose

Despite Tongans having the culture of intense social interactions and well developed informal communication and participation spaces (Helu, 1999), the effects of learning that occur within them, remain limited and very localized, usually not transcending to other groups. This means that inter-linkages between groups are weak and discussion within them is unlikely to cross to higher levels of decision making. Groups are very localized, bound to a specific sector of the community (gender, age, strata, geographical location) and are often also geographically limited.

The main settings for social participation, discussion and social learning in Tongan society are *kava* clubs*[*], woman group meetings and more recently youth group meetings. Things discussed range from usual daily activities to politics.

The aim of informal *kava* club or *kalapu kava tonga* (social drinking of *kava*; which is a direct opposite of the formal and symbolic *kava* ceremony, with very explicit rituals and rules about relationships and power distribution between participants) is to freely and openly discuss topical issues and generally anything that may catch the interest of the participants (Helu, 1999). *Kava* clubs not only offer a forum for discussion and expression of opinions, but also provide a communication space where different ideas for community development projects can be expressed, negotiated and trigger found raising activities. The informal *kava* club is the most effective vehicle for political discussions in Tonga (Ibid.) Similar to this but usually with a more purposeful focus are the meetings of women and youth groups. However within these participatory arrangements, gender and different age groups are distinctly separated, *kava* club almost exclusively attended by men, and women group meetings only attended by women. (Ibid.; Emberson-Bain, 1998). While these communication and participatory spaces can

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\* *Kava* is a national cultural drink of Tonga with mildly narcotic effects. It is made of root and stem of a plant belonging to pepper family (Helu, 1999).

function remarkably well in a given localized group context, their separation still presents a major barrier to the integration of external ideas. Tight bonds between members can also become exclusive and hinder development of external collaboration (Li et al., 2009).

Waste management context in Tonga provides an example of the problems arising when the communication arenas of women, men and youth are largely separated. Women are the ones that are in charge of cleaning and thus waste collection disposal men the ones working on fields while youth are the ones learning about the cause-effect issues of waste in school. For example the useful connection between large amounts of biodegradable waste and farming might be more obvious if those communication spaces would overlap. According to waste characterization surveys biodegradable waste varies between 50% and up to 90% in Tonga (Prescott, 2007; SKM, 1999), which could be used as ecological farming fertilizer.

As discussed Tongan society does not respond well to ideas of younger generations, since they are considered immature and need to first of all learn from the elders on how to become *poto* or socially competent (Morton, 1996). I observed this in focus group sessions. For example when a considerably older men joined the group discussion and intervened when he disagreed with some statements, the general discussion between younger participants would die out. The occasion usually ended with silence and it was up to me to re-initiate the discussion by new questions or ideas. On contrary on another occasions where participants were more balanced in age, lively discussion developed and a variety of opinions was entertained and discussed by all participants. These barriers to communication are problematic because individual growth and creativity can be constrained if individual members are discouraged from standing out in a community (Li et al., 2009).

As a result of this social separation, shared understanding may remain limited within a particular group while broader collective preferences and ideas remain outside. This limits the full potential of understanding contained in these multiple vision. Building a broader shared interest in the common good and devising new solutions is accordingly impaired.

### 5.2.2. The transfer of factual information

In many cases households still bury, burn or discard their waste on their bush plot (Prescott, 2007). Process of scientifically informative/guided cross-sectional social learning could potentially change this

(SPREP, 2006). In Tonga information transfer about waste, rarely happens through participatory processes, but rather only through information campaigns where people are receivers of information, and not active participants of a debate. This means that information is not necessarily understood, critiqued, or acted upon. The informal social participation processes mentioned earlier hold a very broad agenda for discussion, however waste management issues are not likely to be a main focus. Numerous reports identify a lack of awareness and understanding of environmental issues in Tonga, including waste related problems, and corresponding ecologically degrading practices among the general population (e.g., Prescott, 2007; SKM, 1999).

The lack of understanding about waste issues was also expressed as a concern by many interviewees who mentioned that even the previously run extensive awareness raising campaigns didn't result in good "understanding" (in this case understanding being distinct from knowing) of waste problems. Thus the waste management practices in many households had not changed. Awareness raising activities play an important part in informing the people about problems related to waste, about possible options to reduce the problems, and about policies, disposal services and financial costs. But it is participatory public meetings and workshops that involve communities in planning processes, create understanding about management situations and encourage a sense of partnership and ownership that have the ability to foster behavioural change and adoption of introduced waste management policies (SPREP, 2006).

## 5.2.3. Features of participation processes

In Tonga, political centralization has been stronger than anywhere else in the Pacific. As mentioned civil society is generally excluded from decision making or even relevant participatory representation (Helu, 1999).

The traditional but still active communicative space between government, nobles and communities is called *fono*. This is generally not a forum for discussion and debate, but rather an official announcement and instructions to the people without much subsequent discussion. The announcements of government and nobles are usually combined at the monthly *fono* called by the town or district officers. Town officers are popularly elected officials that mediate between government and communities. Their standard duty is to enforce town regulations and to announce government matters

at *fono* (Marcus, 1987.)

A very important type of participation space in regards to waste management in Tonga ware initiated by the TOSWMP leading project team (under AusAID). One type involving high level participatory consultation within the TOSWMP board of stakeholders was discussed earlier. This was the main arena for a more discussion oriented process which then eventuated in formalized decisions about waste management in Tongatapu.

Another type held was public consultation meeting, however the format was not designed to discuss various options that participants might have, discover areas of agreement and disagreement, allow suggestions of alternative options, or to dwell into other problems that might be expressed during the course of the process. Interviews suggested that identification of common purpose was effectively excluded. The whole process was rather more focused on informing the people about decisions already made or in the process of becoming validated by the government.

Interviews also suggested that the participation rate in the TOSWMP meeting was very low, with only 6 people showing up to a meeting on public sector contributions. There could be a number of reasons that explain the low attendance. Such communication formats for example are very recent in Tonga and thus not well established (cf. Helu, 1999). People might not yet understand the role they can play in such processes and will generally need to get used to participate in these cross-sectoral communication spaces. An interviewee suggested that many things in Tonga go wrong because of people's dependant attitude.

Mentioned in several interviews was the lack of interest of public actors to participate in such meetings, since decision making has always been in hands and views of the government without allowing much discussion about development projects. Within such political arrangements it is then also difficult to count on equal representation and power distribution in the participation process (Helu, 1999).

This is also suggested by other authors who state that participation processes can turn out oppressive, by excluding some voices and perspectives, omitting specific concerns, or presenting some arguments as overarching and as self evident truths. Technical expertise and authority can dominate the discussion and silence those with less substantive knowledge or less authoritative positions. Processes lacking mutual recognition and reciprocal deliberation undermine social learning, which requires citizens to

acknowledge and respect each others perspectives and moral positions even though they do not share them (e.g., Saarikoski, 2000; Muro & Jefferey, 2008).

Tongan culture is based on reciprocity, acknowledgment of interdependence and the importance of social relationships, which is very encouraging for social learning. However the great complexity of their social stratification and ambiguity of relationships between elites and commoners calls for deeper considerations of these social arrangements, since relevant participation process will need to cut across all different sectors of society

An example of obstacles facing participation can be provided from political arena. In the small Tongan parliament the discussion over certain issues can lead to very emotional frustrations, especially because the peoples representatives are a minority and often faced with arrogance by the ministers of superior social class. Vice-versa nobles and ministers are offended by what they see as disrespect and disobedience of lower status members (Campbell, 1992.)

The general lack of technical knowledge and comprehension of waste related problems in Tongan communities is probably another disincentive to participate in well prepared debates that usually involve much technical terminology and specialized knowledge (Prescott, 2007; SKM, 1999). Sinclair and Diduck (1995) suggest that what is largely ignored in participation processes is that the effective transfer of power also requires effective transfer of relevant factual knowledge about the problems faced and the decision making process itself.

Participation process can also turn out to be too short. This can deter people from discussing the issues that lay at the heart of the concerns (Saarikoski, 2000). Long term perspective on problem can thus be lost in short term views and decisions focusing on immediate environmental impacts, rather than systemic causes. This leads to reactive rather than proactive approach (Ibid.). Interviewees suggested that In Tonga "fitting" with agenda set by donor countries is still the underlying motive of most development projects. They are usually framed in up to 5 years time frame. Due to the short time frame choices are usually directed towards quick, feasible and cost efficient solutions for example treating the waste, versus solutions that pave the way for an ecologically sustainable solution in the long run. Thus addressing partie's identities, responsibilities, fears and distrust, requires a well managed mediation process, which is essential to reach common understanding and work together (Ibid.).

### 5.2.4. Moral Development and Trust

For effective social learning a high level of comfort and trust is required (Saarikoski, 2000). In Tonga the government is seen as the main driver of the development process. The Kings Tupou IV and V, both succumbed to some  extreme state business ventures that didn't bring any benefits for Tongans, but rather international shame and national grieve . These included selling Tongan passports to foreigners, selling rights to the maritime use of the Tongan flag which was then used by a ships smuggling arms to Palestine; and buying a decommissioned passenger ship for use as a national ferry that sank on its 5th journey and more than 70 people lost their lives. In circumstances like this a government does not espouse much trust from its citizens (Campbell, 1992; Moala, 2009; RCISPA 2010).

Another problem can be the accuracy of information presented by one party (Saarikoski, 2000).  For example according to the interview, misleading information about Waste Management Act and its regulations caused confusion in public and in private business sector for waste collection and management. The newly established Waste Authority was promoted as the sole legitimate domestic solid and liquid waste collection authority. This had negative effects for private waste collection businesses with established clientele. While SPREP's strategy for Solid Waste Management in Pacific suggest that private sector should be engaged in the design of successful waste management strategies (SPERP, 2006).

### 5.2.5. Learning about community capacity

Another issue exposed in the interviews was that without external initiative the seeds of cooperation and mutual understanding can quickly dry up. In Tonga public support for new properly managed landfill was very high during the first stage of the project, but fell significantly after AusAID intervention and funding ran out. People deterred from paying collection fees, and many started to burn and bury their household waste again. Schools didn't succeed in properly managing their recycling stations and thus fell out of the scheme for landfill waste collection and reverted back to burning their "rubbish heaps". Recycling cages distributed during the TOSWMP promotion phase only attract financial returns if managed properly so that recycling company will pay for the materials collected. If materials gets mixed the payment is canceled. The TOSWMP Scheme designed for schools was that money from recycling could cover the cost of waste collection, however according to survey done by

WA personnel, only 2 schools in the whole of Tongatapu are managing their waste accordingly. Similarly the pilot project for composting, mentioned earlier, ended as failure after its initial success. Once funding was out the commitment to carry on the project disappeared.

To be effective, communication activities must be designed around the needs of the stakeholders or target audiences. Individuals, communities, businesses and organizations must understand the role that they can play in supporting the objectives of the national strategies, such as TOSWMP waste strategy. Communications activities need to be tailored to ensure that the appropriate messages reach the intended target audience (SPREP, 2006).

When AusAID agreed to fund the TOSWMP, their primary goal was to replace the old dump with a sanitary landfill, however the project team saw itself as having a wider mission and set about improving infrastructure as well as knowledge (SPREP, Accessed 2010). Currently however according to the interviews, these good intentions are not working out well. The majority of households are not paying their collection fees which is threatening the operation and maintenance of WA services, the incentive for minimizing waste is almost non-existent and attitudes towards waste have not changed much despite the awareness raising programmes. TOSWMP is believed to have been to too focused on training women groups but not enough geared towards learning about the community's capacity to participate, negotiate and devise more suitable waste management strategies.

## 5.3. Limitations for social learning within the education system

Referring to 'Helu's critical ideas towards Tongan education system, this part investigates its role in promoting and enabling social learning for a more sustainable waste management within the institution as well as in a broader social sense.

Helu proposed a vision that conflicts with the mainstream education system which promotes instrumental education and a presumes unified interest in economic development and growth. His vision encourages free intellectual expression, inquiry and debate as means  for students to develop critical understanding of their society. This, he argued, is a necessary prerequisite for active citizenry and participation in a democratic society (Helu, Cited in Campbell & Coxon, 2005). This aligns with the need for the creation of democratic  participation spaces for effective social learning.

Helu's vision supports the understanding that social learning for sustainability requires development of opportunities for critical mutual reflection and the awareness of assumptions in a particular cultural that are taken for granted (e.g., hierarchy, authoritativeness and emphasis on economic modernization) in order to understand the critical roles played by values and beliefs in the shaping of reality. It corresponds with the idea of double loop learning that underlines people's capacity to re-frame their positions and in the process create new knowledge and alternative solutions (Tàbara & Pahl-Wostl, 2007). In Tonga this could contribute to a more egalitarian ethos in society, as well as better connectivity of what are now quite separated communication arenas (men/women; older/younger, rural/urban; state/civil society, elite/commoners).

This leads to next contribution education can make to social learning, which is the exposure of mutual interdependencies not just within social system, but also with ecological systems. For social learning to lead towards a more sustainable waste management it involves overcoming many dichotomous perceptions (human/nature, individual/collective, material/spiritual, masculine/feminine, rural/urban) that are still embedded in the way humans interpret their socio-ecological reality (Tàbara & Pahl-Wost, 2007). Following Gramsci's reasoning, to achieve this prior intellectual efforts will be required. (Gramsci, Cited in Campbell & Coxon, 2005).

The interviewee working with awareness raising on waste issues in schools explained that recently a school book on waste issues for class 3-6 was distributed freely to all schools in Tongatapu. Only two principals came to the workshop on launching the book. The oral and observational survey done on whether the books are used and waste is managed in schools, found that in most cases the books were not distributed to the teachers, and that most schools still burn their waste. This suggest low priority given to new recommended teaching material, as well as low priority to change waste management practices in schools.

A presentation on waste related problems and possible solutions is done once a year by WA community awareness personnel, for all students. To further sustain the interest among pupils, it the task of the teachers. Currently however the education system in Tonga is geared to passing examinations for academic advancement. This puts strong pressure on teachers to teach only what will be found in the examinations, leaving little time for anything else, environmental issues included. Furthermore information is often memorized without reference and conceptualization into reality. Such pedagogical

methods encourage little understanding of the knowledge being passed on (Schmelzer, 1991.)

Some scholars, including ones interviewed suggest that schooling as it is in Tonga does not address the challenges faced by young people today, namely challenges of livelihood and multiplicity of cultural identities Nor does it address many important national and global issues (Thaman, 2009). For more sustainable waste management however, there is a need for increasing awareness of the ecological limits and of the intended and unintended negative consequences of individual and collective action upon ecological life-support systems (Tàbara & Pahl-Wostl, 2007; Schmelzer, 1991). Despite the westernized type of development and education in Tonga, there has been a mismatch in delivering sufficient information and preparation for problems that follow the modern development.

Thaman (2008) argues that the conflicts between the culture of formal education system and that of Tongan learners largely contributes to students' underachievement and that leads to unsustainable livelihoods. The education system has significantly contributed to the transformation of the way Pacific people see themselves and their environment, as well as the way they think and communicate with one another (Ibid.) This relates to the promotion of individualism over collectivism and a decrease of communicative capacity due to relational uncertainties between social actors in highly relational society (Thaman, 1992). This then effects social learning between social actors.

Another problem is a low conducive environment for cultural sensitivity. Thaman (1992) suggests that understanding of culture within the historical and ideological context enables understanding and critical reflection on the contentious aspects of ones own culture. She defines cultural literacy as a competence in the shared knowledge (understandings, skills and values) that enable members of a group to communicate effectively. Teaching children about cultural values enables them to understand the values of other people, as well as factors which may contribute to changes in their own values. Cultural literacy then supports cultural sensitivity which enables better communication (Thaman, 1992). This is essential for social learning.

Although developed in other countries than Tonga, curricula is taken for granted, with little consideration of whether it actually fits with the Tongan needs (Thaman; Tuioti; Tolley, 2009). As such curricula is having very little or no consideration of learners socio-cultural context. Many Pacific scholars agree that the current educational systems tends to alienate many young people from their own

cultures, especially in areas of language, values and teaching-learning styles (Thaman 2008; 'Fua 2009; Taufe'ulungaki 2009).

# 5. DISCUSSION

Many scholars today stress that the complexity of socio-ecological systems under rapidly changing conditions, creates challenges that can't be tackled with the narrowly defined technical solutions. They advocate for wider use of social learning models to address these complexities in a sustainable, socially and ecologically acceptable ways. (e.g., Pahl-Wostl et al., 2008)

Social learning is a concept that does not have a unified theory. Amid various conceptualizations there are those with strong propositions for the need to apply this learning approach if we are to transition towards more sustainable society. There are also some relevant critiques relating to social learning, exposing challenges and limitations of its usefulness in particular contexts.

This research has been focused on identifying limitations to social learning for waste management on Tongatapu. Analysis of challenges was conducted based on information obtained from literature, interviews and focus groups and separated into three analytical categories of 'stable' culture, 'dynamic' culture and education, all of which play a significant role in social learning.

In Tonga political centralization and an autocratic structure does not support cross-sectoral participatory processes in a meaningful way. The civil society is usually excluded from decision making and relevant participatory representation. At the same time some cultural characteristics suggest that people are used to having decisions made for them, thus their interest to participate and 'make a difference' is currently low. Acceptance of submissiveness is a socialized aspect of Tongan culture; an essential part of *anga fakatonga.*

In Tonga formal institutions and governmental interventions are turning the wheel of "development" and government is also perceived as being responsible to tackle the problems that come along with it. The civil society is generally rather non-reactive to decisions in the government, although important changes seem to be on their way. A major political reform process is under way. This represents an important opportunity for social learning since it could trigger emergence of more participatory oriented decision making processes. However even with good ambitions it might take some time for

people to get used to new rules and realize what their role is in the process in order to really start to actively participate.

Although Tongan culture is usually characterized by strong reciprocity in relationships, interpretations and manifestations of reciprocity can be ambiguous, especially between different social strata. In practice it often divides into authoritative and submissive roles where high ranking people control the direction and meaning of discussion and guides the communication by advising and teaching. Meanwhile lower ranking people must listen and obey (Morton, 1996). *Fono* is one example of communication between people and the government or nobles that holds close resemblance to this view by being instructive and not discussion oriented. Furthermore the tendency of people to follow the authoritative ideal of one's personhood whenever situation permits makes the hope of more democratic and balanced communication and participation processes seem fairly distant.

This ambiguity of power relations in Tongan culture disables equal representation of opinions and can turn group dynamics in participatory processes that aim to cut across social stratification, into oppressive and non-representative forums.

Palmer (1998) demonstrates that one of the most fundamental features of the social learning approach is a shift from multiple to collective cognition. Multiple cognition prevails when actors maintain mutual isolation from one another. The aim is therefore to enable participants to define their stand more with regard to others and therefore collective good, rather than just within their distinct group identity. Here Tongan culture seems to play a positive role in that it emphasizes the importance and value of interpersonal relationships and seeing one's individuality always against the collective backdrop. This trait could be very helpful for shifting to collective cognition in the social learning process.

Another problem is the segmented nature of communications spaces in Tonga. Discussion remains ineffective where age, gender, rural/urban, status difference and even geography create communication gaps and asymmetries between different groups of people. This has negative effects on social learning for more sustainable waste management, which needs to occur with cross-sectoral participation involving all relevant stakeholders. Although different groups might have already developed collective cognition they maintain it in isolation from other groups, meaning their cognition in this case is multiple rater than collective.

Orientation towards western style development and education as well as high level of migration is influencing new ideas that play their part in shaping plurality of opinions, or at least making them more visible in public. The capitalist market economy and the following consumer society is espousing tensions precisely because it doesn't align well with old social and political order. New values and priorities are entering the everyday system of Tongan lives, encouraging individualism and freedom of choice.

There are two sides to the rise of individualism in relation to social learning. A negative one signifies the move form a collectively oriented society towards a more individualistic one, where aacceptance of shared goals and collective action, will be more difficult to achieve due to high diversity of views and interests. However a move towards individualism also symbolizes a push for changes in politics and social organization towards a more democratic structure of relations and participatory processes in decision making. While this shift represents an opportunity it raises the question of society's capacity to think, reason and learn as citizens rather than self-interested individuals.

The question then drops back to capacity to think, reason and learn as a citizen and not individual.

Schmelzer (1991) suggested that the increasingly westernized type of education in Tonga, fails to deliver sufficient information and preparation for problems that follow modern development. Education as it is now does not seriously address the many important national and global issues of today, environmental problems included. The system emphasizes teaching that is focused on passing examinations. Pedagogical methods do not encourage development of understanding and critical reflection on knowledge presented. Information is often being memorized without reference and conceptualization into reality.

This study has identified various limitations to social learning in relation to a more sustainable waste management on Tongatapu. While not arguing that social learning is impossible or useless in helping to find more appropriate and broadly supported waste management solutions, the study agrees that limitations identified in this study indicate the need for thoughtful preparation and organization of participatory problem solving processes in Tongatapu. Other complementary strategies, like enforcement of regulations, and economic incentives may also be needed.

This study was limited by time available to spend on field as well as finances to cover the broader

exploration of the Kingdom of Tonga. As such the analysis and finding are limited to Tongatapu context. Although some parts of this thesis engage in a more general discussion on what could be limiting social learning, such as inquiry into 'stable' culture, the analysis provided does not cover other islands, where waste management situation could be quite different to the one described here.

# 6. CONCLUSIONS

A multitude of factors might affect the success of social learning processes and the willingness of social actors to cooperate and learn with each other in order to create new ideas on how to tackle complex sustainability problems. Tongan culture holds many asymmetries in power distribution that have an important influence on communication, participation, and subsequently on social learning.

The main limitations identified in this case study deriving form a 'stable' cultural environment in Tonga are culturally defined communication divides between higher and lower social strata, the authoritative ideal of personhood and the rise of individualism over collective orientation.

Limitations deriving from a more dynamic interactive level of participatory problem solving are the segmented nature of otherwise vibrant informal social communication spaces, over reliance on governmental institutions to deal with occurring problems as well as the one percipitating form the more stable cultural system and education system, effecting the flow of communication and interaction.

While insufficient information and preparation for problems that come with modern development, and pedagogical methods and curriculum that do not encourage understanding and contextualization of information or help creating a society that is able to critically reflect on their behaviour, values and attitudes in a way that reveals the limitations of those and thus creates a potential for social change, were identified as main challenges arising form education.

Despite the barriers identified, social learning can still evolve through time, especially since major political changes are on the way in Tonga. While this study identified a number of limitations to social learning it is not arguing that social learning should be overridden by other problem solving approaches be it regulatory, technical or market, although these could potentially play a complementary role in addressing the problem.

The study does however indicates that the emphasis on social learning in participatory problem solving is likely to be insufficient, without a broader awareness amongst people about the problem. It also indicates the need to integrate the 'stable' culture into the problem solving equation, since it can also exhibit limitations to social learning approach. Although the challenges for achieving effective social learning may then appear to be considerably harder to overcome, the efforts will probably turn out more sustainable in the long term. Indeed such changes present social learning by itself.

This research can perhaps inspire others in different context in order to get a better insight of how feasible it is to expect social learning to occur in a given context and lead towards generation of more sustainable solutions, and inspire research towards identifying possible ways of overcoming the limitations identified. Although the case study was directed to researching social learning through waste management lens, the findings of this study might prove valid for other types of resource management as well. By providing this insight the study can be helpful in informing future efforts towards enabling and strengthen social learning in Tongatapu waste management in particular as well as in Tongan environmental resource management in general.

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# APPENDICIES

## Appendix I : Glossary of Tongan Terms Used

Ala – Touch

Anga fakapalangi – The 'Western way' or used to describe things and behaviours that are not Tongan

Anga fakatonga – The 'Tongan way' or used to describe things and behaviours that are 'truly Tongan'

'Eiki – Elite;  Aristocracy – formally chiefs, but today used to refer to nobles and royalty

Fahu – Social stratification system, whereby sisters outranks their brothers

Faka'apa'apa – Respect that is closely related to *'ofa.*

Fonango – Listen; deep listening

Fono-  Traditional but still active communicative space between government, nobles and communities

Kaimua-  Too smart for your own good, being a"smart-ass", pretentious

Kalapu kava tonga – Informal socializing and drinking of kava

Kava –  National cultural drink of Tonga with mildly narcotic effects

'Ofa - Love and compassion

Poto- Social competence

Sio - Observation

Ta – To perform or act

Talangofua- Obedience

Talanoa – Talk in an informal way, discussion in a formal or informal setting

Tu'a- *A* commoner, or someone of lower rank in any relationship

Vale – Foolish, crazy

## Appendix II: List of Interviewees & Focus Groups

*Mrs Betty Blake*

Ma'a Fafine no e Famili Inc

10 March 2010 – Nuku'alofa

*Mr 'Ofa Fakalata*

Organic Farmer and formerly Head of Research at the Ministry of Agriculture, Fisheries and Forestry

25 March 2010, in Nuku'alofa and 29 March at his bio-waste facility and farming field

*Mr Sione Faka'osi*

Executive Director –Tonga Community Development Trust

10 March 2010 – Nuku'alofa

*Ms Tufui Faletau*

Deputy Secretary of Finance - Ministry of Finance and Planning

18 March 2010 – Nuku'alofa

*Mr 'Ata'ata Finau*

Government Statistician –Tonga Statistics Department

5 February 2010 – Nuku'alofa

*Mrs Ana Bing Fonua*

Programme Manager –  AusAID

1 March 2010 – Nuku'alofa

*Dr Seu'ula Johansson Fua*

Fellow – Institute of Education, USP

4 March 2010 – University of the South Pacific and 16 March Nuku'alofa

*Mr Talo Fulivai*

Environment Officer –Ministry of Environment and Climate Change

5 March 2010 – Nuku'alofa


*Dr Sione Nailasikau Halatuituia*

CEO – Ministry of Lands, Survey and Natural Resources

8 February 2010 – Nuku'alofa


*Mrs Talita Maile Helu*

Waste Authority, Community Awareness

26 March 2010 – Nuku'alofa


*Mr Gabrielle Mafi*

CEO – Tonga Waste Management Authority

1 February 2010 – Nuku'alofa


*Mrs Mafi Le'o Masi*

Environment Officer - Ministry of Environment and Climate Change

5 March 2010 – Nuku'alofa


*Ms Lupe Matoto*

Head of Technical Division - Ministry of Environment and Climate Change

18 March 2010 – Nuku'alofa


*Mrs Lee Miller*

Waste Management Ltd

3 March 2010 – Nuku'alofa


*Mr Kalafi Moala*

Taimi o Tonga

25 February 2010 – Nuku'alofa

*Mr Semisi V. Tapueluelu*

Technical Officer –Tonga Waste Management Authority

24 February 2010 - Tapuhia Landfill Tongatapu


*Dr 'Ana Maui Taufe'ulungaki*

Director – Institute of Education, USP

4 March 2010 – University of the South Pacific


Mrs **Ofa Tuikolovatu,**

Gio Recycling Ltd.

31 March 2010 – Nuku'alofa


*Mr Tukua Tonga*

Director of Urban Planning –Ministry of Lands, Survey and Natural Resources

27 January and 4 February 2010 – Nuku'alofa


*Mrs Monalisa Tukuafu*

'Aloua Ma'a Tonga

1 February 2010 – Nuku'alofa


*Mrs Suliana Vi*

Environment Officer –Ministry of Environment and Climate Change

1 February 2010 – Nuku'alofa


**Focus Groups:**

*University of the South Pacific Tonga Campus*

9 March 2010


*Atenisi University*

12 March 2010

*On the Spot Arts Initiative*

31 March 2010


*'Eua*

 2 April 2010

## Appendix III: Tongan Culture

**Anga fakatonga –** "the way of the land and the people" **or between the two realms**


Most Tongans believe that there is a certain way of being Tongan. They tend to refer to this concept as timeless and fundamental to their cultural identity, yet they also seem to be aware of its multiple interpretations, historical transformations, sometimes even contradictions. *Anga fakatonga* encompasses what is seen as uniquely Tongan, the Tongan identity, the values and behavior, and is shaped by notions of differential power, prestige and social ordering. In practice it is used in many contexts from describing values to describing the way of peeling a potato (Morton, 1996).

Pre-European period has seen an active interaction between pacific societies, carrying over certain influences to one another. Even though they were mutually influential, they have also been self-consciously distinct in their cultural identities (*anga fakatonga*- Tongan, *vaka viti*-Fijian, *fa asamoa*-Samoan) When Europeans arrived, Tongans discerned themselves from the Western way or *faka palangi* (Morton, 1996).

Cultural contact and interaction with the "Western world" had a powerful influence on social and political transformation of Tongan society, starting from late 19th century (Morton, 1996, Campbell 1992). Some scholars suggest that during this period Tonga developed a "compromise culture", a stable complex of new institutions, ideas and practices which integrated Tongan culture with a version of European culture (Marcus, 1978). This shows that the interactions between cultures are effective, leading to modifications, with concessions and accommodations taking place in due course of interaction (Helu, 1999). Tongan adoption and adaptation of Christianity might be the most prominent example of this "compromise culture", since the categories of tradition and Christianity are now inseparable in Tongan minds. In almost a century of Christianity, the respective religious practices had

become so absorbed into daily life that it became an integral part of of Tongan culture (Campbell, 1992). It was during this period that much of the "*anga fakatonga*" was established. *Anga fakatonga* is based on norms and values of kingship, kinship and reciprocity and shaped by notions of differential power, prestige, social ordering and obligations. The concept of social hierarchy is central to Tongan identity (Morton, 1996).

King George Tupou I, was the first Tongan king, who after wining the civil war, established the national constitution and European style codes of law to avoid colonization by foreign forces. He modified the existing hierarchical system, instituted a land reform and equal rights before the law. Although the new political system embraced western legal forms, its remained in its essence autocratic in practice. The new laws and provisions of the constitution, although changing the official face of Tonga, scarcely modified the substance, for almost next 100 years. Tongans continued to lead the lives whose structure was little changed from the old one, new people exercised power in religion and government and there was new distinction between nobles and the traditional chiefs, however that mad little difference to established pattern of social life (Campbell, 1992.)

By declaring a clause that makes all segments of the society subject to the same law, and by abolishing the chiefs authority over the people the political reforms dismantled the traditional customary system, by instituting a class of nobility that accounted 33 nobles and some hereditary *matapule* (speaking chiefs or representatives of a certain kin group). Gentry identity that traditionally linked people to the highest kin (traditional chiefs) and thus ensured them the generosity and secured prosperity in accordance to superior kinship claims was interrupted. The people in the process internalized, emulated and attuned the multi-stranded expectations and obligations of being kin within their kin relationships, thus the complex  kinship culture precipitated to the social units at lower level throughout Tongan society (Gailey, 1992).

These social transformation generally did not eventuate in a more egalitarian ethos, although they have, to some extent, equalized the opportunities and capacities for status competition among a greater number of  social units of kin, which became highly rank conscious and internally stratified. (Marcus, 1980) The complex notion of rank continues to be applied in practice in daily life of people; higher rank commanding respect  and obligation from lower rank, the older commanding respect from the

younger; female commanding respect from male (Campbell, 1992).

Under the rule of first three monarchs Tupou I, II and Queen Salote, Tonga was still relatively isolated and conservative place (Morton, 1996). Most social changes continued to be the result mainly of government policy, mediated through close regulation of imports, management of production and exports and health and education policies in pursuit of modernization (Campbell, 1992).

Major changes in lifestyles and traditional customs occurred only later during the the reign of Tupou IV (1967 – 2006) and his successor Tupou V (2006-), the current monarch of the kingdom. Tonga was increasingly opened to the outside world during this time. Various policies on migration, education, health and economy stimulated major intended social changes, however many of the unintended changes happened as well, connected with population growth, rising material aspirations and the growing pluralism in Tongan society. Tonga has seen during that time, unprecedented development in international trade, increasing internal and external migration flows, increasing urbanization, introduction of "exotic" goods and new technologies; and also growing reliance on aid, remittances, growing land shortages, increasing unemployment, crime and environmental problems (Campbell 1992, Morton 1996).

Tongan social organization still demonstrates vigorous interdependencies within extended families and differential social status. At the top of the social  pyramid is the king and his royal family, followed by the nobles and then last is the class of commoners. The stratification gained new dimension with the proliferation of business related middle class and educated elite. Tongan family is changing in character as people re-define their roles and obligations within the added dimensions of social stratification. The ethos of Tongan life is adapting to new material possibilities, people have become conscious of changes in values and relationships. Tensions are arsing between the new economy and the old social and political order (Campbell, 1992).

Up to today Tongan culture is still contrasted to anga fakapalangi, yet the strand of Tongan and Western have been interwoven in many aspects. Renewed concern for Tongan culture in recent years has been accompanied and to some extent motivated by the growing fear of weakening or losing that culture. Much of this concern is directed at children, socialization becoming a critical site for the contest,

construction and reconstruction of Tongan identity. The concept of anga fakatonga still ideally guides the socialization of children and determines appropriate behaviour in any given situation (Morton, 1996).