Bounding the Lagoon:
Spatialising Practices and the Politics of *Rahui*
Tongareva, Cook Islands

Charlotte Nesta Louise Chambers

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DECLARATION OF ORIGINALITY

In accordance with University of Edinburgh regulations, I hereby declare that this thesis has been composed by me and is based on my own work except where otherwise stated.

Charlotte N. L. Chambers
Date: 18.3.2008
ABSTRACT

This thesis is an exploration of the politics and practices of environmental management concerning a species of giant clam; *pasua* (*Tridacna maxima*) on the island of Tongareva, an atoll in the northern Cook Islands, Eastern South Pacific. In particular, the thesis examines variations in what the Tongarevan people see as the 'problem with *pasua*' and the complex interplay between these different conceptions and the acceptance or not of a proposed customary closure on *pasua* harvest known as *rahui*.

The research accounts for a range of social and power relations and ecological conditions in order to demonstrate the socio-political-ecological nexus that produces *pasua* management on the island. It explores how authority structures, economic changes and networks of exchange intersect to determine and shape the politics of *pasua* harvest and *rahui* on Tongareva and place both the island and *pasua* in very specific ways. It engages with recent debates over the significance of so-called traditional knowledge and management practices to argue for and contribute to a more nuanced understanding of environmental management in a South Pacific context. Theoretically, the thesis builds upon recent debates around the social and the environmental as mutually constitutive domains, elaborating this relationship by demonstrating how the use and conservation of *pasua* is negotiated in and through space.

The interdisciplinary research design includes analysis of oral histories, key player interviews and participant observation along with findings from a comprehensive survey of *pasua* abundance and distribution in the lagoon. It pursues this combination of data collection not in order to use ecological 'facts' to verify social 'beliefs' but because it sees such knowledges as different but equally valid – if differently empowered – forms of knowledge.
Overall the thesis suggests a different analytic lens for examining environmental management. It challenges the self-evidence of place, the existence of clear-cut 'environmental problems' and the idea that traditional practices can be unproblematically implemented. It suggests a relational approach that recognises the social, mobile and networked characteristics of the species, people and places under consideration so as to encourage attention to the varied topography of environmental problems and to develop similarly nuanced solutions accordingly.
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LIST OF ACRONYMS

ADB: Asian Development Bank
ANT: Actor Network Theory
CIPA: Cook Islands Progressive Society
CITES: Convention on International Trade in Endangered Species of Wild Flora and Fauna
CMT: Customary Marine Tenure
EEZ: Economic Maritime Zone
GDP: Gross Domestic Product
IEK: Indigenous Ecological Knowledge
IUCN: World Conservation Union
LMS: London Missionary Society
MIRAB: Migration and Remittances, Aid and Bureaucracy
MMR: Ministry of Marine Resources
NZODA: New Zealand Overseas Development Agency
SPC: Secretariat of Pacific Community
TEK: Traditional Ecological Knowledge
TMK: Traditional Marine Knowledge
TMRC: Tongareva Marine Research Centre
WWF: World Wide Fund for Nature
GLOSSARY OF MAORI TERMS

Apinga (aroha): Gift, present
Aria: A shallow channel through the reef opening into the lagoon
Ariki: A chief, king.
Aroha: Love
Atinga: Tribute, levy
Au: 1. Rarotongan equivalent of the Hau. 2. Bitter bladder of pasua
Haanau: Patrilineal extended family
Hakapapa: Genealogy
Hakavaa: Judge, appointed by the early British Administration on Tongareva
Hapuku: A species of cod Epinephelus polyphekadion
Hararanga: Alternative name of Tongareva
Hau: Council of elders, appointed by the early British Administration on Tongareva
Hititangata: A ramage comprising a group of huaanga
Hoki mai: To return, come back
Huaanga: A ramage comprising a group of huaanu
Kauniho: Reef on the lagoon side, extending from beach
Koutu Nui: Council of mataiapo that sits beneath the House of Ariki
Maeva Nui: Competition held during Constitution celebrations in Rarotonga
Mama: Literally translated, Mother, but is used to signal respect to a female elder
Mana: Power, authority
Manihiki: Island in the Northern Cooks close to Tongareva
Mangarongaro: Alternative name of Tongareva, also used to refer to a district
Marae: A sacred place used for pre-Christian religious purposes
Masanga: Ritual prohibition, synonym of rahui
Mataiapoi: Lesser chief, head of tapere
Motu: An islet
Nato: Small fish Myripristis berndti
Ngati: Descent group
Paaree: Slit drum
Papa: Literally translated, Father, but is used to signal respect to a male elder
Papaa/pakeha/papa'a: European/foreigner
Pasua/pa’ua: Clam Tridacna maxima
Parau: Black-lipped pearl oyster Pinctada margaritifera
Pati: Party
Pese: Chant
Pipi: Small pearl oyster *Pinctada maculata*
Pohatu: Rock, stone
Pure: Prayer
Rahui/ra’ui: To prohibit, to ban harvest. Synonym of Masanga
Rakahanga: Island in the Northern Cooks adjacent to Manihiki
Rakau: Stick, tree, marker
Rangatira: Priest
Rarotonga/Raro.: Capital of the Cook Islands
Rito: Coconut fibre woven into hats and baskets
Rui: Black trevally *Caranx lugubris*
Sei: Necklace
Tapere: Sub-district (Rarotonga)
Tapu: Sacred, prohibited
Taura: Ritual specialist or pre-Christian priest
Te: The
Te Pitaka: Literal translation, the circle. Name cited by Lamont (1867) to refer to Tongareva as a whole
Tere: To travel
Tere pati: Travelling party
Toka: Distinct coral head in the lagoon
Tongareva: Name for the island
Tuarai: Collection of coral patches joined by shallow ridge
Umu: Stone oven used for cooking under ground
Vaka: District
I sit in the eaves of Papa Ben’s house, listening to the sound of waves lapping the edge of Tongareva lagoon. The wind is strong and I strain to pick up Ben’s quavering voice as he talks about his memories of Tongareva. Our conversation turns to the subject of a recent harvest of *pasua*, a species of giant clam (*Tridacna maxima*) much favoured throughout the Cook Islands for their good eating. According to Ben, large quantities of *pasua* are being harvested from Tongareva lagoon not only so they can be taken to the largest of the Cook Islands, Rarotonga, for the forthcoming Constitution celebrations, but because people taken them to routinely sell for profit. Ben is not impressed: “I don’t know why we do that. They could just take one drum or two, not ten. The people don’t care eh? When we are out of *pasua*, what about our children eh? It’s not good.” Ben’s sentiments were echoed in comments from other islanders I spoke to during my time on Tongareva. Indeed, the matter of whether the Island Council, the governing body for the island, should close the lagoon by placing a *rahui* (harvest closure) on the *pasua* was a topic of protracted local consternation, debate and rumour.

This situation concerning the ‘problem with *pasua*’ appears, at first glance, to be a classic environmental management problem; an important food species is being depleted through over-harvest and the local authority, the Island Council, are taking action by considering a traditional
management strategy to remedy the situation at hand. But what is 'local' about this problem with *pasua* or indeed 'traditional' about the *rahui* suggested to address it? What are the social practices and the biophysical peculiarities of Tongareva that have produced this particular social and ecological outcome, and how do these, in turn, shape the processes of environmental management\(^1\) in this context?

The purpose of this thesis is to understand the politics and governance of *pasua* harvest and management in the geographical context of Tongareva through an in-depth, empirically grounded exploration. I examine the historical events, networks of exchange, local authority structures and biophysical specificities of Tongareva lagoon. The specific focus of the study is the politics surrounding a local initiative to manage *pasua*, that being a proposed harvest closure known locally as *rahui*. This case-study based research seeks to contribute to current geographical thinking on cultures of nature more generally, and as these relations manifest in the South Pacific specifically. It also seeks to emphasise the importance of attending to socio-political relationships, authority structures and knowledge systems in the context of environmental management more generally.

The specific research objectives of this study are as follows: first, given the assumption that environmental management is never unproblematic or straightforward, I seek to question the specific nature of the 'problem with *pasua*'. How is the 'problem' manifest? Is there a shared understanding of the nature of the 'problem' or does it vary within the island? These questions are predicated on an understanding that environmental management is always a deeply political process, involving socio-political processes of governance, authority and the ways in which these

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\(^1\) I have chosen to use the term environmental management instead of resource management at least initially because of the instrumentalist framing implied by discursively representing such species as *pasua* at the outset as 'resources'. Nevertheless, later on in the thesis I do frame *pasua* as a 'resource' in order to account for the ways in which it has become enrolled in networks of commercial exchange. For a general critique of nature as accumulation strategy see Katz (1998) especially p48-56.
are negotiated in and through space. In the context of my research into *pasua*, then, I seek to explore how the intermingling of social practices and biophysical specificities of the lagoon-space serve to produce the 'problem with *pasua* in very particular ways. My second research objective is to explore how different understandings of the 'problem with *pasua*', shape the seemingly 'traditional' socio-political processes of governance and authority. Accordingly, I examine how changing structures of authority shape the definition of the problem, and people's reactions to the solutions proposed. For example, why is it that a *rahui* has been suggested? Do the Tongarevan people agree with the need for *rahui* and do they think it will work? How is the success of *rahui* dependant upon particular configurations of authority within the island? In order to explore these questions I focus on people's reactions to the proposed *rahui* on the lagoon, examining both the spatial and political dimensions of this suggested closure on *pasua* harvest.

Finally, and extending the analysis, I seek to locate these questions of environmental management and authority in light of different economic circumstances that appear to be producing this problem. How are the different networks of exchange that surround *pasua* contributing to the problem? How can re-framing the 'problems' of environmental management lead to unanticipated and seemingly contradictory outcomes? I explore how people's contestations of the suggested *rahui* and the practice of sending *pasua* overseas may seem contra to the successful management of the Tongarevan marine environment. Nevertheless, examining justifications for particular instances of *pasua* harvest and exchange can shift considerably the 'problem with *pasua*'. In this respect, I argue that the 'problem with *pasua* is not in a sense locatable, because *pasua* is revealed as a consequence of this study to be relational, networked and deeply socialised. Overall as I outline in this thesis, environmental problems which appear 'local' are never about what happens in any one location. Rather, problems are complex, multiple and often situated in networks of competing relations. This study is offered as a contribution to other relational approaches to questions of environmental management in its
attempt to move towards a more nuanced understanding of the politics and processes involved in environmental management.

1.1. Introduction to the case-study

Tongareva, or Penrhyn as it is also known, is the northern-most island and largest atoll in the Cook Islands group, floating deep in the eastern South Pacific at 9°00'20"S, 157°58'10"W (see Figure 1-1). The island appears from above, as an improbable rim of white and palm-frond green, encircling a monstrous cobalt lagoon. Oceanside, the raw coral rim is coloured brown with algae, swirling under angry surf but cupping calm waters teeming with fish and a lurking menace of sharks. The landmass which forms the atoll is low-lying, a splintered collection of small islets locally known as motu, thick with coconut palms. Today, only three motu are inhabited: the villages of Omoka and Te Tautua fall on opposite sides of the lagoon and a small pearl farm is located on the north-eastern side at Pahonu (see Plate 1-1). As a visitor on Tongareva, it is easy to feel isolated; simply to reach the island involves a noisy four-hour flight north from the Cook Islands capital of Rarotonga. Flights are not regular; frequency is determined by demand so flights only go when there are enough people wanting to travel. Every few months, it is possible to reach the atoll by way of a five-day boat ride on the unreliable inter-island cargo ship, the Manuga Roa.

Tongareva (pronounced Toh-nga-leh-vah) is known by many names although it is commonly referred to as Penrhyn after the first European sighting of Tongareva in 1788 when the crew of the Lady Penrhyn "saw a low flat island, beating east to north east, seven or eight miles distant" (Watt, 1789: 244 cited in Roscoe, 1987). Throughout this thesis, I have chosen to refer to the island as Tongareva, avoiding the colonial name of Penrhyn. Literally translated, tonga means south whereas reua is to float, or to leave (Shibata, 2003). Combined, Tongareva translates as going south, but it is also interpreted by some to mean floating Tonga, up-growth of coral or
land floating in the south (Smith, 1889). Other names for Tongareva include Hararanga (pronounced ha-la-la-nga), Mangarongaro (pronounced mah-nga-roh-nga-roh) and Te Pitaka.

_Hara_ means pandanus² and _ranga_ means to look for or to search for, thus Hararanga is taken to mean the place of pandanus, or found pandanus.³ Shibata, however, in his dictionary of Tongarevan Maori calls it the place where the wind blows as _harara_ means to blow (the wind) (Shibata, 2003). The name Mangarongaro, while often used to describe Tongareva and frequently people of Tongarevan descent, is the name of one of the districts of Tongareva and not the island as a whole. Te Pitaka means ‘the circle’ and was cited by E. H. Lamont⁴ as the name by which the inhabitants of the different _motu_ used to refer to the entire lagoon (Lamont, 1867). In a recent email exchange with Hakaoro Tuauri Hakaoro, a Tongarevan now living away from the home island, he recommended that I use Te Pitaka in accordance with Lamont’s scholarship (Hakaoro Tuauri Hakaoro personal communication 4.11.2006). While I acknowledge his views, for sake of simplicity and consistency with existing academic texts, I have chosen to use the name of Tongareva. It is important to note, however, that all these names are used interchangeably by other Cook Islanders and people from Tongareva, to refer to both people from Tongareva and the island itself.

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² _Pandanus_ (Pandanus tectorius) is a small tree growing to ten meters in height with a canopy spreading five to 12 m in diameter. The trunk is multi-branched and often has aerial roots that descend from the upper canopy to the ground (see [http://www.ntbg.org/plants/plant_details.php?plandd=8353&rid=365]). On Tongareva the fruit can be eaten and the leaves are used to weave mats, fans and baskets.

³ There is now a website dedicated to the island called Hararanga.com which I used to advertise my research on the island. It was a consequence of this website that I was put in touch with Hakaoro Tuauri Hakaoro.

⁴ E. H. Lamont was shipwrecked on Tongareva in 1853. He was later to write an account of his time on the island; _Wild Life Among the Pacific Islanders_ published in 1867. Lamont is discussed further in Chapter Four.
Figure 1-1: Map of the South Pacific showing the location of the Cook Islands. Penrhyn, the name given to Tongareva on this map, is at the top right hand corner (Source: http://www.nztopoonline.linz.govt.nz/).

Plate 1-1: Satellite photo of Tongareva showing land mass and coral heads in the lagoon. The villages of Te Tautua, Omoka and the pearl farm of Pahonu are labelled in addition to a coral head named *Te Rakau* which as I will explore, is an important marker point in the lagoon (Source: google earth).
1.2. Geography of the Cook Islands

The Cook Islands as illustrated in Figure 1-1 are an archipelagic state comprising of 15 widely scattered islands with a total landmass of 240 square kilometres and an exclusive economic maritime zone (EEZ) of two million square kilometres (http://www.cook-islands.gov.ck/cook-islands.php). The group is located in Central Eastern Polynesia between the Western Pacific islands of Samoa and Tonga and the eastern islands of French Polynesia (see Figure 1-2). The concept of a united Cook Islands nation was largely a consequence of colonial annexation, described in detail in Chapter Four. The different islands that make up the Cook Islands each have their own distinct, albeit related, cultural and linguistic structures which gave rise to separate island identities (Mason, 2003). Geographically, the ‘Cooks’, as they are referred to
colloquially, are divided into northern and southern islands, the northern islands being the low-lying atolls or semi-atolls of Manihiki, Rakahanga and Tongareva. Pukapuka and Nassau are also included in the northern Cooks but as the westernmost islands, they are closer geographically and linguistically to other Western Pacific islands such as Samoa and Tokelau. The southern Cooks tend to be higher islands, mainly of volcanic origin. Rarotonga is the largest (6719 ha) and most populous of all the Cook Islands. The district of Avarua on Rarotonga, where the main administrative centre is located, is the capital of the archipelago. Rarotonga is also the site for an international airport and thus acts as the gateway to the Cook Islands, experiencing the highest number of overseas visitors as well as people from other islands in the Cooks group. All of the Cook Islands are inhabited with the exception of Suwarrow, which is a designated marine reserve, and the small islands of Manuae, and Takutea.

1.2.1. Language

The Cook Island people are Polynesians and share close cultural and linguistic connections with the Maori in New Zealand, and the Polynesian cultures of French Polynesia, Hawai’i and Rapanui (Easter Island). Cook Islands Maori (Maori Kuki ‘Airani) an Eastern Polynesian language closely related to New Zealand Maori (Goodwin, 2003) is the official national language although each island has its own dialect. The different dialects of Cook Islands’ Maori are Rakahanga-Manihiki, Tongareva, the Ngaputoru dialects of Atiu, Mitiaro and Mauke and the Aitutaki, Rarotonga and Mangaia dialects. The language spoken on the island of Pukapuka is considered by scholars to be a distinct language closely related to Samoan and to the language spoken on the nearby atolls of Tokelau. Rarotongan Maori, however, is the main dialect used in policy documents and bibles throughout the Cook Islands (Crocombe and Crocombe, 2003). The dialect spoken on Tongareva is notably different to that spoken on Rarotonga with pronunciation of R always spoken as L, thus Rarotonga is pronounced as Lalotonga. There are also many subtle differences in words; for example, rāhui as used on Tongareva is rā’ui on
Rarotonga (Shibata, 2003). While English was designated the official language of the Cook Islands under the 1915 Cook Islands Act, Cook Islands’ Maori became the official language in 2003 after the Te Reo Maori Act was passed by the government. Further information on contemporary Cook Island culture is given at the end of this chapter.

![Diagram showing cultural sub-divisions within the Polynesian triangle.](Source: Leach, 2003 p446)

1.3. Characteristics of Tongareva

Tongareva atoll is likely to have first come into existence some 119 million years ago (ma) when carbonate sedimentation began atop the nearby Manihiki plateau which had been formed by a volcanic episode at approximately 125-120 ma (Larson, Pockalny et al., 2002). These volcanic
episodes created a volcanic island around which a fringing coral reef started to develop. In simplistic terms, atolls such as Tongareva form when the volcanic island gradually sinks back into the ocean, leaving behind fringing barrier reefs. Tongareva atoll has been studied in depth by Spencer et al. who used the surface topography of the atoll to understand sea level change in the past (Spencer, Tudhope et al., 1997).

As an atoll, the lagoon area massively outstrips the landmass. Tongareva lagoon has an estimated area of 233 square kilometres (km²). Combined, the numerous motu that encircle the lagoon have a land area of approximately 9.8 km² (Tangimetua, 2003). There are three main entrances to Tongareva lagoon: Taruia passage on the Western side near the village of Omoka; Sikirangi passage at the northern end; and Takuua passage near the village of Te Tautua. The southern end of Tongareva lagoon is shallow containing many small coral heads and is well-flushed by tides that break over the southern fringing reef. The lagoon varies in depth and at its deepest can reach 64 metres (LINZ, 1995).

Tongareva appears distinctly bounded by the splintered rim of coral that encircles its vast lagoon, but this vision of Tongareva as a discrete self-contained place is misleading. As a biophysical entity, the lagoon is linked to the outside ocean by the tides that rush in and out of the two main passages and break across the southern reef edge. Each motu may appear to be physically bounded by water, but this water also serves to connect the islets to both the ocean that encircles them and the lagoon that they combine to contain. The important point here, as I demonstrate in this thesis, is that the boundaries of Tongareva at all levels are not fixed. They are fluid and practiced and change over time.

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5 Estimates of the lagoon area vary. Spencer and Tudhope et al (1997) for example state that the lagoon is 280 square kilometres. Although the Pacific Islands Applied Geoscience Commission (SOPAC) had generated a bathymetry map of the lagoon, I was unable to resolve these disparities and obtain a definitive area measurement.
Tongareva, at only seven degrees south of the equator, has a relatively consistent climate with a mean average temperature of 29 degrees Celsius. The island lies within the Trade Wind belt and experiences a prevailing easterly wind. Tongareva, however, is only occasionally subject to hurricanes and cyclones, which tend to occur during the months of November to March (Spencer, Tudhope et al., 1997). In recent years, the island has been fortunate to fall outside the path of both Hurricane Martin, which devastated neighbouring Manihiki in 1997 and Cyclone Meena, which created major damage to the capital island of Rarotonga in 2005. My first period of fieldwork occurred just after Cyclone Meena had struck the Cooks and although there was no major damage apparent on Tongareva, there was a noticeable lack of fruit for quite some time after.

There are no major bodies of fresh water on Tongareva. Prior to the introduction of water tanks and water collection systems at the turn of the twentieth century, water supply was uncertain on the island with the only fresh water found by digging crude wells. Moreover, Tongareva is susceptible to drought due to its free draining sandy soils and at times, erratic rainfall. Campbell (1985) reports a drought experienced by Tongareva in 1982 after rain had failed to fall for five months. Similar droughts were likely to have caused the serious coconut blights reported by the London Missionary Society (hereafter LMS) in the 1860s and 1870s, and the serious famine that ensued (Buck, 1932). Average annual rainfall for the period of 2002-2006 was 1714.8 mm (http://www.spc.int/prism/country/ck/stats) but rainfall remains variable for the island. As a low-lying atoll, Tongareva is at risk of major devastation from tsunamis. The highest point on the island is around six metres above sea level, which also means the island is at risk from sea-level rise as a consequence of climate change.

The food of primary importance for Tongarevans historically was the coconut. According to oral tradition, Mahuta brought both coconut and pandanus to the island (see Chapter Four for more on the significance of Mahuta). Lamont who was shipwrecked on Tongareva in 1853
found that there were no other significant food crops on the island. Indeed, Lamont noted that the islanders were entirely unfamiliar with either the chickens or the pigs that were salvaged from the wreck of his ship (Lamont, 1867). This is in direct contrast to other South Pacific islands where Sir Peter Buck (Te Rangi Hiroa) suggests pigs and chickens were common if not indigenous (Buck, 1932). Furthermore, Buck who visited Tongareva in 1926 noted that root crops such as taro (Colocasia esculenta) and kumara (Ipomoea batatas- sweet potato) were also absent from the island, probably due to the difficulties associated with growing such crops in shallow, dry, sandy soils. Pigs and chickens are present on Tongareva today, while root crops like taro and kumara are grown with difficulty.

Sahlins (1958) most notably, attempted to understand how unique ecological conditions such as those found on Tongareva gave rise to differing social institutions. His argument suggested that degree of social stratification depends upon productivity and the ability for communities to produce a surplus of food. The lack of root crops, the small area of land on Tongareva and the difficulties with acquiring sources of protein, however, was anomalous with the ramage system Sahlins identified in this location (Sahlins, 1958 p238, 239, 251). Indeed, Campbell (1985) argued that Sahlins’ premise for his classification of Tongareva as a ramage relies upon a number of problematic assumptions such as Tongareva having a large area of land, and a scattered distribution of resources. By contrast, Campbell argued that Tongareva was idiosyncratic in terms of its relationship between social organisation and the ecological conditions present (Campbell, 1985 see in particular p93-94).

Indeed, while pandanus can also be utilised as food and its leaves woven into material, Campbell (1985) speculated that reliance on pandanus and food from the lagoon alone, would not have

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6 Sir Peter Buck, or Te Rangi Hiroa as he is known in Maori, visited Tongareva for 17 days in 1926. His visit is discussed in more detail in Chapter Four. Hiroa was of New Zealand Maori descent, and worked as a medical officer through the Pacific prior to the World War One in addition to being a member of NZ parliament.

7 A full monograph on vertebrate fauna of Tongareva is provided by Clapp (1977).
been adequate to support the large pre-European contact population of approximately 2000 (Roscoe, 1987). In this regard he suggests that the coconut was vital for survival on Tongareva. Not only did it provide water and food but also materials for shelter and clothing. In the absence of any major fresh bodies of water, survival was dependent upon the crucial role played by coconut *nui* (water) (Campbell, 1985). Buck (1932) noted that every part of the coconut was utilised on Tongareva with the Tongarevan people having an incredibly detailed classificatory system for each stage of growth and analysis of the corresponding food values. Moreover, Buck speaks of how the coconut was intimately tied to the spread and pattern of settlement throughout Tongareva. He states:

"The sharp definition of individual rights to land was no doubt accentuated by the coconut tree. The coconut, introduced by Mahuta, had to be planted by man. The man who planted a coconut on land that he occupied had the right to its fruit when it grew up. Thus, individual ownership of the land and the coconuts that grew upon it went together. The planting of coconuts, if allowed to go unchallenged, established the right to land even without occupation: It is probable that during the early spread of population families first planted some districts and moved to them when the trees became capable of bearing fruit." (Buck, 1932 p58).

Coconuts as the primary food source were thus intimately tied to the rights associated with private ownership of land. Indeed, because of the small land area of Tongareva, communal rights were only exercised with respect to the lagoon and sea although, as I discuss in Chapter Six, it is possible that there may have been exclusive use-rights accorded parts of the lagoon.

In terms of the marine environment, Tongareva has plentiful numbers and a wide variety of different fish, both lagoon and ocean dwelling. There are high numbers of reef sharks in the lagoon of which only one of the three species is feared (*papera- Cararcharhinus amblyrhynchos*). Of lagoon fish, the *rui* or black trevally (*Caranx lugubris*) is highly regarded for its good eating, as is *hapuku*, a species of cod (*Epinephelus polyphekadion*). *Puna* (*Tridacna maxima*) is the most important shellfish for the island and in the past would be eaten fresh, cooked and uncooked, and often threaded on strips of material and hung up to dry to form a reserve ration (see below) (Buck, 1932). The lagoon also supports *parau* or black-lipped pearl oyster (*Pinctada margaritifera*) found in
depths of five to 60 metres. After European contact, Tongarevan men were employed as divers to collect the pearl oysters, and the shell (mother-of-pearl) was exported to be made into products such as buttons (Campbell, 1985). In present-day Tongareva, some of the islanders continue to experiment with pearl farming although there were only three families actively seeding pearl shells at the time of my fieldwork in addition to the pearl farm operating at Pahonu. The lagoon also has large numbers of the small pearl oyster or pūpi (Pinctada manulaa) which produces a natural golden pearl. These grow abundantly on the tops of large coral heads, but many people spoke of increasing difficulty in finding these pearls at the time of my fieldwork.

Tongarevans are renowned for practicing distinctive fishing techniques and fishing according to seasonal and moon-based variations in fish populations. While many of the practices described by Lamont are no longer practiced (such as the driving of porpoise onto land), I witnessed a variety of distinctive fishing practices during the time of my fieldwork, such as fishing hapuku spawning aggregates and nato (Myripristis berndti) fishing, which involved going out at night on the full moon and dangling a un-baited hook from a short rod (see also http://www.spc.int/Coastfish/Countries/CookIslands/MMR2/Penrhyn.htm). From my limited understanding of the meanings of the songs and dances performed for Cook Island Constitution Day (Maeva Nui) celebrations, Tongarevan compositions celebrate different fishing/shell fish harvesting techniques and emphasise the unique marine environment of Tongareva lagoon (Mita Soatini personal communication 4.5. 2006).

Food plays a significant role in Cook Islands culture and as I go on to describe with reference to pasua, is key to gifting practices (see also Alexeyeff, 2004). Certain foods have prestige value and are prioritised, particularly at feasts. There is a clear hierarchy of food with turtle and large fish

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8 The celebration of the Cook Islands self-governance, established in 1964, is a major event for all Cook Islanders today and forms the basis of the Constitution celebrations where groups from all the Cook Islands gather in Rarotonga to celebrate in dance and song at the Maeva Nui competition (see also Crocombe and Crocombe, 2003).
such as tuna traditionally decreed to be reserved for those with chiefly status. Pork is another prestige food and vegetable root crops such as taro and yam are also rated highly although on Tongareva such root crops are rarely available (Leach, 2003; Ta’irea, 2003). In contemporary Tongareva, seafood remains the food of primary importance and vegetables and fruit such as breadfruit, bananas and pawpaw are eaten widely. Coconuts are still utilised in a variety of forms. Since the arrival of LMS missionaries, explored in detail in Chapter Four, traditional foods and forms of cooking have been supplemented with an increasing dependence on a wide variety of imported goods, namely rice, flour, bread, sugar, powdered milk, tinned meats (mainly corned beef) and tinned fish. Soft drinks and sweets (lollies) are also consumed on the island, often being sent north from families living in Rarotonga. While the traditional earth oven or umu is still used, albeit mainly for special occasions, day to day cooking in a saucepan over gas or electric stove is much more common. Fish is usually fried in vegetable oil rather than coconut oil or steamed in the umu. These patterns reflect wider trends concerning changing diet throughout the Cook Islands discussed by Ta’irea (2003) and are also implicated with a rising incidence of heart disease, diabetes, obesity and gout. With power on the island in the form of a diesel generator which runs limited hours, most families own chest freezers which are used to store fish whereas in the past, surplus catch would have been shared out within the community or salted for storage (Manata Akatapuria personal communication 8.8.2006). Fresh meat is generally in the form of pork with pigs raised by individual families and killed for special occasions.

1.3.1. Pasua on Tongareva

Pasua (Tridacna maxima), also known as pa’una in the Southern Cook Islands, are one of two species of giant clam native to the Cook Islands. Pasua are a culturally significant food source throughout the Cooks, and on Tongareva remain an important food source. Pasua, however, are rare in the Southern Cook Islands as a consequence of previous over-harvest particularly on the
island of Aitutaki where the clams were once reputedly numerous (Kori Raumea personal communication 7.4.2006). In response to this decline in numbers, the Cook Islands Ministry of Marine Resources (hereafter MMR) established a clam hatchery on Aitutaki in 1990 in order to spawn the clam and repopulate the lagoon.

*Pasua*, as with other *Tridacna* species, are classed as protandrous functional hermaphrodites, meaning they mature first as males, developing later to function as both male and female. According to Lewis (1987), *pasua* begin to reach sexual maturity as males at approximately six centimetres (cm); 50 percent of both males and females are sexually mature at 10 cm; and 100 percent are sexually mature at 14 cm and larger. *Pasua* are also very slow growing and according to Lewis’ study in Aitutaki, they take five years to reach 10 cm in length, 10 years to reach 15 cm and 15 to 20 years to reach 20 cm and above (Lewis, 1987). Consequently, *pasua* are thought to be able to live for several decades. According to other research, very large clams - clams longer than 15 cm - are deemed vital for future reproduction as they produce the largest numbers of eggs during spawning (Heslinga, Watson *et al.*, 1990).

*Pasua* usually grow on firm substrate such as coral or reef limestone (Plate 1-4). Once settled after spawning, the clam attaches itself to the bottom with byssal threads. These threads serve to keep the clam upright and prevent displacement by currents or marine predators. In their juvenile state, *pasua* are vulnerable to predation, although after reaching 10 cm, the chances of mortality from non-human causes are significantly lower due to the thick protective shell and firm embedment in the surrounding strata (e.g. rocks or coral). Known non-human predators of *T. maxima* include large triggerfish (*Pseudobalistes flavimarginatus*), eagle rays (*Aetobatis narinari*) and puffer fish (*Tetradon stellatus*). At the juvenile stage, in addition to the dangers posed by crushing predators, *pasua* are also vulnerable to the snail species *Cymatium muricinum*, which attacks clams through the byssal opening (the root) (Heslinga, Watson *et al.*, 1990).
*Pasua*, as with other *Tridacnid* species are susceptible to overexploitation due to the ease with which they can be collected; they do not move and are easy to spot from the surface, the slow rate at which they mature, and the sporadic timing of their reproduction (MMR, undated). Indeed, *pasua* are classified as Lower Risk – conservation dependent (LR/cd) on the World Conservation Union (IUCN) Red List, 2004, and are listed on Appendix II of the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) (Wells, 1996). This designation, however, does not influence the ability of Cook Islanders to harvest the species, although it is only South Pacific Islands that still retain the right to collect this species of clam (Larrue, 2006). *Pasua* are also much sought after in the aquarium trade, as they are relatively easy to ‘grow’ and have a very colourful mantle.

Plate 1-3: Crate of freshly harvested and shelled *pasua* (Source: C. Chambers)
Historically, *pasua* were an important source of protein with Lamont remarking that "pashues (sic), an excellent shell-fish, are very abundant here. [They are] the chief accompaniment to their cocoa-nuts" (Lamont, 1867 p235). Before refrigeration was available either on the island, or on inter-island ships, *pasua* used to be dried and salted before being sent to relatives and friends. Often, dried *pasua* would be strung in the form of a *sei* (necklace, garland) and gifted to people leaving the island to sustain them on the boat journey south (Buck, 1932). *Pasua* in this form was known as *pasua maro*, or *pasua tamiti* (Shibata, 2003). With the availability of refrigeration, *pasua* is now frozen before being sent off the island. In addition to its role as an important food, many people interviewed during the course of my research suggested that *pasua* used to have spiritual significance, used as markers for land boundaries, and as with turtle, accorded significance at *marae* (spiritual enclosures, see Chapter Four). One of my informants, Papa Takake, describes the significance of *pasua* as food as follows:
Charlie: So is pasua a favourite food?

Papa Takake: Yes, yes, it's really tasty. I would say that, how do you put it; maybe we might say it is a priority food on the island. It's number one.

Charlie: Especially to take away?

Papa Takake: Yes, to take away and to have it on the island yes. Because well I knew that during past days, our grandparents, and forefathers, during the past years, its only big occasions that they go and get pasua, because you know, pasua is famous. And Sundays, they get pasua for Sunday. Not everyday, not everyday, cause there is a saying that, if you don’t have pasua in your meal, or if you have a function and you don’t have pasua on the table, it means your meal is not delicious. We say this in Maori “me kakore e pasua i runga i roto i te kaingakai me kore i roto i te kaikaianga, kare reka te kai kai.”

Pre-European contact, harvesting pasua was apparently designated as women’s work. Smith (1889) for example, notes that “it was the duty of the women to swim out into the lagoon with a basket attached to a paddle, and there dive to great depths for shell-fish, often bringing up the great pausu (sic) or Tridacna” (Smith, 1889 p93 emphasis in original). This is also supported by oral mythology as illustrated in the story of Tu and Roi, a legend from neighbouring Manihiki. The story begins with the following:

“It was custom in those days for the women, not men, to dive for clam shells. When their things were ready, they paddled their canoe until they arrived at a submerged coral rock in the lagoon. Roi jumped into the sea and dived for clam shells. She uprooted the shells from the coal rock and placed them in the canoe. She collected enough clamshells and then rested.” (Atama, 1977 p43).

Lamont also noted that pasua were fished principally by women who “in their search for them amongst the rocks, to which they are found adhering tenaciously at a considerable depth, swim often a mile or two from shore, carrying with them a basket and a piece of hoop iron, to detach them from their beds. These women will sometimes remain two or three hours in the water, being perhaps unsurpassed by any natives of the Pacific in diving and swimming” (Lamont 1864 p235). In contemporary Tongareva, pasua harvests are larger in scale, involving day-long trips across the lagoon in a motor boat and tend to be exclusively male affairs. This is described in detail in Chapter Five. There are no formal accounts as to why this gender shift came about although other research on the gendering of activities in the Pacific suggests that commoditisation of certain species such as pearl shell and the advent of new technologies encouraged male participation (see for example Feinberg, 1986).
1.4. Overview of rahui

Rahui or the Rarotonga equivalent, ra'ui, is a technique central to this thesis. At its most simple, rahui translates as a customary sacred prohibition, a technique used by those in power to control or deny access to land, crops or areas of the sea (Crocombe, 1964). Rahui were generally declared in response to declining resources, or to protect scarce resources from over-harvest (Ama, 2003). The presence of a rahui is generally signalled by a marker or sign of some sort. For example, in an interview with Papa Ben Samuel, he stated how a rahui on a motu (islet) would be signalled by the presence of a stick:

Papa Ben: Sometimes the older people wouldn't let people take pasua from around the motu eh? There would be a stick which would show that the motu was rahui. It meant that you are not allowed to go and pick the pasua from the reef and send to your family in Rarotonga. Pasua is only for eating eh?

Compliance with the closure on the resource or the physical area in question was reinforced by the presence of both physical and spiritual sanctions which are described in further detail in Chapter Six. While rahui continues to be used in some of the Cook Islands, particularly the Outer Islands, the economic and social changes experienced post-European contact saw a decline in the use of this technique. In a contemporary Rarotongan context, there is currently a ra'ui declared on sections of the reef, demarcated by large signs billboard signs. This ra'ui was instated by the Koutu Nui (group of traditional elders - see Chapter Four) and the World Wide Fund for Nature (hereafter WWF) in an attempt to revive respect for traditional practices and structures of authority. I discuss the relationship between rahui/ra'ui and authority in greater detail in Chapters Four and Six.

* Throughout this thesis, I will speak of rahui when referring to the practice in a Tongarevan context. Any use of ra'ui signifies discussion of the practice in a Rarotongan context.
1.5. Contemporary Cook Islands

The latest census of the Cook Islands was conducted on the 1st December 2006 and according to preliminary analysis suggests a total Cook Islands population of 19,569 (preliminary statistics available at http://www.spc.int/prism/country/ck/stats/). According to the previous census held in 2001, the total Cook Island population had decreased by 5.6 percent between 1996 and 2001 due to out-migration (Tangimutua, 2003) but increased again by 8.6 percent within the five years leading to the 2006 census. Since annexation in 1901, Cook Islanders have enjoyed free-association with New Zealand and over 80,000 Cook Islanders live away from the archipelago residing either in New Zealand or Australia. According to Crocombe and Crocombe (2003), there are over 16,000 Cook Islanders living in the Auckland suburb of Manukau alone. Out-migration continues to be a feature of the Cook Islands, particularly since the international airport opened in Rarotonga in 1974. There are now air services to all inhabited islands within the group with the exception of Nassau and Palmerston. As Crocombe and Crocombe note, while the increased mobility afforded by the advent of air travel has extended the ‘reach’ of families it has “reduced the intensity of social action between kin” (Crocombe and Crocombe, 2003 p12). I discuss this issue in greater detail in Chapter Seven.

Within the Cook Islands, Rarotonga remains the most populated island with 72.3 percent of the total population in 2006. From 2001 to 2006, the population of the northern group decreased by 24.2 percent with the southern group experiencing a slight increase of 0.5 percent during the same period largely due to migration from the outer islands to Rarotonga. Tongareva, according to the preliminary findings, now has the lowest population since the census began in 1901, with only 251 people still living on the island, a decline of 106 individuals, or 29.69 percent since the 2001 census. The reasons behind this decrease are the subject of the second half of Chapter Six.
Tourism accounts for approximately 40 percent of the Cook Islands' Gross Domestic Product (GDP), but is concentrated in Rarotonga and to a lesser extent, Aitutaki. Other significant contributors to the export market are fishing, which occurs throughout the archipelago, and pearl farming, which is concentrated on the northern atoll of Manihiki. In terms of contribution to GDP, both are currently in decline due to increasing fuel prices and difficulties associated with pearl farming in the remote northern Cook Islands. The Cook Islands rely heavily on imported goods, reflected in the massive difference between imports and exports illustrated in Table 1-1 below.

Table 1-1: Key economic statistics for the Cook Islands (Source: http://www.mfat.govt.nz/Countries/Pacific/Cook-Islands.php)

<table>
<thead>
<tr>
<th>Nominal Domestic Product</th>
<th>NZ$268 million Financial Year (FY) 2004/05 actual/estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real Gross Domestic Product growth (percent)</td>
<td>1.8 percent (FY 2005/06)</td>
</tr>
<tr>
<td>Exports</td>
<td>NZ$7.41 million (for year ending June 2006)</td>
</tr>
<tr>
<td>Imports</td>
<td>NZ$115.3 million (for year ending June 2006)</td>
</tr>
<tr>
<td>Main exports</td>
<td>Pearls: NZ$1.65 million; Fish: NZ$3.4 million (for year ending June 2006)</td>
</tr>
<tr>
<td>Gross External Debt</td>
<td>NZ$111 million (2002/03)</td>
</tr>
</tbody>
</table>
1.5.1. Contemporary Tongareva

Tongareva was used as a base in World War Two\textsuperscript{10} and, as a consequence, has a serviceable air strip which enables Air Rarotonga planes to fly to Tongareva. Flights technically operate weekly on a Saturday morning, but will only fly if there is sufficient demand for the expensive four-hour journey and available fuel at the other end. The cost of flights to the northern Cook Islands has recently increased by 69 percent with the cost of a one-way fare from Rarotonga to Tongareva now set at $1150 NZD, representing a serious financial burden for any residents requiring travel to and from the island by plane.

The only other way to reach Tongareva is by inter-island cargo ship, operated by the Taio shipping company. These boats are very infrequent, although scheduled roughly once a month can sail as intermittently as four monthly, creating problems for the Tongarevans dependant on imported goods such as rice, milk powder, flour and diesel. The journey on these cargo boats can take up to five days, assuming the boat doesn’t break down. A recent development has been the introduction of a service provided by the ship \textit{Kuai} which at the time of my research, had just started a sailing run from Hawai‘i through the northern cook islands to Rarotonga and back, bringing food and second hand clothing (see www.svkawai.com). Although the infrequency of these boats and air services makes Tongareva a relatively inaccessible island, the kin connections maintained throughout the wider Pacific region have shifted the notion of Tongareva as an isolated island considerably (see below).

Since the arrival of the first LMS missionaries in 1821, Cook Islanders have widely embraced Christianity (see Chapter Four). As Figure 1-3 demonstrates, nearly all of Tongarevan residents

\textsuperscript{10} James Michener's famous book \textit{Tales of the South Pacific} (Michener, 1947) contains one story that is reputedly based on events on war time Tongareva.
are members of one of the several denominations present with the vast majority affiliated with the Cook Islands Christian Church (CICC) which replaced the LMS (Tai'a, 2003). There are two CICC churches on the Tongareva; one at Omoka and one at Te Tautua. There is also a Roman Catholic chapel and mission house run by the Maretapu family at Omoka. For the Roman Catholics and CICC followers, Sunday is strictly reserved as a day of rest. All food preparation is performed on Saturday so that no work need be performed on the Sabbath and any activities that are not associated with worship are prohibited. For example, it is not permitted to swim, fish, watch television or listen to music until after six pm on a Sunday (Kristine Maretapu personal communication 20.6.2005). Church activities are central to life on Tongareva and there is considerable authority vested in those who hold positions of responsibility within the Church either as deacons or ministers (see Chapter Six and Seven).

Tongareva Population According to Religious Affiliation at 2001 Census

Figure 1-3: The majority of Tongarevans are members of the Cook Islands Christian Church (CICC) with a handful of other religions followed on the island (Tangimetua, 2003).
1.5.2. The 1996 ‘Transition’

On Tongareva, the main source of employment was the government prior to a nationwide economic restructuring implemented in 1996. Using a strategy of privatisation of the economy, the restructuring was an attempt to reduce the Cook Island’s level of national debt from an estimated 169 million NZD, a figure which exceeded the GDP of the Cook Islands by around 19 million (NZODA, 1997). Implemented jointly by the New Zealand Overseas Development Agency (NZODA) and the Asian Development Bank (ADB), the restructuring was closely linked to changes taking place within the New Zealand economy.

Having been one of the primary subsidisers of the Cook Islands economy, New Zealand’s decision to withdraw budgetary aid resulted in a massive downsizing of Cook Island public spending (Siikala, 2001; Alexeyeff, In Press). Tongareva, along with the other Outer Islands, lost the greatest proportion of public service jobs; of the approximate 75 percent of paid work force in such jobs, around 57 percent were made redundant (NZODA, 1997). In addition to the widespread loss of public-sector jobs, the price of essential items increased dramatically, and those who were retained in employment had to face significant pay-cuts (Alexeyeff, In Press). Associated with this re-structuring was the Cook Islands Transition Project, funded by NZODA.11 The strategy of this project was to retrain those who had lost employment in enterprise initiatives, most of which centred on either tourism or primary production such as agriculture and fishing (see Chapter Six).

Commentators such as Siikala (2001) and Alexeyeff (In Press) have suggested that the strategy of the structural adjustment programme was justified on the assumption that those people who lost employment would simply resort back to more ‘traditional’ practices, and rely on

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11 Most people refer to the entire period of change as the ‘Transition’ although it is important to note that the name comes from this particular aspect of the structural adjustment programme. Throughout this thesis I also refer to the whole process of change as the ‘Transition’ except where specified and do so without the use of scare quotes to assist with readability.
subsistence economies based around island-specific modes of production. What actually resulted as a consequence of the cutbacks was a massive period of emigration. From the years of 1996 until 2001, Tongareva lost 41.08 percent of their population (Figure 1-4), the majority moving either to Auckland in New Zealand, or to Cairns in Eastern Australia. (Tangimetua, 2003).

![Tongareva Population According to Census 1901-2006](image)

Figure 1-4: Tongareva population according to census statistics recorded over the last 100 years. Note the sudden decline from 1996-2001 and the continuing downward trend according to the most recent census statistics from the 2006 census (Source: Tangimetua 2003 and Cook Islands Census Preliminary Result 2006).

Structural adjustment plans such as the Transition are often justified on the grounds that islands of the South Pacific, such as Tongareva, are too insulated and isolated to sustain internally productive economies. Accordingly they have been characterised as economically dependant on Migration and Remittances, Aid, and Bureaucracy (MIRAB) (Bertram and Watters, 1985). Poirine (1998 cited in Alexeyeff, In Press p7), by contrast, suggests that MIRAB economies are actually very successful economic strategies for island states and in many ways are far more sustainable for islands such as the Cooks than economies based around agricultural exports or tourism ventures. Anthropologists such as Epeli Hau'ofa, Edvard Hviding and Margaret Jolly
have also critiqued the insidious portrayal of island states as being isolated, dependant and separated. Hviding (2003) for example, notes that Pacific Islands “have always... been culturally complex with everyday connections far beyond the home island” (Hviding, 2003 p47). The work of Epeli Hau’ofa has been particularly influential in this regard suggesting that far from being discretely bounded islands, separated and isolated by large expanses of South Pacific Ocean, Pacific Island states are instead afloat in a sea of islands (Hau’ofa, 1994). This metaphorical move has been incredibly important in terms of recognising the mobility of Pacific peoples and shifting attention to the ways in which they are connected rather than separated by the ocean that surrounds them. Jolly (2001), building upon Hau’ofa’s powerful metaphor of seas of islands, argues persuasively against the spatialised portrayal of Pacific peoples “[as]... simply rooted, as grounded in the land... static in place and time” (Jolly, 2001 p419). Her work simultaneously challenges the temporally problematic and broadly colonial assumption that traditions in such islands are similarly bounded and unchanging. As I suggest in Chapter Seven, the current economic fabric of Tongareva is based around a complex and transformative system of mobility and exchange practices involving sending gifts and travelling between trans-national family groups.

As Table 1-2 taken from the 2001 census demonstrates, only 90 of the 357 people living in Tongareva at the time of the 2001 census were employed with men being the majority of those in formal employment. Women, however, despite not being formally employed, tend to be the main export earners sending woven goods such as hats, fans and baskets made out of rito (coconut fibre) to be sold in Rarotonga. These issues will be discussed in more detail in Chapter Six and Seven particularly as they relate to the recent trend of sending pasua to be sold in Rarotonga. As I go on to demonstrate in this thesis, the contemporary social fabric of Tongareva is constituted by historical engagements and interactions that stretch far beyond the boundaries of the island. I explore how Tongareva is firmly embedded in trans-national networks of communication, travel and exchange that link both the human and non-human of
Table 1-2 Principal sources of employment on Tongareva, at the time of the 2001 census, by gender (Source: Tangimetua, 2003).

<table>
<thead>
<tr>
<th>Principal Occupation</th>
<th>Total</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>90</td>
<td>64</td>
<td>26</td>
</tr>
<tr>
<td>Legislators, Senior Officials &amp; Managers</td>
<td>11</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Professionals</td>
<td>14</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Technicians &amp; Associate Professionals</td>
<td>5</td>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td>Clerks</td>
<td>6</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Service Workers, Shop &amp; Sales Workers</td>
<td>7</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Skilled Agricultural &amp; Fishery Workers</td>
<td>26</td>
<td>23</td>
<td>3</td>
</tr>
<tr>
<td>Craft &amp; Related Trades Workers</td>
<td>5</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Plant &amp; Machine Operators &amp; Assemblers</td>
<td>7</td>
<td>7</td>
<td>-</td>
</tr>
<tr>
<td>Elementary Occupations</td>
<td>9</td>
<td>7</td>
<td>2</td>
</tr>
</tbody>
</table>

Tongareva to other parts of the Cook Islands and more widely around the rest of the world. In this regard the island of Tongareva and its people can be seen to embody what Jolly (2001) has described as a dialectical tension between movement and settlement, passionate association with particular localities and expansive trans-local social spaces, or what Clifford calls the “lived connections across distances and differences” (Clifford, 2001 p470). Tongareva and other islands of the South Pacific are, therefore, by no means self-contained or unchanging places. Indeed as this thesis explores, linkages between islands are maintained through practices of
exchange and migration. Tongareva, then, represents an interesting case study in so far as it is simultaneously a 'remote' place but as both a place and a people, it is linked and networked throughout the larger Oceanic space, and tied into wider social relations around the globe. The title of this thesis is intended to signify this tension between that which is bound, and that which is bounding for while bounding can be used to imply containment or encirclement, it also mean to spring forwards in leaps and jumps, to bound beyond.

1.6. Thesis structure

This thesis is divided roughly into two parts. The first half is concerned with setting out the theoretical concerns that inform the research as well as introducing the case-study which forms its basis. Chapter Two works to provide a theoretical context for the ensuing empirical analysis. I present an overview of key literature, which my thesis is variously informed by and seeks to challenge. This chapter outlines the epistemological and ontological premise for the relational analysis of environmental management that underpins this thesis. It serves, in particular, to align my work with other research that has emphasised the importance in conceptual terms of understanding issues associated with conservation and environmental management as simultaneously social and natural, or 'socionatural' issues. Chapter Three traces the methodological justifications for my research approach and techniques, focussing on the distinct approach I utilised to realise the different objectives of my research. This chapter seeks to provide a link between the theoretical concerns of Chapter Two and the empirical analysis that comprises the second half of the thesis. Finally, Chapter Four expands upon some of the historical developments touched upon in this introduction. This chapter serves to introduce the unfamiliar reader to key historical events in the Cook Islands and Tongareva and does so in order to provide a context for the discussion that follows. The sources used in this chapter are a mixture of oral history (as recounted in both published and unpublished texts) and post-contact accounts from early visitors and contemporary Cook Island scholars.
The second half of the thesis presents the detailed empirically grounded analysis of the case study. Chapter Five explores the different dimensions of the 'problem with *pasua*'. I examine the findings from my ecological survey of *pasua* distribution and abundance in the lagoon, alongside qualitative data including a mapping exercise of the Tongareva lagoon to argue that the 'problem with *pasua* is far more complex than standard ecological science would suggest. This chapter also sets out the importance of understanding Tongareva lagoon as a lagoon-scape, a product of human labour as much as the ecological specificities of the marine environment itself. Chapter Six explores how the 'problem with *pasua* is interlinked with the various structures of authority that exist on Tongareva. I explore how the Island Council, as the legislated governance structure for the island, shapes and is simultaneously shaped by, the practice of *rahui*. I go on to consider the spatial nature of the power relations invoked by *rahui* and the boundary work involved in sectioning Tongareva lagoon into accessible and inaccessible zones. I focus in particular on the impact of the 1996 Transition project as a moment of rapid economic and environmental change that served to radically re-shape people's relationships not only to authority structures on the island, but also their relationship to *pasua*. Chapter Seven extends this analysis to focus on the various drivers of *pasua* harvest that appear to be contradictory to the successful management of this species. I focus on the affective relations that are sustained by the practice of sending *pasua* to friends and family and the politics that surround the discursive framing of *pasua* as God's gift. I argue that so describing *pasua* legitimates a wide range of uses and frames it as a resource that must be taken advantage of for the benefit of the people.
Chapter 2. Situating the Study

2.1. Introduction

In April 2006, soon after I had started my main period of fieldwork, I was dismayed to find in the Secretariat of the Pacific Community (SPC) *Traditional Marine Resource Management and Knowledge Information Bulletin*, an article detailing research on community management of *Tridacna maxima* on the island of Tubuai, in the Austral Islands. This article focussed specifically on issues raised by the recent commercialisation of this species, and conflicts at the local level as to whether the community ought to institute *rahui* on the clams, known in this context as *pahua*. It seemed that my planned research had been 'pipped at the post', as they say. The main argument put forth by the author (Larrue, 2006), however, was the problem of achieving a 'common approach to managing the clam resources' because of the gap between 'local views', economic issues posed by the recent commercialisation of the species, and the seemingly objective claims of the 'scientific community' who 'knew' that this resource was under threat. The economic issues discussed by Larrue, involved the desire of the 'elders' who "seemed to want to profit as much as possible from the resource without really worrying about the future" (Larrue, 2006 p7). Larrue, therefore, concludes that the problem with *pahua* on Tubuai is due to 'vestiges of oral tradition' that are being used as a 'shield' by elders, keen to protect economic interests at the expense of 'ecological realities'. As I demonstrate in this literature review, there are a number of fundamental differences between Laure's research and my own, despite appearing so similar on first consideration.

Admittedly, publications such as the aforementioned SPC bulletin have helped draw attention to the need for input into environmental management and conservation debates from traditions
other than 'science'. There is now a proliferation of literature within the field of environmental management that seeks to shift attention towards the positive conservation and management outcomes that can be achieved when community views are taken into account and more participatory approaches adopted. In this literature review, however, I suggest that there are a host of epistemological and ontological issues that impede this work. Fundamentally, I suggest that how environmental management is practiced depends upon how people envisage firstly, the problems, secondly, the processes, and thirdly the goals implicit in such practice. Put differently, the manner in which a 'problem' is constructed influences how the goals of environmental management are envisaged and thus shapes the development of solutions. The main point of contention and difference between Larrue's work and my own, however, is the way in which his study reifies systems of local knowledge which are positioned as autonomous stand-alone antecedents to a 'scientific awakening' while simultaneously privileging 'scientific claims' as equivalent to 'ecological realities'. Larrue's work appears predicated on an ontological division between his 'ecological realities' and cultural practices that suggest a very particular way forward in practicing environmental management that leaves unquestioned issues surrounding how different kinds of natures are constructed, to what ends, and with what social and ecological consequences. In short, such work leaves unquestioned and unseen a deeply embedded politics of environmental management.

My work, by contrast, seeks to overcome these impediments by drawing on a diverse range of literatures in order to explore alternative ways of conceptualising environmental management. I begin this literature review by considering the recent attention accorded so-called community-based, 'traditional' or customary environmental knowledges in the specific context of marine

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12 My use of the term 'science' refers specifically to Western science or what Sandra Harding (1986) defines as the 'objective' rationally based mode of enquiry based on "culturally specific notions of the powers and existence of reason, science and language." (Harding, 1986 p28). For ease of readability, however, I shall simply refer to science and hereafter without the use of scare quotes.

13 My use of 'traditional' is not to imply that this term is uncontested or unproblematic. For ease of readability, however, I will use this term hereafter without scare quotes. Synonyms for 'traditional' in this context include indigeneous, local, lay and community-based. In this chapter and throughout the thesis, I use these terms interchangeably, as they are used in the literature which I am reviewing.
conservation and management. I argue that environmental management, including marine conservation, is never unproblematic and suggest that formulation of marine conservation problems is always already temporally and culturally inflected.

In relation to conventional approaches, I argue for an epistemology that does not assume science as superior to so-called traditional knowledge. That said, I also suggest it is important to guard against romantic perspectives that see traditional or local knowledges as somehow more ‘in tune’ with ‘nature’. As this study will demonstrate, systems of environmental knowledge emerge as hybrid forms, embedded in social and natural or socionatural (Swyngedouw, 2004) processes illustrated for the purposes of this thesis by debates over the ‘problem with pasma’ (Chapter Five).

Secondly, I consider the alternative ontology presented in relational theories of space, place and authority. Throughout the course of this thesis I utilise these relational approaches in order to understand the manner in which pasma is mobilised in exchange networks, and the consequences of these networks for the politics of authority and environmental management. I also attend to constructivist accounts that have served to challenge the apparent self-evidence of ‘nature’ as a pre-given entity that exists independently of and apart from social practices (Demeritt, 2001a). I explore how attention is now turning away from revealing the consequences of different constructions of nature, and moving towards re-conceptualising society and environment in non-dualistic ways (Castree, 2003).

Finally, I consider how the relational ontologies that have arisen from such scholarship as Actor Network Theory (hereafter ANT) can suggest alternative ways of thinking through the politics of environmental management and conservation practice. As explored in the previous chapter Tongareva, like many other islands in the South Pacific, is a place that both reflects and continues to be constituted by past events and current changes in the movement of people and
the flow of ideas. Doreen Massey’s (1994) understanding of places as particular moments in intersecting spatialised social relations is useful in this regard. It is clear that while local knowledge and practices can be particularistic, they are also constantly negotiated with and by a wide range of interlocutors, which often stretch beyond the place in question. Such theoretical perspectives promote the exploration of the interrelationship between locality, knowledge, systems of authority and networks of exchange in a manner that attends to the importance of embodied, situated encounter in this case between humans and *pa'ina*. In the context of a relational approach, this encourages attention to the idea of place and knowledge as simultaneously “moment, product and negotiation” (Massey, 2005b p354) and the important role of the non-human, and the biophysical peculiarities of Tongareva lagoon, in shaping these relationships.

### 2.2. Conservation and categorising knowledge

In 1973, Warren and Goldsmith wrote that conservation is fundamentally concerned with fostering a responsible attitude to natural resources while recognising a wider interest in and enjoyment of the natural world. Furthermore, they maintained that the systems of concern to conservationists lie at the meeting points of social and economic systems on the one hand, and natural systems on the other (Warren and Goldsmith, 1973). Although these writers were expressing thoughts that are now over thirty years old, there is still wide acceptance of their definition of conservation goals and indeed, the definition of nature and the natural world implicit in their discourse. A brief review of more recent literature dealing with conservation and environmental management makes clear the persistence of such goals of conservation. To summarise, conservation is variously conceived of as: maintaining resources and living sustainably (Turner and Berkes, 2006), maintaining, securing, and developing the capacity of ecosystems (Folke, 2006), protecting nature *vis à vis* the “human-nature relationship” (Jepson and Canney, 2003 p271), and ensuring the preservation of biotic diversity (Angermeier, 2000).
In these instances, the goals of conservation and the use of nature reflects a particular 'way of seeing' that emphasises the physicality and separateness of the natural world. Such conservation narratives, however, are premised on a number of ontological and epistemological assumptions as to how the world is structured, how best to understand it, and what the role and place of humans is within it.

It is only relatively recently, moreover, that conservation narratives have shifted away from what Adams and Hulme refer to as “fortress conservation” (Adams and Hulme, 2001 p193). Within this model the establishment of areas to protect nature, often at the expense of local livelihoods, was accepted as the primary goal. As Folke suggests, however, conservation is now moving away from viewing the human and natural worlds as separate, and instead working towards the generation of conservation policies and practices that recognise the “interdependencies and feedbacks between societal development on the one hand, and conservation on the other” (Folke, 2006 p686). Conservation practices such as these that build upon the recognition of interdependence between social and natural systems are generally referred to as community-based conservation, or community conservation. These approaches accept that conservation must be participatory, collaborative in design and where possible, built around sustainable resource use regimes (Adams and Hulme, 2001; Berkes, 2003; Turner and Berkes, 2006).

Such community oriented conservation agendas have become increasingly wedded to reviving and maintaining local or traditional knowledges and practices of the people whose livelihoods are understood to depend upon the environments and species requiring protection. Indeed, in some instances, conservation campaigns have become directly allied with the plight of indigenous peoples so that preserving the knowledge and cultures of these people is seen as an important part of preserving biodiversity. For example, Ausable (1994) states “[t]he extinction of biological diversity is inextricably linked with the destruction of cultural diversity. With the loss of native cultures, there is also disappearing the vital and important knowledge of a way of
living in balance with the earth and the value system in which it is encoded” (Ausable, 1994 cited in Brosius, 1997 p54). The assumption in such conservation discourse is that documenting, assessing and operationalising indigenous knowledge will provide the people with a strengthened capacity to assume greater and more direct control over management strategies and practices. In the context of marine conservation initiatives, there is a burgeoning literature on indigenous or traditional knowledges and the importance of such knowledge for successful management of marine environments. It is to this specific alignment of conservation and environmental management initiatives and indigenous or traditional knowledges that I now turn.

2.2.1. Traditional knowledge and marine conservation

In current marine conservation initiatives and fisheries management more broadly, there is increasing attention to indigenous management techniques and the value of local knowledge of marine environments (see for example, Hunn, 1993; Adams, 1998; Ruddle, 1998; Salomon, Ruesink et al., 2001; Sabetian, 2002; Wiber, Berkes et al., 2004). This emphasis is justified by connections posited between fostering indigenous knowledge and improving fisheries management (Johannes, Freeman et al., 2000) attaining more accurate fish stock assessments (Aswani and Hamilton, 2004) and preventing the overexploitation of fisheries (Ruddle, 1998). Traditional Marine Knowledge (hereafter TMK), according to Sabetian (2002), is a term that refers to the customary knowledge of the marine environment by indigenous communities. TMK forms an integral part of Customary Marine Tenure (hereafter CMT) systems, and the importance of such knowledge is increasingly being recognised by fisheries managers and integrated into scientifically-based fisheries management programmes. This recent emphasis on TMK and CMT serves as a backdrop to conservation-oriented activities performed under the rubric of improved ‘natural resource management’ (Johannes, 1995).
For authors such as Aswani and Hamilton (2004), the emphasis placed on both documenting and elevating the status of what they term Indigenous Ecological Knowledge (hereafter IEK), is vital to enable successful inshore fisheries management. Successful management, in their view, will only be possible if both local knowledge and associated sea-tenure institutions are utilised and managerial responsibilities devolved, at least in part, to local communities (Aswani and Hamilton, 2004 p69). Similarly, in a Fijian context, Matthews, Veitayaki et al., (1998) discuss the need to incorporate local systems into ‘contemporary’ management schemes although only if such local management practices are based on ‘sound’ (read, scientific) principles (Matthews, Veitayaki et al., 1998 p208). Adams (1998) in the same way, divides management of fisheries into two spheres, that of government and community. Community management in his research is allied with ‘local’ initiatives, or traditional management practices that have survived the test of time. In his view, it is vital to distinguish between practices and knowledge that have ‘evolved over centuries’ as opposed to views arising from ‘modern entrepreneurialism’ because of the excessive exploitation assumed to be at the heart of capitalist practices of the ‘modern world’ (Adams, 1998 p127).

The South Pacific region is viewed as particularly important in such research into the capacity of indigenous knowledge as it is frequently asserted as having what Ruddle cites as “the greatest concentration of still-functioning traditional community-based systems for managing... fisheries and other resources” (Ruddle, 1998 p105). Existing studies in a South Pacific context have variously accounted for such diverse issues as the role of TEK in understanding the behaviour and seasonality of reef fishes in Kiribati (Johannes, 1995), the effects of sea-tenure institutions in the Solomons for patterns of resource-use (Aswani, 2002), and CMT and fisheries management in Papua New Guinea (Asafu-Adjaye, 2000). To date the only Cook Islands specific research in this regard has focussed on coral reef health and the use of ra ‘ni (Rarotongan Maori for rabbit) in Rarotonga (Hoffmann, 2001; 2002). Hoffman’s work, in a vein similar to mine, attempts to contextualise current practice in a socio-political history of the Cook Islands. While her study is
useful for linking key indicators of coral health with other ecological benefits of the ra‘ui closure, she elides the complex economic, cultural and political reasons behind the resurgence in ra‘ui. Moreover, in asserting the ra‘ui as a “successful model for conservation” (Hoffmann, 2001 p254), albeit it one which people fear will only be temporarily in place, she frames specific environmental conditions (such as the presence of ciguatera toxins in Rarotonga’s lagoon) as a consequence of human ‘impacts’ upon the environment. In so doing, she fails to consider the recursive relationship between environmental change and socio-political processes of environmental governance and management.

In general, attention to TEK in the context of fisheries management valorises knowledge and practices that are assumed to be ‘rooted’ in traditional cultures. The information able to be gleaned from fishers or indigenous people, however, must still be subjected to rigorous scientific testing so as to ensure its reliability (Aswani and Hamilton, 2004). For Johannes, perhaps one of the most ardent supporters of alternate knowledge systems, the epistemological framework for assessing the usefulness and reliability of such knowledge is resolutely scientific. For example, while he asserts that scientific knowledge, like fishers’ knowledge, is fallible, so too is fishers’ knowledge to be treated with scepticism until tested and verified (Johannes, Freeman et al., 2000). While it is evident that science has greater ‘power’ in debates concerning environmental management (Latour, 1999), my research attempts to move beyond an a-priori epistemological division between science and traditional knowledge. As Chapter Five demonstrates, while I utilised ecological survey techniques in order to explore pasma abundance, I attempted to combine the findings from this quantitative approach alongside qualitative oral histories in an attempt to show how both were situated and contingent knowledges. Although they provided a form of triangulation, my key concern was finding how they overlapped and where they contradicted but most importantly, the different stories with regard to pasma distribution they revealed.
The current interest in TEK, therefore, leaves unchallenged the power-laden act of knowledge separation into either indigenous or scientific categories. Indeed Arun Agrawal (1995; 2002) has argued that categorisation is ultimately misleading because it relies upon, and serves to reinforce, a dichotomy between knowledge systems. Agrawal focuses his critique on attempts to separate knowledge, particularly in the context of categorising knowledge for the creation of databases, a common strategy for those advocating for the preservation and utilisation of indigenous knowledges. According to Agrawal, if indigenous knowledge derives its potency from the many ways in which it is practiced, efforts to classify such knowledge (for example, in the form of a database), work to separate that knowledge from practice, and therefore, from its power. Thus, foregrounding knowledge as an extractable transferable thing happens only by ignoring the social, political and biophysical context in which it is situated (Gegeo and Watson-Gegeo, 2001). Moreover, in the process of such an act of extraction, only the forms of knowledge that are deemed potentially relevant or 'useful' in scientific frameworks are documented, which further advances the view of indigenous knowledge as a "resource to be used" (Agrawal, 2002 p290).

The emphasis placed on distinguishing and categorising knowledge, therefore, fails to attend to the processes by which knowledge is constructed and validated (Brosius, 1997; Agrawal and Gibson, 1999; Raffles, 2002a). In addition, the boundaries between science and TEK are not necessarily that easy to demarcate. For example, Timo Peuhkuri (2002), writing on fish farming in Finland, asserts that there is seldom a clear-cut distinction to be drawn between scientific and what he terms 'lay knowledge'. Peuhkuri draws upon his analysis of fisher people's knowledge, which suggests a mixture of traditional knowledge, knowledge based on local observations and popularised science.

Somewhat paradoxically, however, traditional or indigenous knowledges are often privileged in conservation debates, precisely because they are understood to arise out of particular livelihood dependencies, reflecting the lived experiences of people rooted in specific localities. Embedded in these debates over TEK are therefore important spatial and temporal assumptions about the
‘place’ of the communities and associated cultures assumed to be the ‘anchors’ of such knowledge. Not only is local knowledge portrayed as ostensibly unchanging, timeless, and rooted in locality as opposed to the transcendent, ‘place-less’, and continually advancing nature of science (Haraway, 1991; Latour, 1993; Haraway, 1997), but so too are communities and cultures framed as ‘bounded’ and outside the progress of ‘modernity’ (Olson, 2005). Indeed, as Olson’s work suggests, ‘traditional culture’ is all too often posited as the antithesis of progress and modernisation such that as Larrue’s comments in the opening paragraph of this chapter attest, economic interests are seen as fundamentally incompatible with maintaining traditions and traditional communities are seen as in need of ‘development’ and progress.

While many of the authors mentioned above readily admit failures of centralised management systems, particularly those associated with colonial expansion into the South Pacific, there is another perhaps more insidious layer to their work. Lam (1998) for example, argues for the preservation of the biodiversity of the South Pacific because of its significance as ‘global resource’, a vital repository of the ‘world’s biodiversity’ (Lam, 1998 p97-98). Sawyer and Agrawal (2000), however, are particularly scathing of such rhetoric and following Said (1979) dub it as a form of ‘environmental orientalism’, which colours neo-colonial conservation interests in the ‘tropics’. As they argue, “management is the current fetish” with conservationists appropriating tropical ‘nature’ as a global ‘resource’ and “simultaneously [appointing] themselves her keeper” (Sawyer and Agrawal, 2000 p89). This form of orientalism goes hand in hand with other colonial fantasies of the ‘salvage paradigm’ (Clifford, 1987), a paradigm that seeks to rescue the untouched authenticity of the indigenous at the same time as it aims to preserve ‘pristine nature’ (see also Brosius, 1997; Agrawal and Gibson, 1999). My research, by contrast, attempts to look at historical changes brought about by colonisation and missionisation alongside contemporary exchange practices, ecological conditions and economic concerns that shape such management practices as rahui. As I go on to demonstrate in Chapter Six, I seek to understand how traditional practices such as rahui and the social context in which they operate, are continually
challenged and transformed by contemporary economic and political changes that are ongoing in their negotiation today.

In sum, this recent attention to indigenous and local knowledge is arguably long overdue in terms of the acknowledgement of non-Western scientific ways of knowing, and, has done much to improve the standing of TMK and CMT governance systems in marine conservation initiatives more generally. Nevertheless, such approaches tend to position TEK in one of two extreme ways. On the one hand there is a continued framing of local knowledge as subordinate and counterpole to scientific knowledge (Peuhkuri, 2002). This suggests a rather utilitarian approach to TEK where it is acknowledged only in so much as it can be incorporated into and serves to expand the authority of science. On the other hand, there is a persistent romanticism where knowledge and associated practices that have “survived the test of time” (Adams, 1998 p128) are assumed to result in a more attuned and therefore appropriate body of knowledge concerning the environment, resulting in an ‘intimate relationship’ between the people and the so-called natural resources within. Most significantly, however, the emphasis on TEK leaves unchallenged the power-laden act of knowledge separation into either indigenous or scientific categories. Therefore, while I certainly do not want to dismiss so-called non-scientific knowledge, I do want to question the extent to which science is somehow epistemologically elevated above other ways of knowing. In order to do this, my research moves away from a distinction between the ‘place-less’ objectivity of science, and the ‘place-bound’ knowledge of ‘local’ people. In other words, to draw on Donna Haraway, I focus on the situated nature of all knowledge (Haraway, 1991). In the next section of this chapter, I discuss the concept of intimate knowledge as an alternative way of framing knowledge which, I assert, follows Hayles’ plea for a knowledge that is based on connection rather than the separation presumed to be at the heart of ‘traditional objectivity’ (Hayles, 1995).
2.2.2. Science and intimate knowledge

The work of Hugh Raffles (Raffles, 2002b; a; 2004; 2005) deliberately uses the concept of ‘intimate knowledge’ in order to draw attention to the affective practices through which knowledge is produced and the relational nature of such intimacies. Unlike the ‘intimate relationship’ assumed to be at the heart of all indigenous or local knowledge in the above discussion, Raffles’ conception of intimacy is deployed to draw attention to the places and spaces of encounter in the making of knowledge. How concept stands apart from a conception of local knowledge at the heart of TEK because it actively avoids reifying “the taxonomy through which knowledges are hierarchised” (Raffles, 2002b p332). Raffles recognises the importance of locality in the production of knowledge but his work makes the vital distinction between locality and location. As he states “[l]ocality . . . should not be confused with location. It is rather a set of relations, an ongoing politics, a density, in which places are discursively and imaginatively materialised and enacted through the practices of variously-positioned people and political economies.” (Raffles, 2002b p2). Thus, while emphasising the importance of place and its role in the production of all knowledge, Raffles avoids suggesting a knowledge born of ‘rooted experience’ instead emphasising a relational conception of both place and associated knowledge (cf. Jolly, 2001).

The concept of intimacy is a particularly effective terminology in that it suggests the situated relational processes by which knowledge, including scientific knowledge is produced. Raffles’ notion of intimate knowledge shares much with Haraway’s concept of situated knowledges which she cites as pertaining not to “parochialism or localism; but… consequential, if variously mobile, embodiment” (Haraway, 1997 p199). Haraway’s concept of situated knowledge was developed as part of moving away from the science premised on “dispassionate, disinterested, value free, objective inquiry procedures” (McNay, 1992 p127), or that which presumes a ‘God’s eye view’ by attempting to see “everything from nowhere” (Haraway, 1991 p187). The work of
feminist scholars such as Haraway have thus served to critique the way in which the operation of science is premised upon not only the delineation of nature as separate to culture, but the simultaneous adoption of a privileged position from which to know and accurately represent the so-called natural world (Harding, 1986; Plumwood, 1993; Harding, 2004). This basis for correct and objective observation was dependent on disengagement of the mind from internal sources of error, represented by the body, the senses and the emotions (Plumwood, 1993).

Conceiving of all knowledge as situated and intimate recognises it as something that is constantly in progress and allows for a "deeper broader and more open scientific literacy" (Haraway 1997 p11). To be situated, however, is not to suggest a rooted knowledge positioned back in time (Fabian, 1983), but rather knowledge that is, as Raffles elaborates, "emergent in talk, labour, sociality, affect and other forms of social practice" (Raffles, 2002b p332). Moreover, such knowledge is a consequence of relationships that are created and sustained with the biophysical and non-human aspects of particular localities. Such affective practices form the very basis of the knowledge that comes to be situated in particular localities. Like some aspects of ANT (see below), Raffles’ attempt to understand knowledge as a form of intimacy draws attention to the ways in which knowledge is produced as a consequence of social practice and the interaction of different actors; the human, non-human and biophysical peculiarities of particular locations (cf. Haraway, 1991). The significance of this work, particularly for my research, is to show that there can be no one interpretation or knowledge of nature that can be ‘objectively’ prioritised, particularly in the context of conservation.

These ideas of both knowledge and place as relational are significant theoretical threads in my research. As Massey (1994) states, places are best understood as “particular moments” in intersecting, spatialised social relations some of which are “contained within the place, others [which] stretch beyond it, tying any particular locality into wider relations and processes in which other places are implicated too” (Massey, 1994 p120). Thus, places are made actively and
continuously through both the action of human and non-human phenomena including circulations of knowledge (Raffles, 2002b). This insight forces not only the relinquishing of a notion of localities as somehow bounded, static and unchanging, but also a reformulation of the knowledge that arises from these places. In this next section, I discuss these ideas concerning the relational nature of place vis à vis discussions on conservation, with particular attention to the emergence of relational thinking as it has been applied to questions of authority and the spatialities of power.

2.3. Relational space, place and power

The work of Doreen Massey (Massey, 1994; 2005a) has been influential in encouraging a reformulation of conceptualisations of space from being the static ‘container’ within which things happen. Far from being the surface upon which social relations are played out, Massey argues that space is rather the product of social relations, a sphere of coexisting trajectories which is constantly in a state of flux. The importance of this formulation is that it does not view space as a form of time-less container within which social relations exist, rather it is the social relations themselves, stretched out over time that constitute the spatial. Space then, does not equate to stasis or an imagining of the spatial as a form of “synchronic closure” (Massey, 2005a p38). Rather, the dynamic, ever-changing social relations between co-existing elements suggest the inalienability of temporality from space.

These views on space and time also lead to a reconfiguration of place. Massey argues for an understanding of place as a particular moment, or a particular node where social relations intersect. Thus, any place is always already linked up to myriad other places and wider relations and processes which stretch beyond the boundaries of any particular locality at any particular time. This relational understanding of place as particular moments in spatialised networks of relations is particularly vital for my interpretation of the empirical material used in my study. It
not only accounts for the importance of acknowledging both the human and the non-human biophysical phenomena that have combined to make the locality which we now know as Tongareva, but it also highlights the importance of both historical and contemporary events - exogenous and endogenous - which shape Tongareva in both material and discursive ways. What this means, is that to understand how and why particular events are occurring on Tongareva, any analysis must pay equal attention to events that occur in the 'innumerable elsewheres' which Tongareva is connected to (see also Appadurai, 1995).

In this regard, my research attends to economic, cultural and political events that occur in other parts of the Cook Islands and beyond, as equally important in shaping the locality of Tongareva and the social institutions that shape resource management practices in this context. Such a relational understanding of place, then, also necessitates consideration of the importance of the biophysical and non-human in shaping historical and current events. The important point to note here is that attending to the biophysical and non-human elements does not necessarily equate to support for environmental determinism. Rather as Raffles and Massey assert, it is to acknowledge the agency and power of the non-human in both constituting and shaping the formation of place.

For an atoll like Tongareva, this is perhaps more evident than in other localities because the narrow slivers of land which form the many different motu are built atop fragments of former coral reefs which would have once encircled a volcanic island, long since slipped back into the sea (see Chapter One). Moreover, the limitations of the shallow sandy soils and lack of major bodies of fresh water have produced a unique relationship between the people who were eventually to arrive on the island and the coconuts upon which they so heavily depended, using them as both as primary source of food and of materials for clothing and shelter (cf. Buck 1932). In more recent times, the tendency for pasma to grow in certain locations and not others, has shaped in a recursive manner the way in which people interact with Tongareva lagoon, as
well as the social relations that are expressed in management practices. Acknowledging the agency of the non-human and biophysical in shaping both the place and people of Tongareva is different to the fixed trajectory implied by environmental determinist accounts, because it suggests a different form of co-evolution; an inextricable entanglement between human and non-human elements, a history that is a form of ongoing and unpredictable negotiation.

My thesis, therefore, aims to explicitly attend to the non-human and biophysical dimensions of Tongareva lagoon, in order to gain a sense of how the non-human has played an active role in shaping the socio-political processes of environmental governance on Tongareva. As Massey again asserts, "...[negotiations] between human and nonhuman both vary dramatically between places... and is as 'political' and as contestable as is that which is... between humans alone" (2005b p355). As my thesis suggests, research into conservation, therefore, should recognise agency in species and their biophysical environment and accordingly view organisms and their environments not simply as objects, but active subjects, capable of affecting and shaping their biophysical environments (Levins and Lewontin, 1985). Such an approach also recognises that the non-human and their biophysical environments have their own lives and circumstances that no amount of familiarity can contain (Raffles, 2002b) thus hinting at the multiplicity of future possibilities of which Massey speaks.

Space, then, according to Massey's formulation, is inherently political for if the spatial is conceived of as processual, as a consequence of ongoing social relations, then it is open, dynamic and imbued with power. As the prior discussion on the politics of so-called traditional knowledge suggests, power serves to structure knowledge in very particular ways. Hoy (1986), drawing on Foucault, argues that "knowledge is not gained prior and independently of the uses to which it will be put to gain power" (Hoy, 1986 p129). In the context of conservation and environmental management then, attending to the operation of power, and in particular, how it
emerges out of discourses of science or tradition, is important in understanding the socio-political processes of environmental management and governance.

The relational approaches evident in Massey's work suggest productive avenues for considering the operation of power. In particular, relationality draws attention to the manner in which power emerges out of particular social relations, stretched across space-time. Indeed, as Allen (1999) suggests, a relational understanding of power encourages attention not to the way in which power is asserted 'over', but rather, to understanding the ways in which the operation of power is thoroughly relational, or in other words, how space affects both the operation and realisation of power. As Massey, Allen et al., (1999) suggest, relational approaches to power attend to the different modalities of power according to particular arrangements of space-time, examining how and why power operates in different ways, and produces different effects according to the networks from which it emerges.

Allen's (1999) work signals a shift in relation to authority and domination as modalities of power. Drawing upon Weber, he argues that authority is not something that can be enforced or imposed but rather relies upon wider legitimating practices in order to secure assent. Thus, authority it is not simply power 'over' but power 'among', that which derives its legitimacy through wider social relations (Allen, 1999 p206). This is an important insight for my work, particularly with respect to the manner in which I examine structures of authority on Tongareva such as the Island Council. Indeed, as I go on to explore in Chapter Six, the Island Council which is the governing body on Tongareva, cannot simply force the imposition of rahui on the people because their ability to do so, rests upon a wider community based recognition of their authority.

The social relations that Massey speaks of are also significant in relation to conceptualising power. Such relations, rather than providing the links between pre-constituted 'things', serve to
constitute entities themselves. Whatmore describes the 'hybrid geographies' of these 'precarious assemblages' (Whatmore, 1999; 2002) that represents extending the 'compass of social agency' so that sociality is not restricted to the human, rather, social relations can be human:human, human:nonhuman and nonhuman:nonhuman. This is significant for my work in particular, for it encourages an extension of the realm of politics to consider the role of the non-human in both affecting social spaces and particular localities. Recognising agency in such species as *pa'anga* and such entities as Tongareva lagoon is an important conceptual step for conservation theory and practice, in part because it unsettles the uneasy boundary so frequently constructed between the 'social' and the 'natural'. When working in such a relational framework, it therefore becomes inappropriate to hold the social and natural as separate ontological entities. The next section of this chapter considers the importance of such work that seeks to understand how categories such as nature and society are shaped by a range of practices.

### 2.4. The question of nature

Since geographer Margaret Fitzsimons berated the lack of attention accorded to the question of nature in 1989 (Fitzsimmons, 1989), there has been a profusion of theoretical developments seeking to explore the complex and mutable relationships between society and the environment. Following directly from the Marxian agenda set by Fitzsimons (1989), political ecologists (for example Peet and Watts, 1996; Zimmerer and Basset, 2003) have highlighted the importance of attending to regionally specific economic and ecological relations, suggesting important ways in which economic processes and capital work to transform nature. These 'local natures', as they have been dubbed, reflect strategies of accumulation resulting in a nature made "in the image of the commodity" (Castree and Braun, 1998a p4). Marxian accounts, however, while acknowledging that nature is not separate from social relations tend to posit social relations as doing things to/with/on a nature that appears somehow separate from and prior to the social.
Work under the banner of social constructivism, however, has served to challenge the self-evidence of nature as a pre-given entity. As David Demeritt has shown, social constructivism serves to challenge the apparent self-evidence of ‘nature’ as a pre-given entity that exists independently of and apart from social practices (Demeritt, 2001a; b). In other words, he argues that how we come to know and perceive nature is always already social. This has led to the recognition that what we take to mean by nature is thus historically and socially mediated reflecting not only strategies of accumulation and regional ecological specificities but also discursive and representative strategies (Burgess, 1993; Castree and Braun, 1998b; Demeritt, 2001a; Braun, 2002). In the words of Donna Haraway, “nature can never pre-exist its construction” (Haraway, 1992 p296).

William Cronon (1996) has demonstrated this principle by deconstructing ‘wilderness’ which, as a synonym of nature, has had considerable cultural purchase in American conservation discourse. He explores wilderness as a culturally constructed and specific idea, something that represents what Candice Slater (1996) defines as nostalgia for unspoiled origins and romantic notions of pristine isolation and wonder. Wilderness in other words implies the possibility of a timeless natural state, something eternal, existing outside of history (Cronon, 1996). The power accorded to such ideas of wilderness in conservation discourse has led people to aim for a natural world untainted by, and separate from, human influence. The trouble with wilderness, according to Cronon, is precisely in this false aim. Not only is it impossible to attain, it presents a skewed and static vision of the natural world that excludes other cultural understandings. Questioning terms like wilderness and nature, in the words of Bruce Braun, is therefore to “attend to the subjugated histories and buried epistemologies... that are hidden by, or within, the terms and identities” in question (Braun, 2002 p3).

Another key concern of social constructivist approaches, which is closely linked to post-structural agendas, has been to critique the epistemological basis for particular representations of
nature focussing in particular on the role of discourse. By emphasising the centrality of discursive relations, social constructivist accounts attend to how knowledge constitutes particular social and historical contexts and subsequently how power relations become naturalised in representations of nature (Escobar, 1996; Castree and Braun, 1998b; Escobar, 1999). Such a discursive focus provides a critical basis from which to analyse the processes by which differentially empowered groups come to have their understandings of nature represented. Burgess (1988), for example, argues that scientised conservation discourse represents nature by “being symbolised in words, images and objects which communicate meaning through being situated in particular social and historical contexts” (Burgess, 1993 p52). She argues for greater attention to such representative practices and how they fit into what she defines as the cultural politics of nature conservation; “the continuing struggle between differentially empowered groups to define and represent the ‘true’ meanings and values of wildlife and habitats” (Burgess 1993 p52). Social constructivist accounts thus suggest the production of nature as inextricably bound up with the operation of power and politics, broadly defined. This reframing of nature as something which is ‘made’ has not only engendered critical analyses but simultaneously called into question courses of social action warranted by citing the supposed needs of nature or justified by appealing to nature as a form of given moral compass (Cronon, 1996; Castree, 2002a). Thus for Livingstone (1995), to even speak of environmental problems “presupposes some normative state of nature” (cited in Smith, 2000 p177) which is to make an ethical and universalistic judgement that ‘we’ would be better off without them.

In emphasising the importance of discursive relations and representational practices, social constructivist accounts have received criticism for implying that agency is only to be found in the social (Castree and Braun, 1998a). This framing of agency is argued to be ontologically incomplete by implying two different spheres of reality, the social and the natural. For Latour (1993) this is basically a form of essentialism as it implies that entities are either social or natural prior to their interaction. Moreover, as Whatmore argues, such accounts further risk, treating
nature "as an artefact of social imagination" (Whatmore 1999 p23) and, perhaps more fundamentally, fail to take debates over nature out of the binary poles (Latour, 1993).

The relational ontologies that Whatmore and Latour have helped to develop suggest new ways of thinking through the politics of environmental management and conservation practice (Castree, 2003). Arguably, the consequences of these politics, particularly in a marine conservation context, remain to be fully fleshed out. In the next section of this chapter, I discuss the ontological reconfigurations suggested by scholars working under the umbrella of ANT before concluding with suggestions as to how such relational approaches suggest new ways of understanding the socio-political processes of environmental management in the context of this thesis.

2.5. Actor Network Theory and relational ontologies

ANT, exemplified by the work of Michel Callon (Callon, 1986), Bruno Latour (1993; 2004) Kevin Hetherington and John Law (Hetherington and Law, 2000), employs a specific set of metaphors that reject ontological distinctions that enable the construction of object/subject binaries such as nature/society. Their work rejects "a-priori distinctions between the social and the natural or the technological" (Michael, 1996 p53). They reconceive the "purified spaces of 'nature' and 'society' [reconfigured] as fluid socio-material networkings" (Whatmore 1999 p27). As the name suggests, ANT is concerned with understanding in this context, nature/culture 'imbrications' as a series of 'networks' involving a multitude of different 'actors' to be viewed with analytic impartiality (the principle of generalised agnosticism), and symmetrically, requiring a common language (infralanguage) and a common analytical framework (the principle of generalised symmetry)(Callon and Latour, 1992; Michael, 1996; Murdoch, 1997b; a). The key to identifying such imbrications or 'assemblages' is to start thinking relationally or as Castree surmises, to start seeing things in terms of associations rather than separations and to realise that
“things are only definable in relation to other things” (Castree, 2002a p118). Latour (1993) defines such associations as 'quasiobjects', by which he means objects that fall between the social and natural poles.

Another component of ANT thinking is the principle of symmetry. This is an important part of the way in which ANT attempts to empower those parts of the binary normally seen to be subordinate such as, nature to culture, world to word, technology to society (Murdoch, 1997b). For Latour, language and nature, or what he terms the 'world and words' have been placed in different ontological spheres. He suggests an entirely different phenomenon, that of circulating reference, where truth claims are functions of a complex and circulating chain of connections between both human and non-human participants. As implied in the name, ANT also works to assert actors or 'actants' as effects generated by relations within networks, hence “an actor is always a network” (Hetherington and Law, 2000 p384). In the context of network building, this leads to the assertion that the behaviour of actants will depend upon the relations established within particular networks. Thus for Latour's analysis of Pasteur's research into fermentation, the yeast is considered to play an equally important and active role as Pasteur himself (Latour, 1999). Similarly, for Callon in his oft-cited research into scallops, the scallops through their 'decision' to 'anchor' at certain points and not others, are framed as active agents in the recounting of attempts by researchers to develop a conservation strategy in St. Brieuc Bay (Callon, 1986).

ANT also works to reject a human-centred notion of agency concerned with motivations and intentionality. Agency is instead acknowledged as “an effect distributed through a heterogeneous arrangement of materials... rather than the intentional activity of human subjects” (Hetherington and Law, 2000). This notion of agency challenges conventional approaches that assume humans as the only significant actors, and that action necessarily involves intentionality and/or linguistic capabilities (Whatmore, 1999). Laurier and Philo (1999) describe the effect of
ANT as a levelling mechanism whereby “nonhumans are in effect 'levelled up' to the status of humans and the humans are 'levelled down' to the status of nonhumans” (Laurier and Philo, 1999 p1060). This levelling serves to destabilise both anthropocentric analyses while simultaneously critiquing an understanding of agency as a “manifestation of unitary intent” (Whatmore, 1999 p27). Most significantly, however, it forces attention to the myriad ways in which the non-human has influenced and continues to influence social life.

This ‘flattening’, however, raises the question of whether it is adequate or appropriate to treat all “the countless things of the world… as potentially all the same” (Laurier and Philo, 1999 p1016 emphasis in original). This is, in essence, a question about power. While agreeing with the need to recognise agency in non-humans, Laurier and Philo question whether the agency of humans is not somehow different. Humans, for example, obviously possess intentionality and linguistic capabilities that mean we have quite different abilities with regard to our interactions in networks and our ability to analyse what the consequences of such actions may be. The overriding issue, however, is whether or not ANT can adequately be deployed as a theoretical explanation as to why certain things are different in terms of positing alterity and how such differences may have come about (Castree and MacMillan, 2001). This is particularly salient when considering how useful ANT is at generating arguments directed at political and environmental change (Braun, 2006).

This theoretical move, however, brings into question the focus of ANT on the description of networks. If, as Murdoch states, “the role of the analyst is...to follow the actor-networks as they stretch through space and time, localising and globalising along the way” (Murdoch, 1997b p334), it seems that tracing networks and identifying quasiobjects is more important than actually engaging and acting upon the consequences of these networks (Castree and MacMillan, 2001). While the key questions for theorists of ANT pertains to ‘how’ networks form and are performed, and the act of tracing these complex and multi-scalar networks can be incredibly
helpful in terms of ‘revealing’ the complex cultural, economic and ecological practices that are involved in the socionatural networks, this has often been at the expense of considering why these networks are produced and maintained (Bakker and Bridge, 2006; Braun, 2006). As Murdoch in another article goes onto question, can “we ever do anything more than describe, in prosaic fashion the dangerous imbibiglos that enmesh us?” (Murdoch, 1997a p750). The problem is thus whether describing and following the tangled webs of association will provide a foundation for critique, of both the actors who appear more powerful and of the consequences of certain enrolments and resulting networks. Description, it seems, implies neutrality, passivity and detachment and therefore also raises important questions about the positionality of the analyst who can somehow step outside of networks in order to observe and describe.

As suggested in the preceding discussion in this chapter, the tropes of hybridity and networks, however, are extremely significant in terms of the relational understandings of spatiality that are enabled. As Bakker and Bridge (2006) argue in the context of debates over materiality, relational thinking such as that advanced by ANT “provides a way to unpack apparent permanencies and stabilities and to show how the competencies and capacities of ‘things’ are not intrinsic but derive from association” (Bakker and Bridge, 2006 p16). In this respect, Whatmore (1999) also asserts that the shift in analytical focus enabled by ANT is actually highly productive because of the resultant “topological spatial imagination” that simultaneously draws attention to the effects of various social ‘landscapes’ while also understanding that “these spatial parameters inhere in a host of socio-technical practices” (Whatmore 1999 p31). In the context of environmental management and conservation, however, questions around the materiality of produced environments are often sidelined leading to claims that such analytic moves associated with ANT are often at the expense of considering the biophysical or ‘ecological’ materiality of transformed environments (for a fuller critique of this point see Nightingale, 2002; Walker, 2005).
Swyngedouw (Swyngedouw, 1999; Swyngedouw and Kaika, 2003; 2004) thus speaks of socionatures, as a related but historically focussed analytic framework that seeks to account for the mutual co-constitution of the biophysical and socio-cultural. As with ANT, Swyngedouw discounts the idea that biophysical and socio-cultural can ever be separate domains by arguing instead that the natural and social are bound together by complex interrelations. The key distinction between Swyngedouw’s work and ANT, however, is in his emphasis on how hybrid socionatural entities are “deeply historical and thus produced” (Swyngedouw, 1999 p445). As Bakker and Bridge (2006) assert, this Lefebvrian shift draws attention to the process of the production of assemblages, networks and quasiobjects, which simultaneously highlights the need to attend to the geometries of power that structure such production (see also Castree, 2002b). Swyngedouw argues accordingly that “knowledge and practice are always situated in the web of social power relations that defines and produces socionature” (Swyngedouw 1996 p448). For the purposes of my research, this necessitates a simultaneous consideration of discursive constructions, social relations, cultural and material practices all within a web of power relations (see previous discussion in this chapter).

Swyngedouw’s arguments also build upon the work of Harvey, in particular Harvey’s assertion that “resources can be defined only in relationship to the mode of production which seeks to make use of them and which simultaneously ’produce’ them through both the physical and mental activity of the users” (Harvey, 1977 p226). Swyngedouw (1996) thus suggests that ‘things’ cannot be understood or even talked about independently of relations with other things. A similar analytical line is evident in the work from anthropology (for example Appadurai, 1986; Kopytoff, 1986; Parry and Bloch, 1989) that seeks to understand the role of capitalist relations and market values, often with specific reference to the commodification of ‘things’, in shaping social and cultural transformations. Appadurai, most notably, argued for the recognition that commodities are not only “thoroughly socialised” (1986 p6) but also have complex social lives. Significantly, he argued that all efforts to understand or define commodities must be done by
tracing “commodities in motion” (Appadurai, 1986 p16). This in turn, and partly building upon insights from ANT as discussed, has led to a number of studies in geography seeking to understand the complex nature of people’s relationships with commodities by both tracing commodity chains and associated networks and considering their modes of production (For example Bell and Valentine, 1997; Hartwick, 1998; Jackson, 1999; Cook, 2003; Cook and Harrison, 2003; Castree, 2004; Goss, 2004; Foster, 2005; Cook, 2006). While not framing pasua explicitly as a ‘commodity’, my work seeks explore fully the ways in which pasua is produced by and transformed in and through networks of consumption and exchange. In scientific conservation practices, pasua could be seen as simply a clam with the main concern being whether there are enough left in particular locations to sustain healthy populations (cf. Larrue 2006). My research, in contrast, places pasua within its complex web of social and ecological relations to explore how practices of harvesting, gifting, counting and measuring, produce particular kinds of politics, ecologies and knowledges as I go on to discuss in more detail in Chapter Seven.

2.6. Conclusions

This chapter has served to contextualise the theoretical grounding for my study into the politics of environmental management on Tongareva by highlighting three key theoretical threads. The first section of this review sought to trouble the simplistic distinctions made between so-called ‘traditional’ and ‘scientific’ knowledge. I noted that not only do such distinctions rely upon a hierarchy of knowledge where that which is indigenous, traditional or local is seen to be epistemologically subordinate to science, but is also presumed to be ‘fixed’ and rooted in place. These strong spatial and temporal undercurrents to such research simultaneously portray both the places of the knowledge and the people who hold such knowledge as rooted, bounded and a-temporal. The second section of this chapter considered alternative ontological formulations of space, place, knowledge and power. My argument in this respect suggests the need to
perform research that is premised on a relational understanding of knowledge and place, an approach where the focus is on networks of socionatural relations rather than examining social ‘impacts’ (cf Marion and Rogers, 1994; Hoffmann, 2002; Larrue, 2006). These theoretical perspectives, then, justify my decision to examine how environmental outcomes, such as *patina* distribution and abundance, can be understood as produced by the intermingling of social practices and biophysical peculiarities. In turn, this supports the need to examine how particular practices of environmental governance and management are inextricably related with the production of place and space and how, far from restricting analysis to what occurs ‘in place’, it is also necessary to attend to the social relations that stretch beyond. In the remainder of this thesis, these theoretical issues are pursued in the context of my detailed study into *patina* abundance and distribution, the socionatural characteristics of Tongareva lagoon, and the practices of exchange and relations of authority that entwine to produce the snapshot of events this thesis represents. In the next chapter, I discuss the methodological challenges in performing such research.
Chapter 3. Methodological Approaches

3.1. Introduction

As outlined in the previous chapter, the theoretical perspectives which inflect this research and the complexities of the interactions I sought to understand, required a research design that would enable me to collect information concerning the practices of environmental management in different contexts, through different modes, and at different analytical scales. In this chapter I present a critical reflection on the broader methodological issues that structured how I performed the research that forms the basis of this thesis, as well as providing an account of the practical techniques used in collecting and analysing the data.

The chapter is divided into two main sections. The first reflects upon my choice of a case-study approach to research, the choice of fieldsite and traces the changing formulations of my research project. I discuss the epistemological implications associated with the different locations involved in this research, as well as reflecting upon the multiple positionalities I found myself to embody with each geographical shift. As Foot Whyte (1996) asserts, 'real' explanations of how fieldwork and research occur, necessarily involve a personal accounting of the research process. This need to attend to the emotional textures of fieldwork through reflexive accounting is also emphasised in much feminist literature (for example England, 1994; Nast, 1994; Stacheli and Lawson, 1994; Katz, 1996; Lal, 1996; Nightingale, 2003; Sharp, 2005). While I certainly do not want to be accused of 'naval-gazing' (Rose, 1997), I do assert that such personal reflections are important for understanding why I chose the topic I did, the quality of my research results, and the way I chose to structure my time in the field.

The second section of this chapter discusses in greater detail the techniques of data collection and data analysis that form the basis of the thesis. I explain my decisions to attain social-political
information through analysis of policy and historical accounts, semi-structured individual and
group interviews, as well as participant observation methods (of fishing trips, pasua harvests,
Island Council meetings and other day-to-day activities and events). I conducted interviews
specifically with individuals about their understanding of changes in the lagoon over time,
analysed the content of existing scientific reports, but also undertook my own quantitative
survey of pasua abundance and distribution in the lagoon. I reflect on my decision to collect
ecological information through both social and physical survey techniques as well as discussing
the practical aspects of the methods I used, why I chose them, and issues that arose in
implementing them. I focus in particular on the unlikely combination of ethnographic fieldwork
and ecological survey techniques and draw upon recent work on mixing methodologies to frame
this discussion and consider how the changing techniques deployed in my research also
engendered shifting patterns of comportment in relation to the people and places I worked with.

3.2. The case study approach

The material which forms the basis of this thesis draws from an in-depth case-study examining
the practices and politics of pasua management on the island of Tongareva. The use of case-
studies as the basis of research within human geography has a long tradition because of its
strength in enabling both exploratory and explanatory research. Exploratory research uses case-
studies so as to explore phenomena 'what is happening?' without necessarily testing hypotheses
(Dixon, Bouma et al., 1987). Explanatory research uses case-studies to research questions based
around understanding 'how' and 'why' certain trends or practices are occurring and how they
have developed over time (Yin, 1994). Given my research questions pertaining to how socio-
political relationships, authority structures and knowledge systems combine to affect the
processes and politics of environmental management, a case-study approach that would enable
me to examine these issues in detail appeared appropriate. Moreover, my theoretical emphasis
explicated in the previous chapter suggested the need for a case-study approach in order to explore the social relations producing *pasua* management within a particular context.

Case-study research is premised on the assumption that the trends, processes or practices that form the basis of the research, while in some sense unique to the ‘case’ at hand, are also related to phenomena that occur in other places (Castree, 2005). As Castree argues, case-study research “shows the world to be persistently diverse... yet it shows that this diversity arises out of multiscaled relations such that it does not emerge *sui generis*” (Castree, 2005 p541 emphasis in original). While on the one hand, I sought to understand the specifics of *pasua* management in the particular context of Tongareva, I also sought to understand the relations that connect observations made on Tongareva to larger scale processes, and *longue durée* historical processes. As the following chapters go on to demonstrate, the relational nature of both Tongareva as a place, and the relational nature of the processes of environmental management, came to the fore as my research progressed. In the early months of my study, for example, I visited both Aitutaki and Tongareva with the notion of performing some sort of comparative study and to assess the feasibility of such a plan. It soon became apparent, however, that the theoretical issues I sought to understand would be better served by focusing in depth on the articulation of environmental management in a particular local setting. I found it illuminating and useful, nevertheless, to also interview and observe practices and people often indirectly associated with Tongareva. Indeed, while Tongareva had initially appeared as a remote island with a small and discrete population, it soon became apparent that the issues I was researching were influenced by engagements and interactions with islands and people in other places in the Cook Islands and beyond. This was particularly important in terms of understanding the exchange networks structured around *pasua* including its location in the lagoon on the island, but also the movement of *pasua* as gifts to Rarotonga and beyond, and in the various inscriptions made about it in policy and scientific reports. To ‘do’ Tongareva thus required me to also do research in other places and at different scales.
The research presented in this thesis, however, represents a very particular snapshot of events that occurred during the period of fieldwork. Given Castree's (2005) comments, then, while it is important to recognise that the events and processes described in this thesis are particular, equally, many of the events that I describe and speculate upon are linked to events and changes that are ongoing in their negotiation today. This observation raises significant questions pertaining to the transferability of the insights gained from my research as does case-study research more generally. One of the specific objectives of this thesis is to consider how the insights gained in the course of this study may broaden understanding of what it means to perform environmental management in a South Pacific context. Again, this relates to the ontological and epistemological emphasis on relations upon which this thesis is based. As Castree (2005) makes clear, the either/or distinctions of nomethetic and idiographic perceptions of context have largely been dismissed because of the importance now given to attending to the interrelations between particular contexts and the wider processes and practices that stretch beyond. In the case of this research then, I take a constrained approach such that I recognise that many of the events occurring on Tongareva are particular to this context but also have relevance and purchase in terms of wider debates concerning environmental management in the South Pacific more broadly. In the next section of this chapter I explain in greater detail how it was that my research came to be situated in the Cook Islands, and specifically on the remote atoll of Tongareva.
3.3. Placing the field:

"I am sitting at a table with the chop-lap sea on my right and my first Tongarevan sunset burnishing the coconuts gold on my left. It is very humid and I have just switched the lights on as at ten to seven it is already too dark to read. I have hung up my holey mosquito net and sprayed my still-white skin in order to ward off any beasts. In ten minutes I go over to supper where I fear embarrassing my hosts with my dietary requirements. I tried to eat a meal with meat in it today that they provided and it nearly made me cry. I just can't do it". (18.6.2005 fieldnotes)

This snapshot of my first night in Tongareva reflects the type of (dis)placement with which I would become familiar throughout the ensuing two years of research which involved me shuttling between my institutional setting in Edinburgh, and the 'place' of my study in the northern Cook Islands. The idea of my fieldsite as a discrete location, disjunct and separate from my everyday life - a place that I could enter, immerse myself in for an intense period of time and then leave - was initially a dominant trope in my research. The island-ness of Tongareva and its remoteness helped sustain this fantasy but as my research progressed I began to realise that my fieldsite was not a singular geographic entity. Rather, Tongareva could more accurately be conceptualised as a series of networked relations. The trans-national relationship that I struck up with Tongareva was but one in a range of such relations, some ancient, some colonial, some of them here and now.

My decision to base my research in the Cook Islands was initially stimulated by a World Wide Fund for Nature (WWF) report that I had read concerning the 're-implementation of ra'utou on the capital island of Rarotonga. Here it seemed was a good opportunity to push against some of the TEK literature which all too often framed small island communities as 'vulnerable' or 'at risk' if they didn't fulfil the requirements of being 'properly' traditional or 'native'. Take for example, the following statement by Chesher, who undertook research on giant clams in Tonga:
“I knew I was setting out to change a cultural behaviour pattern, so I picked the northern island group in Tonga - Vava'u. There are only 19,000 people there, all Polynesians, all closely related, with cultural ties going back more than 2,000 years. This eliminated the problem found in urban areas where multi-cultural mixes and transient people can destroy a project in a few minutes.”

(Chesher, undated http://www.tellusconsultants.com/tongan.html emphasis added)

As detailed in the introduction to this thesis, Rarotonga as the capital of the Cook Islands has a considerable transient population of both tourists and Cook Islanders but nevertheless was reinstituting a traditional technique. Rarotonga, however, continues to be the focus of considerable research compared to other islands in the Cooks group and a PhD specifically examining the benefits of the ra'ui had been completed in 2001 (Hoffmann, 2001). As a consequence, I chose to examine the possibility of performing research pertaining to so-called ‘traditional’ management techniques other islands in the Cooks group that maintained the use of ra'ui or equivalent.

At a personal level, Tongareva was appealing because of its description on Cook Island tourist websites as “a magnificent example of a pure atoll” (www.ck/penrhyn.html, emphasis in original), a remote and beautiful place that few tourists ever ventured. Moreover, no ‘ethnographic’ research had been performed on Tongareva since Sir Peter Buck had spent 17 days on the island in 1929.14 Tongareva also compared favourably in terms of lack of academic attention compared to other northern atolls such as Pukapuka which had been studied at length by Borofsky (1987) and more recently by Munro (1996), Rakahanga studied by Matheson (1987) and the more accessible southern islands such as Rarotonga and Aitutaki. These naive presumptions of academic authority to go forth and explore a ‘pure’, ‘exotic’ and ‘uncharted’ ground are important to acknowledge. Despite all of geography’s recent self
reflexivity about colonial legacies (cf Sidaway, 2000; Driver, 2004; Radcliffe, 2005), it was undeniable that some colonial fantasies (be they residual or neo) were coursing through my early instincts about a field site and had a strong influence on my early experiences of the unfamiliar 'tropics'.

As I was to read prior to entry to the field, Tongareva had a small population but as with many of the Cook Islands, this didn’t mean that they were somehow more 'traditional' or suitable for environmental management projects as Chesher’s comments above would suggest. Practically, however, this small population base did mean that I would be able to interview a large proportion of the resident population despite a relatively short fieldwork period. The geographic isolation and independence of this island was also relevant to my research aims as it suggested that residents could have a relatively high degree of institutional autonomy in their decision-making processes regarding the practices of environmental management. Complicating matters though, the Cook Islands Ministry of Marine Resources (MMR) have offices on the island, so I was interested to explore how decisions regarding access to and control over marine resources were negotiated between this national-level body and the local governance vested in the Island Council. Finally, because of their isolation and the high sea to landmass ratio, it seemed likely that the Tongarevan people would depend greatly on the sea for their food which might result in different ways of relating to the marine environment compared to their Southern Cook Island counterparts while at the same time suggesting the possibility of unique processes of environmental management.

As the work of Katz (1994) and Clifford (1997), among others served to remind me, I was as a twenty-first century researcher in part following in the footsteps of prior processes of colonialism and missionisation, albeit one who was attempting to 'listen' and research in different ways. Take as an example my felt experience of 'authority' in the field. To read my presence in Tongareva as purely neo-colonial might assume that I enjoyed full and secure
authority. I clearly did not. While as a researcher there were many times when I was in a powerful position relative to my research subjects (the role I am currently performing as author of this document is a case in point), my location and role in the research process shifted and developed over time. Indeed, during my fieldwork there were many instances when I felt without authority, vulnerable and power-less, even dependent. Bhabha (1994) has famously talked about 'colonial anxiety', whereas I had what might better be described as a postcolonial anxiety: the desire not to assume authority, to be properly respectful of the people living on Tongareva and their knowledges. The progression of ideas and topics which resulted in this thesis can therefore been understood as a consequence of on-going interactions and negotiations with people and places the contours of which were shaped not only by what happened on Tongareva but also by my views, hopes and ethics I formed prior to my arrival.

3.3.1. Fieldwork in Aitutaki and Rarotonga

While the majority of my fieldwork was based on Tongareva, I found visits to Rarotonga and the island of Aitutaki an equally important part of the research process. My time in Rarotonga was unavoidable due to the close association I was to develop with the MMR who ended up sponsoring my research permit. It was also unavoidable due to the lengthy periods of time I had to wait for connecting flights up to Tongareva. I chose to visit Aitutaki initially with a comparative approach in mind because of the presence of a MMR Marine Research Station on the island and the MMR sponsored project of spawning pa‘a’ua (pasua in this Southern Cook Island context) for re-introduction to the lagoon. This second case-study was eventually abandoned as the focus of my research topic changed to examine in detail the processes of environmental management concerning pasua on Tongareva alone. My time on Aitutaki was nevertheless useful in gaining a sense of the different governance regimes between Aitutaki and Tongareva, particularly with respect to pasua/pa‘a’ua, and also in exploring people's views on the sudden decline in pa‘a’ua numbers on this island. On Rarotonga and Aitutaki I interviewed MMR
staff and government officers and people involved with the *pa`uma* spawning programme, all with the goal of attaining a broader understanding of environmental management priorities and politics within the Cook Islands in general, but also, people's perceptions and views of Tongareva as a place and people. Interviews with people on Rarotonga and Aitutaki are summarised in the second half of this chapter and in Appendix 2 and Appendix 3.

Rarotonga, as the capital of the Cook Islands, has a large and transient population of Cook Islanders as well as backpackers and other tourists (mainly people on the transpacific route that links Los Angeles and New Zealand). On my visits to both Rarotonga and Aitutaki I stayed in backpackers where I met many other young travellers. These times were often quite challenging as they forced me to reconcile a strange mix of arrogance and separation to other tourists or travellers and even led me to imagine myself to be more legitimately present on the Cook Islands (cf Jolly, 1994). At the same time, however, this status made it hard to switch off from research. I remember very clearly in my first week on Rarotonga feeling extremely uncomfortable at simply relaxing on the beach with other travellers staying at my backpackers. On one particular occasion, I took to wandering the beach in search of 'locals' who I attempted to engage in conversation about their fishing practices. This tension I perceived between my overlapping roles as researcher and tourist haunted me throughout my time in the Cook Islands and although I enjoyed the respite my times in Rarotonga provided, I found the re-immersion back into this relatively 'bustling metropolis' a dis-orienting experience that engendered constant shifts and challenges to my positionality and identity throughout the research process. In the next section, I discuss these issues of positionality explicitly with respect to my ability to negotiate access to the field, gatekeepers and caretakers, and issues around acceptance in my fieldsite.
3.4. Negotiating the ‘field’

"It is boiling! I had completely managed to forget a place can be this hot and fly infested and yet now I’m here it all feels pleasantly familiar. (8.4.2006 fieldnotes)

Given the dearth of research links to Tongareva, negotiating access to this community was challenging. Prior to leaving Edinburgh, I had attempted to contact with the MMR in order to attain permission to undertake research, but met with little success as no responses to my emails were received. Eventually a contact at the Secretariat for the Pacific Community (SPC) advised that it would be easier to simply travel to Rarotonga and organise the requisite research permit on arrival. As a consequence, I was faced with very specific issues relating not only to accessing the specific research community on Tongareva, but also negotiating Cook Island bureaucracy.

I first travelled to the Cook Islands on the 10th of June 2005. I had travelled long haul directly from Edinburgh and remember with vivid clarity, the first moment I stepped off the plane into the heavy evening air of Rarotonga, thick with the smell of *tipani*[^1], diesel fumes and distant bonfires. Fortunately, the MMR were extremely receptive to my research proposal, despite expressing some surprise at my intent to base myself in Tongareva, and agreed to ‘host’ me and sponsor my application for the compulsory research permit. This bureaucratic stipulation led me to have a close working relationship with both the MMR and their northern branch, the Tongareva Marine Research Centre (TMRC). Furthermore, as part of the requirements for gaining a research proposal hinged on the research having relevance and of being of benefit to both the country, and in my case, Tongareva and its residents, the MMR suggested that it would be important for me to incorporate into my research something that would be of interest to the Tongarevan Island Council.

[^1]: *Tipani* is the Maori word for *frangipani* (*Plumeria obtusa*).
In part due to this stipulation, but also due to my theoretical emphasis on the importance of context, I felt it necessary to do a reconnaissance trip up to Tongareva during this first visit in order to assess the precise nature of the research I would do. Over the entire course of my fieldwork, I spent approximately 16 weeks on Tongareva, three weeks on the island of Aitutaki and around two and a half weeks in the capital island of Rarotonga totalling approximately five and a half months of fieldwork in the Cook Islands. My time on Tongareva was split into three main trips, the reconnaissance visit in 2005 for a fortnight, the main trip between April-June 2006 and a final five week visit from July-August that same year.

My decision to stagger the time on Tongareva was based in the first instance by quite practical matters, notably the limited 10 kilogram baggage allowance on the flight up from Rarotonga. This effectively prevented me from bringing enough food to comfortably exist as a vegetarian on the island for long periods of time as the main diet on Tongareva is based out of necessity around seafood and rice. Moreover, after my first two-week visit in 2005, I realised that my ability to work for long periods on Tongareva would also be challenging given the high temperatures and isolated living conditions. As such, while I found the relatively short bursts of research time on Tongareva necessary, they were also frustrating as I never felt as though I had really ‘settled in’, nor spent long enough continuous periods of time to justifiably label my work as ‘ethnography’ in accordance with the unwritten code governing adequate time in the field. In the end, however, my constant pattern of arrival and departure was useful. Not only did it allow me to cope with the rigours of fieldwork, but it also provided me with a series of departures and returns. Every ‘return’ I made to Tongareva worked to demonstrate my loyalty to the project, the place and the people I worked with. As such, the returning served to secure my place in the field and deepened my relationship with the people on the island. Moreover, these visits served also to illuminate subtle changes in people’s behaviour towards me, as well as my own shifts in comportment as I became familiarised with the people and places that had initially felt so foreign.
3.5. Gatekeepers and caretakers: the ambiguities of acceptance

"We’re airborne, flying at the cusp of a blanket of cloud, the roaring propellers drowning out the sound of my iPod already turned up too loud. It was exhausting saying goodbye this morning despite knowing I’ll be hoki mai (returning) in a month. My right cheek still tingles from the multitude of kisses received from papas with scratchy beards and smiling wrinkled mamas. I’m laden with sei (shell necklaces) from Katu and my new friend Tania and I don’t really know what I’ll do when I reach Rarotonga." (20.5.2006 fieldnotes)

When I first flew up to the island of Tongareva on 18th of June 2005, I knew very little about ‘Penrhyn’ as I then referred to the island, other than what I had read in MMR publications and on the web. As the MMR in Rarotonga were responsible for sponsoring my research permit, the onus was placed on staff at the TMRC on Tongareva to ‘look after me’. When I first arrived on the island, however, I was also taken ‘under the wing’ of the Maretapu family, a large friendly and exuberant family who were eager to open their door wide to any papa’a (foreign) stranger that might venture so far north in the Cook Islands. Despite their welcome and the proximity of their Mission House accommodation to Omoka village, I was encouraged to move to TMRC-owned accommodation in at the southern end of Omoka, about a twenty-minute walk away from the main village. I spent the rest of my time on Tongareva living by myself at this TMRC house (see Plate 3-1). While at the start it was simply a relief to have somewhere permanent to stay on Tongareva, the TMRC accommodation framed my presence in Tongareva in quite specific ways although I only became aware of these as my research progressed.

Mataora Marsters, acting manager of the TMRC, also served to mediate most of my first introductions with residents. In discussions pertaining to general issues and practices of environmental management on Tongareva in the course of my reconnaissance visit in 2005, Mataora raised concerns about large harvests of pasua which were ongoing at the time of my stay. It was partly due to this early mention of pasua that my eventual research focus on this species was decided as I started picking up and focusing on people’s viewpoints and the debates over the need for rahui on pasua that were circulating around the island at the time of my first visit.
The subtle gate-keeping performed by Mataora and indirectly the MMR served (especially in the early stages of my research) to have a strong influence over people's expectations of the purpose behind my research. It also framed me; for some I was an 'expert', for others a 'critic' (cf Hammersley and Atkinson, 1991). Indeed, I discovered near the end of my fieldwork that many people had initially resented my presence on Tongareva as they assumed I was there to 'tell them what to do' with regards to *papa* management. This was also bound up with my other affiliation with the Island Council who as the local governing body also exerted a degree of influence over my research process and focus. As my fieldwork progressed, however, I became more attuned to those moments when people were influencing (positively or negatively) my access to people for interviews, or in the case of my survey of the lagoon, restricting the scope of my survey by controlling access to boats and petrol.

Plate 3-1: The view from the TMRC house which I lived in for the majority of my time on Tongareva. The buildings in the foreground are TMRC out-buildings. The lagoon is just visible through the coconut palms (Source: C. Chambers).
The survey I conducted of *pāua* stocks in the lagoon turned out to be of particular interest to the Island Council who stated early on that they wanted to use my results in order to provide baseline information regarding the possibility of establishing of specific harvest size limits, the possible need for a *rahui* and the ideal location of such a *rahui* if required. This led to a rather tense period of negotiation with the Island Council and staff from the TMRC over how the survey would be designed, who would be involved, and what would be done with the findings. Moreover, I had to temper my aim to survey a large proportion of the lagoon as I was often made to feel as though I was making unreasonable requests about how many sites we needed to cover, and the distances involved in doing so. Nevertheless, I soon realised that this particular research technique would also be very useful in terms of highlighting the local politics of ‘science in action’ (Latour, 1993) enabling me to explore in context, the manner in which some of the Tongarevan people responded to overt discourses of science, for example, the ‘rigours’ of survey methodologies, and how these meshed with other social relations of power and authority (Moss, 1995).

My physical location in Omoka meant that I had less opportunity to get to know people living on the other side of the lagoon in the village of Te Tautua. This meant it took longer to meet and interview people from this village although later in my fieldwork I made specific efforts to travel across the lagoon in order to do so. Furthermore, as a single white female living alone on Tongareva, I often felt quite vulnerable at night as the following excerpt from my fieldnotes serves to illustrate. This feeling of powerlessness also transferred to a general feeling of shyness in approaching people I hadn’t yet been introduced to by my initial contacts such as Mataora and the Maretapu family.

“I’m sitting at my table, listening to the tinny sound of Liberty X on my laptop speakers. Wanting to go to bed but waiting for Mataora to return next door so I’ll feel a bit more relaxed. I’m really cross that I don’t feel safe in my own house. Bugger the bloody men coming around my house at night and bugger the bloody windows in the house that stop me from locking people out and not dying of heat exhaustion in the process. Oh what a strange space and place I’m in. I’m hoping to get cracking with my research tomorrow. Yesterday was a write-off of vomiting and too much heat and today wasn’t much better although I did manage to clean the house.” (19.4.2006 fieldnotes)
3.5.1. Language and diet

One of the first things I sought to do upon arrival in my fieldsite was to attempt to learn some of the local dialect. As a pakeha (non-Maori) New Zealander raised in a bicultural system, attempting to work in another language is sanctioned as an important component of both integration and coexistence. While I didn’t learn the language fluently, I did adopt a range of terms, partly because Tongarevan Maori is not dissimilar to New Zealand Maori. My attempts at performing and listening language were also important ways in which I demonstrated my respect and commitment to the Tongarevan people’s ways of being in the world. Moreover, attending to the local ways of naming things, particularly as Chapter Five goes on to demonstrate, was a vital part of understanding the processes and politics of environmental management in this context.

In general, people’s attitudes towards me gradually became much more amicable once I had a chance to explain my research aims and they got to know me better. People’s initial reservations about my presence as researcher on the island had not been aided by my open vegetarianism, which got activated in ways I had not anticipated. In this context, my vegetarianism operated as proof that I was ‘against’ harvesting paunga and other seafood for food, as was the practice locally. As such, my vegetarianism was not simply a curious, benign difference I carried with me, it was also a somewhat threatening feature of my persona. The resistance to my presence that I felt strongly in the initial phases of my research certainly altered the power-dynamics of the research process overall. The varying perceptions of the reason for my research were all the more troubling because it was entangled with my own commitment to have a research strategy that, if not full-blown action research, was nonetheless responsive to local imperatives around what needed to be understood in terms of local paunga harvest and management.

My time spent on other islands also highlighted the way in which my identity was shaped and moulded as a consequence of the research process. One instance when this was made tangible
occurred at the end of my fieldwork when I met up with a group of Tongarevans who were in Rarotonga for the 2006 Constitution celebrations (see Chapter Seven). The group were staying at the Tongareva Hostel along with other Tongarevans visiting from New Zealand and Australia. The diasporic Tongarevans who did not know me looked visibly confused when I casually entered the Hostel to catch up with my friends. “She’s not a papa’d’, Mamaruaki explained, “she’s Mangarongaro papa’a now” (meaning she’s one of us). Thus while on Tongareva my identity was definitely that of outsider, when in Rarotonga with other Tongarevan people, I was ‘one of them’.

In the next section of this chapter, I discuss in greater detail the techniques used as part of the research process. Specifically, I attend to the ways in which these techniques enabled me to both address my research questions, but also allowed me to reflect in greater detail the ways in which my research findings were grounded, structured and received through specific social relationships.

3.6. Mixing methodologies: the politics of research techniques

“I’m worried about my research. I just don’t know how to begin ‘researching’. I just feel so blunt and clumsy when I try to get people to speak on my subject area, and yet my subject area itself is so nebulous. I don’t even know how to describe it. Perhaps I should be writing, expanding on my proposal and the arguments within? And yet it feels wrong day after day to sit at my laptop…”

(14.4.2006 fieldnotes)

The process of data collection started in earnest on the second trip to Tongareva in 2006. By this stage, I knew and was known by most of the island population although as the above quote suggests, I still very much grappling with defining the specific focus of ‘my subject area’, as I put it in my journal. Reflecting back on this turn of phrase is revealing. I had committed to an ethos of allowing the specific focus of my research into the processes and politics of environmental management to be shaped by local concerns, but clearly I still had a sense of propriety over the (‘my’) research. In short, this turn of phrase reveals the very tenacious hold of a structure of
thinking in which it was 'my research' and 'their information'. I appeared to know enough about my research to label it 'my subject area', but the specific focus of my research was actually not my knowledge but theirs, not my island but their lagoon, their *pauna*. Moreover actually doing 'research' was not a simple process of having a set of research questions that could be answered. Indeed, although I certainly entered the 'field' with pre-existing theoretical ideas and goals which drew me to certain issues and observations more than others, I drew heavily on participant observation in order to further refine my research questions as my fieldwork progressed. This reflexive research process was complicated not only by the practicalities of bouts of food poisoning and loneliness, but also by the politics of rights of around knowledge (who knew what and what rights I could or could not assume in relation to that knowledge). The techniques I used to facilitate this transaction in knowledge were loosely ethnographic, based as they were on semi-structured interviews, informal conversations as well as different types of participant observation.

3.6.1. Participant-observation, interviewing and other research techniques

Participant observation is a common ethnographic technique in research (for example Crang, 1998). As a method, it is premised on the understanding that researchers in the 'field' are not separate to, but become connected with, the social world in which they are studying (Reinharz, 1992; Gupta and Ferguson, 1997; Sharp, 2005). In my research, the social context within which people structured their engagements with the lagoon environment, particularly in the context of *pauna* harvest, was assumed to be integral to the processes of environmental management. In order for me to attain a sense of the broader significance of these practices, it was therefore important that I too attempted to 'participate'. Ultimately, however, I was not concerned about discovering knowledge, but rather about producing knowledge about *pauna* and the lagoon, and therefore an analysis of context, interactions and what people didn’t say, were very important (Nightingale, 2005). I variously participated in and observed such activities as fishing and *pauna*
harvest trips, collecting coconut leaves to be woven into *rito*, sitting with the women as they wove and prepared *rito*, attending Church on Sundays, and playing games at the Omoka youth club. I attended community meetings, Island Council meetings and spent long periods of time talking to the doctor; Dr Myo Hlaing, my neighbour and one of the only other 'foreigners' on the island. Indeed, Dr Hlaing was integral to my ability to get across the lagoon and interview people in Te Tautua; interviews were often performed with people who were waiting to see the doctor at his clinic. I also spent a number of weekends at the pearl farm owned by an Australian, Mike Grubnau, on the island of Pahonu which served as important moments of respite for me in the research process.

According to Burgess (1988), interviews are an ideal medium to explore people's environmental values and how they mesh or contrast with the institutional context at hand. In this regard, talking to people was an excellent way of producing knowledge about the significance of *pasua* in people's everyday lives as well as attempting to understand their views on such things as the planned *rahui*. After conducting pilot interviews on my reconnaissance visit to Tongareva in 2005, I decided to utilise an informal conversational interview approach (Kitchen and Tate, 2000). I developed a thematic interview schedule (Table 3-3) and I usually began interviews by referring to a consistent list of questions. Although I did not follow these questions in a strict order or ensure that all were answered, this approach did enable some comparability between answer and provided me with a technique to discern a feeling for saturation point, or when no new information was received. My interview approach was also based around asking questions that arose from the immediate context of the situation and conversation at hand, thereby allowing the interview to take its own course and raise issues and themes that were initially unanticipated. This was particularly successful in terms of enabling interviewees to discuss issues that were not directly related to the topic but had bearing on their views concerning *pasua*, authority and environmental management as a whole. Particularly in the early stages of my research, I both relied upon and was directed by the people I had made initial contact with, namely: the Maretapu family, Mataora Marsters and other staff at the TMRC, and Dr Hlaing.
used these contacts to elicit recommendations as to whom I should talk to about *pasua, rahi* and the Tongarevan marine environment in general while remaining aware that these informants had their own agendas which shaped the information they were willing to share with me and who they encouraged me to interview.

Theoretically, my decision to gather peer recommendations as a start to the interviewing process, was premised on work by Davis and Wagner (2003) who advocate systematically gathering peer recommendations to identify what they term ‘local knowledge experts’ (Davis and Wagner, 2003 p465). This approach proved useful in relating knowledge claims to social hierarchies and addressing how such knowledge is associated with wider relations of authority, class and gender. In the course of seeking nominations for interviews and approaching people for interviews, however, it was necessary for me to consider how my gender both enhanced and restricted and overall shaped the information elicited (Sundberg, 2003).

All of the people nominated by the peer recommendation exercise were initially men and men in positions of authority, for example, many were Island Council members. I found that I needed to specifically request suggestions of women who might hold ‘expert knowledge’ or might be useful to speak to in general. Table 3.1 presents a summary of these men and women nominated by the peer recommendation process and the number of times they received these recommendations. I sought to interview both individuals and groups, often interviewing the same person more than once. In general, I tried to observe how different people chose to position themselves in relation to me and to other people, and how such positioning related to their statements and their observations about the lagoon. All of the interviews, with the exception of three interviews conducted on Aitutaki on my first fieldwork period, were recorded on a digital recorder with occasional supplementary notes taken, which meant that exhaustive note taking did not detract from the conversations. A full list of interviews conducted with dates and length of time is inserted in Appendix 1.
Table 3-1: Number of peer recommendations for suggested interviewees

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Gender</th>
<th>Community status</th>
<th>Times Suggested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Papa Ben</td>
<td>&gt;75</td>
<td>Male</td>
<td>Former Island Council Member</td>
<td>3</td>
</tr>
<tr>
<td>Papa Arake</td>
<td>&gt;50</td>
<td>Male</td>
<td>Former Mayor and TMRC worker</td>
<td>2</td>
</tr>
<tr>
<td>Papa Takake</td>
<td>&gt;60</td>
<td>Male</td>
<td>Government Representative</td>
<td>2</td>
</tr>
<tr>
<td>Mama Tomanu</td>
<td>&gt;75</td>
<td>Female</td>
<td>Respected female elder Omoka</td>
<td>1</td>
</tr>
<tr>
<td>Apera William</td>
<td>&gt;40</td>
<td>Male</td>
<td>Mechanic</td>
<td>1</td>
</tr>
<tr>
<td>Fana Ivirangi</td>
<td>&gt;45</td>
<td>Male</td>
<td>Island Council member</td>
<td>3</td>
</tr>
<tr>
<td>Rangi Taia</td>
<td>&gt;35</td>
<td>Male</td>
<td>Telecom worker</td>
<td>1</td>
</tr>
<tr>
<td>Twin Tonitara</td>
<td>&gt;45</td>
<td>Female</td>
<td>Government worker</td>
<td>3</td>
</tr>
<tr>
<td>Alex Maretafu</td>
<td>&gt;45</td>
<td>Male</td>
<td>Head of Catholic Church</td>
<td>3</td>
</tr>
<tr>
<td>Tini Ford</td>
<td>&gt;50</td>
<td>Male</td>
<td>Former Mayor</td>
<td>2</td>
</tr>
<tr>
<td>Tata Motini</td>
<td>&gt;60</td>
<td>Male</td>
<td>Deacon of CICC church</td>
<td>2</td>
</tr>
<tr>
<td>Papa Rongo</td>
<td>&gt;70</td>
<td>Male</td>
<td>Former principal of Te Tautua school</td>
<td>3</td>
</tr>
<tr>
<td>Matirau Ford</td>
<td>&gt;50</td>
<td>Female</td>
<td>Head of women’s craft council</td>
<td>3</td>
</tr>
<tr>
<td>Mama Pine</td>
<td>&gt;65</td>
<td>Female</td>
<td>Respected female elder Te Tautua</td>
<td>2</td>
</tr>
</tbody>
</table>

In all cases, my interviews were conducted in English. Nearly all Tongarevans speak and understand a little English but most are generally fluent in Tongarevan Maori. Although I understand basic Maori and was quick to pick up some of the Tongarevan dialect, there was still a substantial language barrier. Because of this, I did not feel as though I was attaining detailed...
nuanced responses as I might have had if the interviews were conducted in Maori. At times, moreover, I suspected that people did not always understand the specific meaning of some of the questions posed in the course of interviews so I found myself both simplifying the language of the questions, constantly prompting and at times, interjecting which I found really embarrassing to listen to during the transcription process. These factors such as my limited ability to speak and understand Maori, therefore had an influence on the ways in which I was able to speak, listen and be heard in the research process (Gibson-Graham, 1994).

Table 3-2: Summary of interviews conducted on Tongareva, Rarotonga and Aitutaki

<table>
<thead>
<tr>
<th>Individual Interviews</th>
<th>Group Interviews</th>
<th>Women Interviewed</th>
<th>Men Interviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
<td>3</td>
<td>5</td>
<td>26</td>
</tr>
</tbody>
</table>

Table 3-3 gives a sample of type of questions asked and general themes the questions were seeking to elicit knowledge around. Interviews specifically around people’s views on the changing nature of Tongareva lagoon environment and questions concerning changes in *puna* abundance and distribution over time formed the basis of the oral-ecological interviews that I used in conjunction with the quantitative material, discussed below. Most of the early interviews were transcribed in the field in order to suggest new avenues of questioning. All interviews were subsequently coded using a simple ‘selective coding’ method described by Strauss (1987 p104). My coding was based on the themes around which my interview questions were structured as well as themes that emerged from analysis of the interview material, particularly as they pertained to the theoretical questions that guided my research overall.

The conversations enjoyed and endured with those both willing and reluctant to speak into my digital recorder were transformed in the transcription processes, and simplified to a series of
dots and exclamation marks, translations and inferences. The background roar of surf, windy gusts obliterating words and happy squeals of children in the background are written out of my transcripts, meaningful pauses elided as dots, and the occasional suspicious tones expunged. Despite this textual reduction, I have attempted to include as much of the original dialogue in the interview transcripts as possible, while editing slightly to ensure clarity of meaning and ease of reading. Any translations are my own aided by Shibata (2003). Interviews were selected for inclusion in the text of this thesis on the basis that they were embodying thematic points that were common to other points raised by interviewees. In this respect, while certain people's comments are drawn upon more than others, this was often because they were able to convey their viewpoints more clearly, particularly compared to some of the other people I interviewed for whom speaking English was more challenging.

The use of interview material, however, raised issues concerning my authority to 'speak for' the people and places involved in my research and questions around the ethics of the research process, particularly in the context of whether to anonymise people's quotes cited in this thesis. As part of the standard ethical procedures, I always began my interviewing process with consenting interviewees by asking if they would like to be anonymised or referred to in the thesis by name. All but one wanted to be named directly. My reading of my informants' desires to be named directly in this thesis is based around an assumption that the people interviewed wanted to be attached to their quotes because of their rightful pride in such knowledge. This also reflects their sense of selves as local experts, people who have willingly shared with me their perspectives and understanding of different practices pertaining to ecological management in a research context where they knew I would draw upon their views as part of my research. In these circumstances, the standard ethical practices of anonymity involved in social science research were not entirely helpful. On the one hand, if I went ahead and anonymised their quotes, I risked offending the people who specifically asked to be named. On the other, the personal pride and investment that my interviewees have in their knowledge presents considerable burdens for me as author in terms of ensuring that I have accurately represented
their knowledge. This remains problematic particularly as the majority of the writing up of this thesis has been done in Edinburgh, with no opportunity to check with my informants as to my interpretation of their responses. In the end, I chose to respect my informants wishes to be identified with their information and can only hope that I have represented their views as accurately and fairly as possible.

Following England (1994), it was also necessary for me to consider the significance of the silences and rejections that were part of the research process. For example, consider the following taken from my fieldnotes:

"People appear slightly reluctant to discuss information about pasua harvest (their personal harvest) with me. I sense they avoid some of my questions possibly because they sense I disapprove of the practice (thereby putting me/placing me as a conservationist and vegetarian) but also I suspect it's because many (most?) of the people I was talking to were harvesting pasua to take and sell in Rarotonga on the boat, due Wednesday 2/6/2006 and anything to do with money is a sensitive topic" (2.5.2006 Fieldnotes)

My interpretation of these silences and apparent reluctances are always framed by my own preconceptions (for a specific example of a 'Western' reading on the significance of money see Parry, 1989). Nonetheless, the times in which people evaded certain questions, avoided scheduled interviews due to 'sudden changes in plan', or simply failed to turn up to meetings, were ways in which they could signal to me that they were not willing to participate in my research, and therein, retain a sense of control over the research process. As mentioned above, however, these instances were just as important to reflect upon in the research process as the material gained from successful interviews.
Table 3-3: Example of questions and relevant themes

<table>
<thead>
<tr>
<th>Examples of specific questions:</th>
<th>Related theme:</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are the different coral formations and how are they named?</td>
<td>Spatialising the lagoon</td>
</tr>
<tr>
<td>How does the island council work and what other decision-making processes are significant?</td>
<td>Authority and decision making</td>
</tr>
<tr>
<td>What kinds of knowledge are deemed important on Tongareva and why?</td>
<td>Power and authority</td>
</tr>
<tr>
<td>What are the most significant social structures on Tongareva and why? Eg. Church? Family?</td>
<td>Structures of authority</td>
</tr>
<tr>
<td>Do you think there has been a change in the value of <em>pasma</em> and other local produce over time? Why?</td>
<td>Changes to <em>pasma</em> over time</td>
</tr>
<tr>
<td>How is authority gained in Tongareva?</td>
<td>Structures of authority</td>
</tr>
<tr>
<td>What do you think is the most significant issue facing the marine environment of Tongareva at present?</td>
<td>Perception of resource management issues</td>
</tr>
<tr>
<td>How do you think <em>pasma</em> populations have changed over time and why?</td>
<td>Changes to <em>pasma</em> over time</td>
</tr>
<tr>
<td>What are the main decision-making processes on Tongareva?</td>
<td>Authority and decision making</td>
</tr>
<tr>
<td>When people visit other islands are they expected to take gifts with them? Why? Is there a ranking to this?</td>
<td>Gift exchange</td>
</tr>
<tr>
<td>How do you understand the role of the MMR on Tongareva?</td>
<td>Institutional framing</td>
</tr>
<tr>
<td>How effective do you think the Island Council is in managing the marine environment?</td>
<td>Authority and decision making</td>
</tr>
<tr>
<td>How well do you think practices such as <em>rabui</em> have been working in recent years on Tongareva?</td>
<td>Effectiveness of <em>rabui</em></td>
</tr>
</tbody>
</table>
3.6.2. The *pasua* survey

"Day three of the survey- my face is red and my arms a brownish pink. I've a badly cut finger which is healing and infected scratches on my legs and fingers from coral. I'm completely exhausted!"  
(10.5.2006 fieldnotes)

I designed and conducted the ecological survey of *pasua* distribution and abundance on the premise that it would be useful in generating a quantitatively informed understanding of where *pasua* grew in the lagoon and the spatial nature of this distribution. Alongside designing the *pasua* survey, I was requested by the MMR to survey Trochus (*Trochus niloticus*) numbers and size-distribution in the lagoon, to enable the Island Council to make a decision if it was time to harvest this shell (see Chambers, 2007b).16

Performing the Trochus survey further ensured that I would receive both free accommodation at the MMR facilities and free petrol for the boat required to travel around the lagoon as it was understood as MMR business. The physicalities of performing both surveys were no less rigorous than the political negotiations involved in organising them and as the above quote illustrates, I had to deal with sunburn, infected coral cuts through constant immersion in the massive expanse of Tongareva lagoon, as well as overcome my fears of the omnipresent sharks.

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16 When I first raised my intention to undertake the survey of *pasua* in the lagoon, the MMR in Rarotonga asked if I could combine this exercise with a survey of Trochus shell in the lagoon and receive free accommodation at the TMRC house in return. I agreed to do this and while I don't draw upon my findings from this survey directly in this thesis, the Trochus survey also produced interesting insights into the manner in which my role of 'researcher' was envisaged by the MMR and the community.
The *pasua* survey took place over four days from 3 May to 17 May 2006 with a follow up survey at sites Te Võ, Tepetepe and between Ahuamiria and Atutahi on 24 July 2006. Fieldwork was conducted in close association with the TMRC who I relied upon for people to assist with the survey and also the petrol needed to travel across the lagoon. I designed the survey so that it could be repeated by the TMRC in a year in order to further explore changes in *pasua* population over time; it was not practicable for me to assist with this future survey due to constraints on the amount of time I could spend on the island.

My plan at the outset was to combine the findings from the survey with qualitative material concerning people’s perspectives on how the *pasua* population had changed over time thereby allowing the results to sit in tension with each other and thus provide “a combination of partial perspectives” (Kobayashi, 1994; Lawson, 1995; Katz, 1996; Lal, 1996; Nightingale, 2003; Sharp, 2005; Jackson, 2006) (for examples of other research with an epistemological commitment to highlighting the partiality and situated nature of knowledge, see Haraway, 1991; Kobayashi, 1994; Lawson, 1995; Katz, 1996; Lal, 1996; Nightingale, 2003; Jackson, 2006). Although arising from very different epistemological traditions, my theoretical commitment to analysing both social and ecological data in combination led me to combine the findings from the different techniques, rather than using the survey as a means to corroborate or otherwise the information taken from interviews (see Nightingale, 2003). The survey, therefore, was intended to act as a different ‘lens’ on the situation, one which was able to generate a detailed picture of the spatial distribution of *pasua* population in Tongareva lagoon at a particular moment in time. As Chapter Five of this thesis demonstrates, the combination of the statistical information attained from the survey with interview material pertaining to harvest rates and patterns, was illuminating. Combining the statistical findings with interview material was particularly successful at producing a very detailed picture of how the lagoon is spatialised in both ecological and social terms.
I designed the survey on the assumption that measuring samples of *pasua* populations within the lagoon would give an indication of the lagoon's overall *pasua* abundance and distribution. As such, I attempted to select a wide range of coral formations within the lagoon as a whole (it was assumed that *pasua* would not grow in the absence of coral). Sites were selected by dividing the lagoon into quadrants (e.g. north, east, west, and south), and travelling in a boat within these sections in a relatively straight line (e.g. parallel to the shore) for a set period of time (e.g. 10 minutes) until suitable habitat was encountered. From preliminary observations and based on existing biological information concerning *pasua* (Lewis, 1987), suitable habitat was defined as coral formations with measurements taken in waters up to a depth of 10 metres.

The survey area was delineated by four 50 metre (m) ropes which were knotted to form a square. This was then placed randomly over the survey site although in the case of reef edges, the lines were placed at the edge of the reef extending towards the shoreline. Five transect lines were then placed within the square at 10 m intervals. All *pasua* found within five metres both side of the line were counted and a proportion of the total population measured. In cases where low numbers of *pasua* were present, every second *pasua* were measured but in situations where large numbers were found, measurements varied from every 10th to every 100th *pasua*.

I chose to focus on the size distribution of *pasua* in order to attain an overview of the species age structure and to see what patterns were evident in this regard, I evaluated the size distribution of *pasua* by recording the length along the shell opening (lip) using callipers measured in centimetres (cm). The census of *pasua* abundance in the lagoon was calculated by counting the number of *pasua* within each survey area; density was calculated as the total number

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17The variance in measuring effort was based upon practical considerations. As a consequence, however, aggregated results pertaining to size distribution must be viewed with some scepticism. For future surveys, it would be useful to stratify the lagoon according to density and have a consistent measuring effort within these zones. Appendix 5 gives individual size distributions for each site surveyed.
of individuals divided by the area sampled which at each site was 2500m². A total of 27 sites in the lagoon were surveyed (see Figure 3-1).

As my forthcoming chapters illustrate, enacting the quantitatively oriented ecological research alongside the ethnographic techniques of participant observation and interviewing, produced interesting insights into the spatial nature of Tongareva lagoon as well as illuminating variations in people's comportment towards me as researcher as I too moved along the continuum of research practice. Placed in analytical combination, the combined researcher methods revealed much about differences in terms of how people were positioned not only in relation to myself, but also in relation to local and national structures of authority and how these differences played out in the context of views regarding both the current status and future management of *pasua*.

Figure 3-1: Map of Tongareva lagoon showing approximated location of the sites surveyed and the villages of Te Tautua and Omoka (Source: Chambers, 2007a p7).
Plate 3-2: Mataora Marsters demonstrates the use of the callipers to measure *pasua* length on a tin of tuna to Tuku Marsters and Taimana Manata who assisted with the survey (Source: C. Chambers).

3.6.3. Secondary sources:

In addition to the empirical data generated through my time in the field, I also drew heavily upon a range of secondary sources. As I go on to describe in Chapter Five, an unanticipated but hugely informative technique came in the form of a mapping exercise which was stimulated initially by quite pragmatic means (I had lost the map required in order to complete my survey of *pasua* in the lagoon). This mapping exercise, which I detail in Chapter Five, involved myself and three existing members of the Island Council who assisted me with recording the local names given to different coral formations in the lagoon on an ordnance survey map. This mapping exercise was particularly useful in terms in generating a tangible representation of the socionatural character of Tongareva lagoon, and provided a useful focus for interviews which I used to enrich the quantitative information collected in the course of the ecological survey of *pasua* abundance.
In addition to interviewing MMR staff, my time in Rarotonga was devoted to digging up scientific reports on pasua to supplement my scant knowledge on the biology of the species. At the MMR, I was also able to access internal reports annual reports and research initiatives, which supplemented my understanding of the institutional role of the organisation as well as the general conservation priorities of the Cook Islands Government. Close reading of reports and publications from institutions such as the WWF and the MMR provided a macro-institutional level framing within which broader issues pertaining to environmental management on Tongareva were analysed. I sought out such information because of my emphasis on understanding how priorities in environmental management are both influenced by, and frequently differ according to, scales of governance. This material also enabled me to gain insight into the discursive constructions of environmental management processes and priorities in a Cook Islands context.

In addition, I relied heavily on historical accounts of the Cook Islands such as Lamont’s *Wildlife among the Pacific Islanders* (Lamont, 1867), Sir Peter Buck’s *Ethnology of Tongareva* (Buck, 1932) and other books detailed in Chapter Four. Through the National Library of New Zealand, I also attained copies of significant legislation pertaining to Tongareva such as the *Outer Islands Act 1987* and the *Cook Islands Act 1915*. These were used to provide a legislative context for my observations. In addition to the main information collected, this thesis also draws upon emails to friends and family, diary entries, photographs, as well as my memories of my time ‘in the field’. In drawing upon this range of sources, I hope in some way, to reflect the diverse nature and number of encounters which were experienced during the research process and also those which particularly ‘spoke’ to me as I sat at my desk in Edinburgh, weaving the different threads of this thesis together.
3.7. Conclusions

This chapter has interrogated the way in which both my role as researcher and the research I produced was placed as a consequence of a series of ongoing negotiations and movements. I have, through reflection on my research experiences, argued that the fieldwork represented by this thesis is an embodied process that involved, travel, observation and dialogue but also food, heat and other species. As detailed in the preceding chapter, social relations simultaneously frame particular ways of relating to the biophysical world and are also transformed by such interactions. Because of this assumption, it was necessary for me to understand both the social relations present on Tongareva as well as produce knowledge about the significance of pasua in people’s everyday lives. I have further shown that the techniques I deployed in order to explore configurations of power and knowledge with reference to pasua, were shaped, grounded and received through specific social relations which reflected my own ‘deep history’ as a white, female researcher as well as the different research techniques deployed.

My decision to utilise quantitative ecological survey techniques and allow the results from this to sit in close proximity to the findings from more standard ethnographic methods was explored in the context of an epistemological commitment to highlighting the partiality and situated nature of knowledge production. Not only did the use of the survey produce knowledge about the spatial patterns of pasua within Tongareva lagoon, combined with material taken from interviews and the mapping exercise, it served to deepen my understanding of changes in pasua distribution over time. Another unanticipated use of the survey was to highlight hitherto unseen configurations of power and authority circulating in Tongareva that surrounded the enactment of the survey.

Overall, this chapter has argued for an understanding of this thesis as a form of mediation between the Tongarevan knowledge fields as defined by this research, and the different fields in
which these knowledges are re-produced. While relying most heavily on the fieldnotes, photographs, transcribed interview recordings and memories that I took away from the field, this thesis is also a product of other 'post-field' encounters and dialogues. The information represented in this thesis must therefore be viewed as a product of collaboration between specific interlocutors, which influenced both the formulation of my research topic as well as how and where my field of research was eventually located.
Chapter 4. *Rahui* and Historical Resource Rights

This chapter serves to contextualise the contemporary situation on Tongareva which forms the central case-study used in this thesis. I chart a history of the Cook Islands, focusing in particular on events and changes associated with European contact. As a focus I explore differences in the ways which pre-contact social structures were either supported or dismantled post-missionisation, discussing in particular, events associated with the arrival of the London Missionary Society (LMS) on the main island of Rarotonga and the work of the LMS on Tongareva. The core purpose of charting these histories is to show the ways in which changes such as those brought about as a consequence of missionisation and the establishment of trade relations, continue to influence events occurring throughout the Cook Islands today especially with regard to links between practices of *rahui* and structures of authority. For the purposes of this general introduction to Cook Islands history I draw upon works which synthesise much of the information on post-contact history and the consequences of European influence for such relevant practices as land tenure and the evolution of the contemporary political system.

The discussion begins with a comparison between pre-European contact¹⁸ social structures of Rarotonga and Tongareva before exploring in detail changes associated with the arrival of LMS missionaries on these two islands. I then focus on the process of annexation and the establishment of European influenced political structures such as the Island Council. It is important to note that many of the issues touched on in this historical background are discussed in more depth in the ensuing chapters. This chapter, therefore, is designed to introduce the unfamiliar reader to key practices and significant historical events in the Cooks.

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¹⁸ I am not intending to suggest that prior to European contact there was no other 'contact' between islands within the Cooks group. Indeed, as I go on to demonstrate, Tongarevan oral history suggests that Tongareva was visited and eventually settled by people from other islands in the Cooks group. Nevertheless, for ease of expression, I use the terms pre-contact and post-contact in the remainder of this thesis but this is intended to refer specifically to pre and post European contact.
Islands and Tongareva in particular, so as to provide a context for the discussion to follow in the subsequent chapters.

The sources used in this chapter are a mixture of oral history as recounted in published and unpublished collections, and post-contact accounts of early visitors and contemporary Cook Island scholars. Information on the early social history of Tongareva prior to European contact is not well documented and exists mainly in the form of fragmented oral histories such as those collated by Nihi Vini in an unpublished document I had access to during my fieldwork. Post-contact history of the Cook Islands in general is well documented in the many accounts of early LMS missionaries such as John Williams and William Wyatt Gill. Historian Richard Gilson's work, The Cook Islands 1820-1950 (Gilson, 1980) was written between 1949 and 1952 but was not published until Ron Crocombe, another Cook Islands scholar, took up the task of preparing the manuscript for publication after Gilson's death. While focusing largely on events that occurred in Rarotonga, Gilson's work has been central to scoping three main periods of European influence; the Mission period, the British protectorate, and annexation. It is also useful for understanding how post-contact conditions in the Cooks were stimulated by events that were particular to Rarotonga. Crocombe's own work, a book based on his doctoral thesis Land Tenure in the Cook Islands (Crocombe, 1964), also serves to synthesise and interpret many of the early accounts. Importantly, he extends these Rarotongan-specific observations to historical events on other islands in the Cooks. In terms of accounts specific to Tongareva, I draw heavily upon the work of anthropologist Andrew T. T. Campbell, particularly his historical ethnography of the island, which gives a detailed account of the atoll post-European contact (Campbell, 1985). Other important texts pertaining to Tongareva include the work of E. H. Lamont who, as

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19 There is of course a wealth of archaeological and paleo-environmental research on the Cook Islands such as Kirch's work (1997) detailing landscape change and socio-political evolution in Mangaia.
20 This book is a collection of personal anecdotes, oral histories and memories of Tongareva as well as a record of historical data concerning chants and other spiritual matters of significance. Nihi Vini, a Tongarevan, currently resides in Australia.
mentioned in Chapter One, was an American ship-wrecked on Tongareva in 1853 and was later to write an account of this time (Lamont, 1867), as well as the work of Sir Peter Buck who wrote an ethnology of the island after a 17 day visit in the early nineteen twenties (Buck, 1932).

4.1. Settlement of the Cook Islands

Dates as to when the Cook Islands were first settled by Polynesians vary. Roscoe (1987) for example, suggested that the Cook Islands were first settled around 875 AD although Kirch (1997) suggests settlement in the Southern Cook Island of Mangaia at around 2400 BP. Estimates as to when Tongareva was first settled vary. Buck (1932) estimated the island was first occupied in the 14th Century AD by islanders from Rarotonga. Radiocarbon dating performed by Bellwood in 1978, however, suggests that initial settlement was around 1240 +/- 70 years (Bellwood, 1978 cited in Campbell, 1985 p24). Campbell asserts that future dating will likely suggest even earlier settlement although to my knowledge such dating on Tongareva specifically has not yet been undertaken. Oral traditions speak of two waves of settlement. In Legends of the Mauri (Pomare, 1934), there is a story which tells of Taruia, an Ariki (chief or king) from Aitutaki, who voyaged to ‘Mangarongaro’. Taruia came through the western passage of the lagoon, which to this day is known as Taruia passage, and assumed rule of the island. Taruia’s descendents, however, were eventually to leave Tongareva and return to Aitutaki to reclaim their family’s land and status as Ariki (Pomare, 1934). The second settlement of Tongareva came from Mahuta who is reputed to have travelled to Tongareva from nearby Rakahanga, with sailing instructions from Taruia (Campbell, 1985). Mahuta landed at Te Puka, one of the largest motu in the southern end of Tongareva, and brought “cocoa-nuts and other plants for the earth, fish for the sea, and birds for the air” (Lamont 1867 p236). Mahuta’s deeds are remembered today in many songs and chants (pese) for, unlike Taruia who arrived at Tongareva by chance and retained his links to Aitutaki, Mahuta’s settlement was a deliberate act, illustrated by his bringing food plants such as the coconut. Despite strong linguistic and cultural links to other islands in
the Cooks group, both Campbell and Bellwood agree that Tongareva was sufficiently isolated to have developed a unique culture, albeit with similarities to other island traditions, but with “affiliation to one particular stream of immigrants likely to remain unknown” (Campbell, 1985 p27).

4.1.1. European contact

Pukapuka was sighted by the Spaniard Alvaro de Mendaña in 1595 with a landing on Rakahanga in 1606 by another Spanish explorer, Pedro Quiros. Captain James Cook, after whom the islands are named, was the first recorded European to survey the Southern Cook Islands (then known as the Hervey Islands) between 1773 and 1777 (Crocombe and Crocombe, 2003). The main period of European influence did not begin until 1821 when Polynesian missionaries from the Society Islands, trained by the evangelical LMS, were posted to all islands in the Southern Cook islands with the exception of Manuae. The LMS was a non-denominational missionary society formed in England in 1795 which worked to establish Christian missions throughout the South Pacific. There were sporadic European visitations to Rarotonga throughout the 1800s, mainly traders and whalers. Prolonged contact with Europeans was not experienced on Rarotonga until 1827 when the European LMS missionaries settled permanently (Crocombe, 1964). First European contact with Tongareva was not made until 28 years after the land was initially sighted in 1788. The contact was instigated by a Russian vessel, The Rurick, which anchored off Tongareva and initiated a brief period of barter before leaving due to inclement weather (Roscoc, 1987). Eight further visits by European ships were made with the visitors recording a general impression of Tongareva as being a wild and inhospitable place, filled with ‘cannibals’ (Johnson, 1941 cited in Campbell, 1985 p9). The main contact of historical significance, however, occurred in January 1853 when the American Brig The Chatham, wrecked off the south west coast of Tongareva. E. H. Lamont was to spend a year on the island as a result of this wrecking, and was later to write an account of his time in the book Wild Life Among the Pacific
Islanders (1867). Although much coloured by the Victorian lens it was written through, this book is still treated as the most definitive account of pre-contact Polynesian life on Tongareva (Buck, 1932). Once Lamont was rescued from the island, he travelled to Rarotonga where he informed the LMS that, contrary to popular belief, the people of Tongareva were not inhospitable cannibals, with the result that a LMS missionary station was promptly established on Tongareva in 1854 (Campbell, 1985).

4.1.2. Pre-contact settlement patterns

Prior to European contact, Cook Islanders would generally have lived in scattered settlements, usually in proximity to their food lands, each falling within a particular kinship group. Crocombe and Crocombe (2003) note that traditional leadership was hierarchical and patriarchal in that most forms of leadership were held by men and first born children were superior to latter born. Rights to land, and also presumably to adjoining waters, were dependant on knowledge and recognition of genealogies (hakapapa) which were key to understanding each persons place in the social order. While the structure and naming of social groupings differed from island to island, the Rarotongan system had considerable influence over laws which eventually were to apply to the entire Cook Islands, in particular those governing access to and ownership over land. Significantly, there is a dearth of information as to how such proprietal rights extended to adjoining waters. This is not to suggest that water was not subject to such territorialisation although kin-based divisions of water territories may have differed compared to their application to land. Rather, it may suggest a land bias in early European accounts of ownership rights which were arguably reflected in ensuing legislation such as the 1915 Cook Islands Act (see below). The next section of this chapter will present a brief overview of the Rarotongan system, before discussing in greater detail the changes brought about to the Cook Islands by the arrival of Christianity in the form of the LMS.
4.1.3. Social structures in Rarotonga

As outlined in Chapter One, Rarotonga is a volcanic island banded by a narrow fringing reef. The centre of the island is mountainous, descending into low lands and swamplands before reaching the foreshore. Pre-contact, the island’s population was split into three *raka* or districts, stretching from the fringing reef into the island’s interior. These *raka* were in turn split into multiple *tapere* or sub-districts. Each *raka* was headed by an *Anki*, translated roughly as chief or king, who were descended from the founding ancestors in the direct male line (Crocombe, 1964). In general, *Anki* would normally be male and preferably the first born son of a first born son (Crocombe and Crocombe, 2003). In unusual situations females could take up this role though this did not become common until after missionisation on Rarotonga, discussed later in this chapter. On Tongareva, there is no record of a woman ever attaining the status of *Anki* (Campbell, 1985).

Each *tapere* had its own leader, also usually male, known as *matataiatop* and associated territorial rights acquired through either birth, adoption, or residence. Within each *tapere*, *marae* served as centralised meeting places where ceremonies were carried out. An individual’s ‘primary’ lineage would have been established at birth. An individual became a ‘contingent’ member of this lineage if they left as a consequence of marriage or adoption into another lineage. ‘Secondary membership’ could also be accorded the children of ‘contingent’ members. The consequence of this social order was that Rarotongans would have belonged to a number of descent groups. Rights to land which entailed access to resources, were associated with the different degrees of membership described above and was considered inextricably linked to both the spiritual and material prosperity of the descent group associated (Crocombe, 1964 p28-30). Indeed, Crocombe notes that “no rank title and no descent group was conceivable apart from the lands associated with it” (Crocombe, 1964 p20). This complex relationship between descent group and land ownership was not fully grasped by the early Europeans. Crocombe and Crocombe
(2003) note that this misunderstanding was formalised in Land Court law (discussed below) resulting in numerous conflicts over land which continue throughout the Cook Islands today.

Ariki, as heads of vaka, had entitlement to certain high status foods which Crocombe identifies as including turtles, sharks, other significant fish and pig heads (Crocombe, 1964 p116). Their status was linked to their level of mana, a key concept which both the missionaries and early colonialists were quick to realise the significance of and use to their advantage. Gilson (1980) defines mana as follows: “perhaps its simplest English equivalent is ‘power’ in the sense that a person, thing or deity which has mana can produce some recognised effect...In human beings, mana denoted a quality which commanded public recognition and implied the ability to exercise authority or superiority over others.” (Gilson, 1980 p11). He notes how mana could be reinforced by the use of supernatural sanctions including the establishment of ra’ui (Rarotongan spelling for rahui) over land. Significantly, in Gilson’s study, the use of ra’ui is framed as a technique by which Ariki could assert their authority or mana over their descent group; in particular, by using ra’ui as a technique to deprive individuals of rights to their land by declaring land tapu (sacred or prohibited). In the context of ra’ui, to declare something tapu was to impose a supernatural sanction and thus to invite “automatic supernatural punishment” (Gilson, 1980 p13) if such a tapu was broken. Tapu was an intrinsic part of performing and accruing mana. Ariki could establish a ra’ui on an area as a form of punishment, thus using their right to declare land tapu as a means of elevating or adding to their level of mana. The close association of ra’ui with the concepts of mana and tapu is significant and will be discussed in more detail in Chapter Six.

On Rarotonga, the arrival of the LMS missionaries did not challenge the pre-contact social order but it did change it in some respects. Notably, the arrival of the LMS actually served to strengthen the authority of Ariki, for the missionaries were dependant on Ariki to, firstly, allow them safe residence on the island, and, secondly, to convince the matastpo and other members of
the different *vaka* and *tapere* to adopt the word of God. In this respect, traditional structures of authority were both co-opted into the mission project and, through that process, had the basis of their authority extended and elaborated. The situation on Tongareva, however, was considerably different reflecting a different social order and biophysical context. The next section of this chapter will first describe the social structures on Tongareva pre-contact and the relationship between authority and *rahii* in the Tongarevan context.

### 4.1.4. Social structures on Tongareva

On Tongareva, in part due to the small landmass of the atoll environment, the social structure was much more finely divided compared to the *vaka* system on Rarotonga. According to Campbell’s research, the atoll was divided into approximately 13 huaanga spread out around the many *motu* each headed by an *Ariki*. Huaanga, as defined by Shibata (2003) were groups of *haanau*, or patrilineal extended families, which formed economic and residential units inhabiting all or part of particular *motu*. The members of the huaanga would have all attended the same *marae* and engaged in a shared body of ritual and economic activities (Shibata, 2003 p52, see also Campbell, 1985). Given the pre-European population estimates (see below), it is suggested by Campbell that each *huaanga* would have had about 132 people. Each *huaanga* would have been part of *hititangata* which as defined by Campbell, were contiguous *huaanga* united as a consequence of either kinship or warfare (Campbell, 1985). The three *hititangata* as shown in Plate 4-1, tended to form in accordance of geographical boundaries, although the *hititangata* of Omoka and Mangarongaro, despite occupying a contiguous section of land, were according to Lamont’s early account, fierce enemies (Lamont, 1867).
Plate 4-1: Aerial photo of Tongareva showing 3 *hititangata* divisions (delineated by coloured lines) of Tongareva as at 1853. The 13 *huaanga*, Atutahi, Akasusa, Mangarongaro, Motukohiti, Motunono, Motu-Unga, Omoka, Ruahara, Tautua, Temata, Te Puka, Tevete and Tokerau, were divided into these 3 *hititangata* (Source: google earth).

The *Ariki* of the different *huaanga* on Tongareva would have assumed certain leadership roles relevant to the organisation of warfare and the settlement of disputes (Campbell, 1985). Alongside *Ariki* were the *taura* or religious priests, who were associated with particular marae and were invested with spiritual power. *Taura*, literally translated, means string, stemming from the idea that the priests were the string or cord that tied the people to the gods (Shibata, 2003). Table 4-1 presents a comparison of the social orderings on Rarotonga and Tongareva and the relations to land.
Table 4-1: Social groupings, leadership structures and relation to land on the islands of Rarotonga and Tongareva

<table>
<thead>
<tr>
<th>Social Groupings</th>
<th>Structure of leadership</th>
<th>Relation to land</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rarotonga: Vaka</td>
<td>Ariki (paramount chief)</td>
<td>Divided into three vaka circa 1823 (Gilson 1980)</td>
</tr>
<tr>
<td>(district)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tongareva: Hititangata</td>
<td>No paramount leader of hititangata</td>
<td>Three hititangata identifiable circa 1853 (Lamont 1867)</td>
</tr>
<tr>
<td>Rarotonga: Tapere</td>
<td>Mataiapo (chief of descent group- and Rangatira (lesser chief) Sub-district running from interior of island to lagoon based around descent group (Crocombe 1964).</td>
<td></td>
</tr>
<tr>
<td>(sub-district)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tongareva: Huaanga</td>
<td>Ariki (NB: The status and role of Tongarevan Ariki was very different to the status of Ariki as paramount chief in Rarotonga and other high islands) Motu divided according to huaanga with clearly defined boundaries running from lagoon to ocean demarcated by the absence of coconut trees in between (Buck 1932).</td>
<td></td>
</tr>
</tbody>
</table>

4.2. The use of Rahui in Tongareva

Possibly due to the more finely divided social structure on Tongareva, Campbell (1985) states that the decision to implement rahui on Tongareva could not be decreed by the Ariki alone. Early accounts note that individual closures on the use of specific coconut trees were a daily occurrence, falling under the authority of the individual landowner (Lamont, 1867). A more generally applied rahui to control access to and use of collective resources, however, required the approval of the entire huaanga (Lamont, 1867; Buck, 1932; Campbell, 1985). For example, in
Lamont's early account of Tongareva life, he describes the implementation of a community masanga (synonym for rabui) on all coconut trees within the buaanga. This ban on using any part of the coconut trees in the area was implemented in the aftermath of an epidemic which Lamont and his shipwrecked crew likely started. The large number of resultant deaths each required a death feast, which in turn resulted in the depletion of coconut supplies. As Lamont's account states:

"To 'masanga' or put a ban on certain trees... is a matter of every-day occurrence with the economic landowner, that the supply of nuts may not fail, but to have the ban put on every tree throughout the island, and to be reduced to a very moderate allowance of food, was soon the case of great suffering... After a great deal of talking on the part of the natives with their usual excitement, the restrictions of the masanga were finally agreed to among themselves, and all the men placed around their necks a piece of platted sinnet as a badge of their acceptance of it." (Lamont, 1867 p273-274).

This masanga was devised in order to allow the coconuts on all the buaanga's food lands to recover from over harvesting. Yet, such was the dependency of the buanga on coconut, a decision not to exploit the resource located on their motu meant pressure to raid the coconut plantations on the other motu belonging to other buanga around the island. In this case, then, a decision to protect and regenerate local coconut supplies through a ban on use resulted in conflict with surrounding groups. Such a drastic step thus required the consent of the whole buanga as the consequences were far reaching (Buck, 1932). So important was longer-term preservation of resources that buanga contemplating rabui were willing to risk both conflict with neighbouring buanga and drastic reduction of food supplies. Crocombe (1964) notes that the Tongarevan situation was quite different to that on Rarotonga where Ariki as heads of vaka could impose ra'ui by themselves and often at whim, to increase their mana.

Unlike the Rarotongan social order, there were no paramount leaders of hititangata on Tongareva. However, according to accounts of both Campbell (1985) and Vini (undated), there were at least two instances when all of Tongareva was united under a single Ariki, either as a consequence of all three hititangata recognising genealogical allegiance (for example, as a
consequence of intermarriage, or as the consequence of inter-buaenga warfare and associated conquest. Campbell describes one such Ariki, Turua Ariki, remembered in oral traditions as the Ariki who decreed a resource-related law, which specified that no-one was to eat turtle but himself. The story recounts how if anybody broke this law - either by failing to present to Turua Ariki any turtle caught, or by eating turtle themselves - they would be speared to death (Campbell, 1985 p77-79). Turtle was considered 'sacred' food throughout the Cook Islands and had particular ritual importance in certain Tongarevan marae (Buck, 1932). For Turua Ariki to assert exclusive access to and use of this food source was tantamount to an assertion of dominance over the entire island.

Oral histories collected by Vini (Undated) relating to this island-wide decree describe how people throughout Tongareva rebelled against Turua's proclamation leading to his eventual overthrow. The grounds for their rebellion was that the rahui placed on turtle was for the personal benefit of Turua Ariki and not for the collective benefit of those he led. In another account, described in Vini's a collection of oral histories, Nihi Ariki, another past Ariki of Tongareva, restricted access to another significant, if not sacred, food source; the pasua. This story is told within a framework that is suggestive of the Malthusian principle of population and food supply:

"The pasua was one of the basic sea delicacies of the entire island. Towards the end of Nihi's reign the pasua seemed to be running scarce while the population was still on the increase. The fear of completely running out of this basic food increased. Nihi Ariki with consultation with Is [a pre-Christian deity], through the high priest, the appointed and anointed tuara and his court of elders agreed to rahui, put a taboo on the pasua. That was decreed and the entire island was made aware of it and to the satisfaction of all." (taken from 'The Story of Nihi Ariki and the Forbidding of the Eating of the Pasua' Vini, Undated p110-111).

21 Buck states that Turua Ariki was the 11th Ariki to reign on Tongareva since Mahuta's arrival. According to Buck's calculations there were 18 generations between the founder Mahuta and the year 1900 which would suggest that Turua ruled in the 18th century (Buck, 1932 see in particular p26 and p47).
This act of rahui, like the prohibition on turtle decreed by Turua Ariki, was also intended to elevate the power of the individual’s Ariki status. Unlike Turua Ariki, whose intentions were interpreted as self-interested and resulted in rebellion, Nihi Ariki’s decree was understood to be in the interests of all and according to accounts, his selfless wisdom and foresight resulted in him gaining the approval of all. In this retelling of this decision to degree a rahui, as with accounts in both Campbell’s and Buck’s work on the use of rahui of the past, to place a harvest ban on use on such a vital food source for the entire island was such a serious decision it required spiritual approval by way of the input of the taura (priest). The complex relationship between rahui and religious structures on Tongareva is something that is still evident today, although in a post-contact context, the structures of religion are expressed in and through the widespread adherence to the Cook Islands Christian Church (CICC), and specifically the framing of the lagoon and associated species as ‘God’s Gift’ (See Chapter Seven for a more extensive discussion of this).

In the next section of this chapter, I discuss key changes that were brought about as a consequence of European contact and specifically the work of the LMS missionaries. In the name of civilising and conversion, the missionaries brought numerous changes that moved swiftly throughout the Cook Islands in the late 1800s. The period of 1854-1888, in particular, was as a key period of LMS influence on Tongareva and resulted in far-reaching consequences for the status of Ariki on the island.

4.3. Changes in settlement and new forms of authority

The first LMS missionaries to work in the Cook Islands were two men from the Society Islands recruited by the missionary John Williams and landed in Aitutaki in 1821. In 1823 Williams brought more Society Islanders to work as missionaries on the islands of Atiu, Mauke and Mitiaro. The strategy of using Pacific Islanders as missionaries was a highly successful one and
conversions to Christianity were relatively swift once the missionaries were able to convince Ariki of the different islands of the material benefits that the missionaries promised would follow if they converted to the new faith (Gilson, 1980).

The rapid adoption of the new religion and the successful strategy of using Pacific Islanders as missionaries can be explained in part by the mana that was seen to be associated with missionaries whose material goods such as ships and guns were greatly admired by the Cook Islanders. Pacific Islander missionaries like Papeiha, a convert from Raitea in the Society Islands, could speak of his first-hand experience in the Society Islands after conversion. As Gilson states, “Papeiha made bold promises for the material future of Rarotonga if the people accepted Christianity and allied themselves with the agents of the new God… thereby helping to start the imitation of the English which was to characterise Rarotongan development throughout the century” (Gilson, 1980 p24).

Papeiha was eventually sent to Rarotonga where he volunteered to remain alone on the island under the protection of an Ariki known as Makea Ariki. Gilson (1980) emphasises the political situation on Rarotonga as key to the way in which Papeiha was able to convince the Rarotongan Ariki of the benefits of converting to Christianity. The first successful conversion, however, was not of Makea Ariki but an Ariki who was head of a relatively weak vaka which had been continually raided by the surrounding districts; this Ariki was apparently keen to adopt a religion which he saw as promising peace and prosperity for his people. The two other Rarotongan Ariki soon followed in converting to Christianity. Although quite quickly the heads of the three main vaka had accepted the new religion, this did not mean that all tapere within the vaka had similarly converted. Many of the lesser chiefs (mataiapo) and in particular the priests (rungatira) were not so enamoured with the new practices, and they viewed Christianity as a direct threat to the continuation of their authority. Papeiha, in order to avoid conflict with these resistant tapere suggested the centralisation of tapere who had adopted Christianity, in the vaka of Avarua. Makea
Ariki was the head of this district and had made blocks of unused land available for the planned settlement. While a large chapel was eventually built at this site, the pre-existing political tensions between the different tapere worked against this new centralised pattern of settlement. In addition, Makea Ariki reportedly had ambitions to be recognised as Ariki over the entire island on the basis of his generosity in providing land for the settlement and was demanding tribute (atinga22) from members of the other districts. As a result, this settlement only lasted four years from 1824-1827 (Crocombe, 1964; Gilson, 1980).

After the failure of the centralisation plan at Avarua in 1827, mission stations were established in each of the three vaka of Rarotonga. This did not amount to a return to the old pattern of settlement based around food lands; instead, the people were actively encouraged by their respective Ariki to create new settlements centred around churches which were built on unoccupied land in each district. Moreover, they were encouraged to adopt what the LMS deemed to be a more morally acceptable pattern of dwelling based around the nuclear family. The LMS missionaries apparently viewed the practice of extended families all living together as sinful, thus encouraged the building of new houses of "stucco beams and rafters" (Gilson 1980 p26).

The new moral codes promulgated by the missionaries eventually became formalised as a series of rules known as the 'blue laws' designed to abolish a range of practices viewed by the missionaries as amoral and included polygamy and violence, trespass, theft and unjust possession of land (Gilson, 1980; Mason, 2003). The blue laws were imposed by 'police forces' made up of Church members. Members of the force were apparently extremely enthusiastic in pursuing offenders because they saw enforcement of these laws as a means of increasing both their social and material standing, for example through the collection of fines. This, however, was not necessarily the intention of the LMS missionaries, who instead understood the

22 See Chapter Seven for contemporary interpretation of atinga or in Tongarevan Maori, āanga.
generation of these laws as vital to maintain their suppression of the islanders' 'pagan practices' (Crocombe, 1964).

The close association between the Church and the pre-existing political structure on Rarotonga was to lead to an increase in the overall power of Arika particularly as a consequence of the relative stability achieved on the island due to the outlawing of violence and the ensuing end to inter-tribal conflict. One of the most significant consequences of the resultant increased concentration of power in the hands of Arika was an increase in the ability of Aniki to control rights to land. This was further assisted by the dramatic population decline brought about by introduced European diseases. As in many other parts of the world, European contact in the Cook Islands resulted in widespread and dramatic population decline as a consequence of introduced disease such as dysentery, whooping cough, mumps, measles and influenza (Gilson, 1980). Crocombe (1064) estimates that on Rarotonga, the pre-contact population of approximately 6,000 to 7,000 people had had fallen to 2,800 by 1848 with only 1,856 people remaining in 1867. According to Gilson’s analysis, the dying out of heirs to a title meant that an Aniki could either “extinguish the title and take over the land, or appoint someone, even from outside the district or island, who may or may not have been related to his predecessor” (Gilson, 1980 p34).

On Rarotonga at least, the LMS were careful to foster the role of Aniki and associated traditional structures of authority because it enabled them to more easily spread the word of God. In turn, as the Arika saw the church as a means by which to emphasise their mana, they actively encouraged their people to attend services and abide by the newly established moral laws. This, however, was not the case on all the islands. On Aitutaki for example, the Reverend Henry Royle who was in residence for over 40 years took upon himself to radically transform the pre-contact authority structures resulting in a dramatic restriction of Aitutakian Aniki’s authority to their own immediate descent groups (Gilson, 1980). Crocombe, moreover, notes
that on islands such as Tongareva where there was a pre-existing diffusion of power, the missionaries were more likely to assume dominant roles without needing to work with the traditional leaders or authority structures. The next section of this Chapter discusses the very different series of events that befell Tongareva after the arrival of the LMS in 1854.

4.3.1. The arrival of the London Missionary Society on Tongareva

The first LMS missionaries arrived on Tongareva in 1854 shortly after the rescue of Lamont and learning that the Tongarevan people were not cannibals as previously had been feared. Following the early successes of using Pacific Islanders as missionaries, the LMS sent three ‘native teachers’ in the March of 1854 as “the fear of being devoured is gone and our young men are anxious to be the first bearers of the Gospel torch among them” (Buzacott, 1854 cited in Campbell, 1985 p10).

After the arrival of the LMS missionaries, the Tongarevan population which at that the time was spread throughout the numerous motu of the atoll, were gradually re-assembled into six main settlements. Each of these six groups were allocated a pastor and chapels were constructed on the motu of Te Puka, Mangarongaro, Omoka, Te Tautua, Motu Unga and Motukohiti. Very rapidly these chapel-centred settlements replaced the traditional maraes and food lands as the central socio-spatial organising units (Campbell, 1985). Moreover, as on Rarotonga, with European contact came a rapid decrease in the Tongarevan population. This population decline had begun after Lamont’s shipwrecking on the island but it is likely that the new patterns of settlement and the practice of worshipping the new Christian God under one roof would have further exacerbated the spread of illness particularly those associated with droplet-born infection. As a consequence, the population of Tongareva declined dramatically from a pre-European contact estimate of 2000 to a mere 700 individuals (Roscoe, 1987). While the early mission settlements attempted to correspond with the different buaanga groupings, as a
consequence of population decline brought about by introduced disease, the remaining huaanga were deemed to be too small to constitute viable congregations, thus settlements were organised according to the hititangata that they fell under (Campbell, 1985).

In contrast to the mutually beneficial relationship between Ariki and the Church on Rarotonga, the introduction of Christianity on Tongareva gradually undermined the status of the Ariki as moral authority and leadership became invested in the Church (Mason, 2003). On Tongareva, however, the status of Ariki was more similar to that of mataiapo on Rarotonga. Thus as on Rarotonga, the former role of Ariki in terms of mediating relations between different huaanga were made obsolete as the Church ended warfare and the need to defend food lands was no longer necessary with changes in settlement pattern.

4.3.2. The Peruvian slave trade on Tongareva

One of the most significant post-contact transformations to the social order on Tongareva resulted from the Peruvian slave trade. Tongareva was the first island in the South Pacific to be visited by the Peruvian slave traders, and according to Maude’s (1981) detailed account of this period of trade, suffered a massive 66.7 percent population decrease as a result. The practice of using Pacific Islanders as indentured labourers on plantations had been going on for sometime. The slave trade was different in that islanders were recruited by either deceitful means or by force and seldom repatriated. The practice of slaving was colloquially known as ‘blackbirding’. Tate and Fidele suggest that the term arose due to the practice of the slavers arriving at night dressed in black to kidnap people unawares (Tate and Fidele, 1965). It is far more likely, however that the term was a contraction of ‘blackbird catching’ as Australian Aborigines were known by the derogatory term of ‘blackbirds’ (Wilkes, 1978). The first Peruvian slave trader to arrive on Tongareva was the ship Adealante in 1862. The trader had stopped in Tongareva to investigate the commercial potential of the lagoon, already famed by this time for its pearl shell.
Just prior to the arrival of the Adelante, 130 Tongarevans had been voluntarily recruited to work in Tahiti on sugarcane plantations (and were eventually repatriated). The captain of the Adelante discovered that the remaining Tongarevans were more than happy to be taken on his ship. A famine (different to the one of which Lamont speaks of) was affecting the island as a consequence of drought and coconut blight and some of the LMS teachers on the island were reputed to have encouraged the islanders to go so they might earn money to build proper churches for the new settlements. According to Maude's meticulous research, approximately 253 recruits were willingly taken from Tongareva to Peru on the Adelante, with the promise they would be paid $4 a month, and eventually repatriated to their home island (see Table 4-2). Three more ships were to visit Tongareva in 1862 so that when the LMS missionary Wyatt Gill visited Tongareva in 1863 he found only 40 inhabitants living in Omoka and 48 remaining in the other villages (Maude, 1981 p10).

No Tongarevans taken by the Peruvian slave traders were ever repatriated. Indeed, as Maude details, only 10 percent of the 3,634 Pacific Islanders taken as slaves to Peru were ever repatriated, and only 1.28 percent of this 10 percent were landed alive. In the case of Tongareva, while no Tongarevans were ever returned home, 111 men from the Gilbert (Kiribati) Islands (a group of islands in Micronesia) were ‘dumped’ on Omoka in 1864, much to the consternation of the remaining 88 Tongarevans. Most of these Kiribati people were subsequently taken to other islands, notably Tahiti, but as Crocombe speculates, many would have stayed on Tongareva and intermarried, as evidenced by the “languages and physical features of the Penrhyn people showing distinct Micronesian traits” (Crocombe, 1961 cited in Maude, 1981 p168).

The ease with which the Peruvian slavers were able to recruit Tongarevans had much to do with the power and influence assumed by the LMS and other Europeans such as Lamont who had previously lived on the island. As Maude discusses, with the advent of Christianity on Tongareva, the visiting European missionaries assumed power in local affairs which
"transcended that of the *Ariki* themselves" (Maude, 1981 p51). After the massive population decline engendered by the slave trade, the patrilineal *Ariki* structure would have been highly fragmented. While the *Ariki* line would have continued to a limited extent, the remaining Tongarevans apparently couldn't decide which remaining *Ariki* should have prominence, thus leading to the views expressed by many of the early missionaries that “there is no chief whatsoever... so that the [Christian] teacher is virtually king” (Gill, 1887 cited in Campbell, 1985 p80).

Table 4-2: Names and dates of slave ships to visit Tongareva and numbers of men and women taken (Source: Maude 1981)

<table>
<thead>
<tr>
<th>Ship name</th>
<th>Date departed Callao</th>
<th>Total men and women taken</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Adelante</em></td>
<td>June 1862</td>
<td>254</td>
</tr>
<tr>
<td><em>Jorge Zahara</em></td>
<td>September 1862</td>
<td>2</td>
</tr>
<tr>
<td><em>Adelante</em></td>
<td>October 1862</td>
<td>173</td>
</tr>
<tr>
<td><em>Genera</em></td>
<td>October 1862</td>
<td>43</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>472</strong></td>
</tr>
</tbody>
</table>

In 1870, however, the roles of *Ariki* and Church leader were tenuously combined on Tongareva. One of the original three Pacific Island LMS missionaries who had been sent to Tongareva from Rarotonga, a man called Ngatikaro, had married the eldest daughter of an *Ariki* from Omoka. After the death of his wife's father, Ngatikaro reputedly declared himself *Ariki* of the entire island arguing his right to the role as a consequence of his status as a pastor of the Church and the inherited status from his marriage. Echoing the previous acts of *Taura Ariki*, Ngatikaro declared a *rahui* on turtles, so that only he might eat them, and thus enhance his *mana* (Vivian, 1871 cited in Campbell, 1985 p79). Anyone who chose to disobey Ngatikaro by eating turtle were not only refusing to recognise his status as *Ariki*, but were also viewed as going against the Church.
Omoka was by this time the most populous of the *mota* around Tongareva as Ngatikaro had dissuaded many of the Omokan people from joining the Peruvian slave ships. In 1864, however, the group of Tongarevans who had left to travel to Tahiti to work on plantations in 1862 (and had thus escaped the slavers), returned to Tongareva. These Tongarevans were part of the Te Tautua/Te Puka *hititangata*, but settled into Omoka to take advantage of the newly established trade relations that were concentrated in this village. When Ngatikaro declared himself paramount *Ariki* over Tongareva in 1870, it was these people from Te Tautua who refused to acknowledge an *Ariki* from Omoka as paramount over the entire island, and thus disobeyed Ngatikaro’s ruling on turtle. As a consequence of this act they were ex-communicated by Ngatikaro from the Church and “consigned as reprobates” (Chalmers, 1879 cited in Campbell, 1985 p79). Along with the remaining members of the Te Tautua/Te Puka *hititangata*, they eventually moved back across the lagoon to Te Tautua, forming the basis of the two main settlements today. Campbell argues that the dispute of Ngatikaro and the turtle was “merely another manifestation of the traditional enmity between two *hititangata*” (Campbell, 1985 p80) but this also suggests the work of the Church in terms of shaping and influencing structures of authority on the island.

The key point regarding these early acts of missionisation in the Cook Islands is that the ways in which the LMS either chose to work with, or work against the pre-existing structures of authority, had lasting effects on the future systems of political development that were to influence events throughout the Cook Islands. On Rarotonga in particular, the fact that the LMS chose to work with *Ariki* instead of undermining their status, had particular influence over the establishment of laws concerning such issues as land tenure. This will be described in more detail in the next section of this chapter. In addition, the series of events which occurred on Tongareva and were eventually to lead to the disintegration of the patrilineal *Ariki* structure, were instrumental in shaping the contemporary Island Council structure, as well as explaining
many of the subtle kin-related affiliations that continue to affect issues to do with land and access to resources today.

4.4. Trade and annexation

Crocombe (1964) notes that prior to European contact there were no trade relations within the island or trade between islands in the Cooks group. In a Tongarevan context, then, it is likely that trade relations only began after 1853 when two Europeans, Thomas Payne and Joseph Bird (who had been shipwrecked with Lamont on The Chatham), chose to remain on Tongareva and establish a trade in pearl shell. Stendale, a trader working in the South Pacific at the time, reported that both Payne and Bird became wealthy very quickly “…for the reason that they conducted the entire traffic of the island; and from their influence over the Natives, they kept hundreds of them continually employed diving for pearl oysters, whom they remunerated with a few knives or nails, blue beads, Dutch looking-glasses, or suchlike geegaws as barbarians most delight in” (Stendale, 1891 p210 cited in Campbell, 1985 p10). Divers employed by Payne and Bird were remunerated with ‘geegaws’ but also with cloth and significantly food. As the island was experiencing a famine due to a coconut blight, this latter form of payment was especially important (Campbell, 1985). Campbell asserts that this was the beginning of the Tongarevan dependence on imported goods. It certainly further served to emphasise the authority of both visiting traders and missionaries who became seen “as an agency of material as well as spiritual salvation” (Campbell, 1985 p10).

Trade relations on Rarotonga were established in the 1840s when the Rarotongans began producing food crops such as kumara (sweet potato) and coffee. These were exchanged with foreign vessels for goods such as calico. Unlike on Tongareva, the trade relations on Rarotonga were controlled by each district’s respective Ariki who operated a market house. The trade relations and in particular, the new wealth that sprung up around these markets was to have
considerable impact on the political future of the island and the Cook Islands more widely. After the French assumed control of Tahiti in 1843, the Ariki in Rarotonga became fearful of a French takeover of their island, particularly as they perceived French intervention as a threat to their continued authority (Crocombe, 1964). As a consequence, the Ariki began to consider the need for formalised British protection. The first petition requesting British protection was sent by Rarotongan Ariki in 1843, but it wasn’t until 1865 when Governor Grey in New Zealand was petitioned directly by Makea Ariki (the female successor to the Makea Ariki discussed earlier in this chapter) that the possibility of establishing a British protectorate over Rarotonga and the surrounding islands was taken seriously (Gilson, 1980).

By the 1860s the trade relations that surrounded Rarotonga had grown considerably, and placed Rarotonga on a par with Tahiti in terms of supplying goods for the New Zealand market. Alongside this growth in the Rarotongan economy, Gilson (1980) describes a societal shift where control of resources for the trade market became of prime concern. Whereas in the ‘blue laws’ period, adhering to the moral codes and attending Church were the primary means by which individuals could enhance their social standing, the newly established commercial relations meant that the production and exchange of crops could be used to generate personal wealth. This was particularly beneficial for Ariki because as heads of vaka they could regularly levy tribute from their tapere in the form of exportable produce. Moreover Ariki could use their power to declare ra’ui over either crops or land thus dramatically increasing their control over trade situations. Crocombe (1964), for example, speaks of how Ariki would often declare ra’ui on particular crops until they had obtained the best possible price from the trader. While in principle, this practice was intended to guarantee fair return for goods, it also gave Ariki the ability to manipulate trade situations to their personal advantage. The ease with which Ariki adapted pre-contact practices such as ra’ui and associated sanctions are extremely significant for my analysis on the ways in which these techniques are associated with authority structures in contemporary times. I will expand upon this theme in greater depth in Chapter Six.
It wasn’t until Makea Ariki again petitioned the British Foreign Office in 1888 still fearing French intervention, that a British Protectorate was finally declared over Rarotonga and the surrounding islands. The islands of the northern Cooks, however, weren’t included in this annexation until 1889 as the archipelago was split into the Hervey islands of the South, and the scattered islands of the North (Smith, 1889). The conditions of the annexation were that the Ariki would retain their rule of the islands and that all other foreign nationals, including other Europeans, would have to obey their local laws and customs. Frederick Moss was eventually appointed British Resident in Rarotonga in 1890. He initiated a re-organisation of the Rarotongan government creating a General Council of Ariki and mataiapo from the different districts. Gilson suggested that the Ariki were extremely keen to make these changes because they saw the emulation of the style of British Administration as directly associated with the “vast material resources of Queen Victoria” (Gilson, 1980 p65). In 1891 Moss also oversaw the creation of the Au, informally constituted councils of elders according to district (nuka) on Rarotonga (Crocombe, 1964 p99). In 1893, the government was re-organised again with the establishment of a two-house parliamentary system, consisting of the Upper House of Ariki and the Lower House of the People.

Tongareva was eventually included in this annexation in 1889 along with Fanning and Christmas Island (Smith, 1889). While the commercial prospect of Tongareva was reliant upon the supply of pearl shell and copra (dried coconut), all three of the above islands were viewed to have strategic importance, particularly as they were being considered as possible stations for the proposed trans-Pacific cable (Gilson, 1980). The agreement which governed this process was apparently signed by the four “head chiefs of Penrhyn Island” (Campbell 1985 p13) who Campbell identifies as men named Kopu, Tautaitini, Tuati and Bopu. It is likely that these men were the highest ranking men left on the island after the Peruvian slave-trade took away the

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23 The Au Empowering Act was established in 1899 to formalise the powers accorded the Au.
24 Fanning island was eventually used for this role.
majority of the islanders and in so doing, disrupted the patrilineal *Anki* structure.

At the same time, Bopu was appointed into a position that colonial records name as the *bakavaa* of Te Tautua, while Tautaitini was acknowledged *bakavaa* of Omoka. The term and role of *bakavaa* as adopted from the Rarotongan context where in Rarotongan Maori, it means to judge, separate, or to cause a division (Shibata, 2003 p34). As far as can be determined it had not existed before in Tongarevan society. The *bakavaa* from Omoka and Te Tautua were jointly placed in charge of the *Han*; “an informally constituted council of elders which was recognised as the local government” (Campbell, 1985 p13) which was the Tongarevan equivalent of the *Au* in Rarotonga. The *Han* were allowed to function relatively independently of Rarotonga which at the time was considered the main administrative location for the Cooks, drawing up legislation for the island where needed.

The eventual centralisation of the remaining Tongarevan population into the two contemporary villages of Omoka and Te Tautua, combined with the establishment of a centralised system of control and the introduction of new economic trade relations had cemented prior changes to Tongarevan social relations that had started with Lamont’s arrival. Tongareva was, by the late eighteen hundreds, involved in trading pearl shell and the export of copra, with Omoka functioning as the main port. The newly created *Han* were designated responsibility for allowing access to the lagoon for the collection of the pearl oysters and also the management of the different *motu* for copra harvest. Although membership of the *Han* would have likely reflected pre-existing *huaanga* and *hititangata* power structures, Campbell notes that the *Han* often had difficulties enforcing their decisions as “their positions had, in effect, been created by the British administration” (Campbell, 1985 p14). It is likely, however, that some of the difficulties associated with the decisions enforced by the *Han* were associated with the sudden concentration of power in an island which until the socio-spatial re-ordering engendered by
missionisation and the slave-trade, had operated in a decentralised manner.25 The Hau were apparently also in a tenuous position with respect to the LMS pastors on the island, who felt they undermined their moral authority.

These local changes to the structures of authority and the imposition of European influenced governance systems such as the Hau reflected wider transformations occurring in Rarotonga under colonial rule. On Rarotonga, one of the most significant changes enacted by Moss in his role as Resident had been a review of the land tenure system. In his view, the dominance of Ariki over both the allocation and productivity of the land was simultaneously undemocratic and an obstacle to the establishment of effective (read European) plantations. He sought to institute a formalised land titles system across the Cook Islands which would avoid the 'vagaries' of Ariki rule which was seen as a feudalised system that effectively left many people landless (Gilson, 1980). It was in part Moss' attempt to challenge the authority of the Ariki over land tenure that lead to his removal as British Resident and his replacement by Major W. E. Gudgeon in 1898. Gudgeon amongst other things, repealed most of the 'blue laws' and amended Moss's reform of the land tenure system through the establishment of a Land Board in 1899. Gudgeon argued that such changes were vital for the Rarotongan people to more fully adopt a political system which would be viewed favourably by New Zealand. His moves can be seen as an attempt to introduce Cook Island society to a seemingly more 'democratic' system, less exposed to the vagaries of chiefly authority, and more favourable to the New Zealand government who were considering 'taking over the Cook Islands' and establishing a New Zealand-based administration (Gilson, 1980). The ensuing Land Act of 1899 served to secure both uniformity of leases and also security of land tenure to foreign lessees (Crocombe, 1964 p194). It was also the first act relating to land which had applicability on islands other than Rarotonga, although the ability to enforce this was limited. In the same year, the An Empowering Act was passed

25 This is a significant observation in terms of how the Island Council operates in contemporary Tongareva and will be discussed in further detail in Chapter Six.
which strengthened the function of this council on Rarotonga, presumably also providing guidance to the functioning of the equivalent body, the Han, on Tongareva.

### 4.5. The New Zealand administration

In 1900, moves for formal annexation of the Cook Islands by New Zealand were made. Apparently the Ariki were not entirely in favour of this move initially preferring to cede their islands to Britain. It wasn’t until the arrival of the Right Honourable Seddon, the Prime Minister of New Zealand, in 1900 that the Ariki of Rarotonga agreed to the idea of annexation on the condition that they would retain self-government and, most importantly, receive the material and ideological benefits that they understood to be associated with a British-influenced system of Government (Crocombe, 1964). New Zealand’s interests in the Cook Islands were arguably based around future trade prospects. This in turn was behind the emphasis placed on the need for land reform because it was believed that changing the system of land tenure would result in greater economic growth. According to Crocombe, the need for land reform was premised on the assumption that there were large tracts of fertile land left unused, that the people of the Cook Islands were believed to be a “dying race” (Crocombe, 1964 p102) and finally, that the unused land would be made available to European settlers.

After New Zealand annexation of the Cooks in 1901, a new system of government was set out in the *Cook and Other Islands Government Act* (1901). This allowed existing laws and customs to remain but gave the newly appointed Governor Gudgeon, “full powers to introduce whatever measures he deemed expedient” (Crocombe, 1964 p199). Gudgeon, like his predecessor Moss, resented the power of the Ariki over commerce and associated income, and justified the expropriation of land as prerequisites for the civilisation and modernisation of Cook Island society (Mason, 2003). One of the first acts of the new administrative body was to establish the Cook and Other Islands Land Titles Court (1902), by way of the *Land Court Act*. The Land
Court was applied throughout the islands and disputes with regard to the ownership of land on Tongareva came under the jurisdiction of this court, although as Campbell (1985) notes, there was considerable backlog in these processes and the first hearing wasn’t held on Tongareva until 1926, at the time of Buck’s visit.26

Gudgeon now arguably held more power than the Ariki of Rarotonga as he was simultaneously the administrator, chief judge of a court of his design, head of the local legislature, and representative of New Zealand. The Ariki at the time, however, were apparently not concerned as to his new powers instead viewing him as “their trusted counsellor… acting in their name” (Gilson, 1980 p114). The main significance of this period of political transformation was the start of a gradual erosion of the powers of Ariki particularly with regard to their formal role in government. Whereas prior to New Zealand annexation, the Ariki were invested with control of the district courts, paramount control over land and also held positions of authority in the Church, these powers changed dramatically with the new legislation. Furthermore, in 1908, Gudgeon was to make the following statement with respect to the power of Ariki: “[o]n the death of the present Ariki, no successors should be allowed until the candidates understand and sign a paper to the effect that they understand that the old powers of the Ariki have gone forever, except where conserved and recognised by law” (Gudgeon, 1908 cited in Gilson, 1980 p120).

26 Disputes over ownership of land remain ongoing on Tongareva. Indeed, at the time of my fieldwork there was an occupation in force of one of the TMRC houses as a protest against the Penrhyn (Naharakura Lease) Facilitation Act (1992) (see www.aolex.fao.org/docs/texts/col65457.doc) which pertains to the land used by the TMRC and power-station on the island. The owners of the land Naharakura were determined to be the descendants of Revahua, but these descendants could not be identified thus this act was drawn up by the government so that they could use the land until such a point that the ancestry could be proved and a lease arranged. The people enacting the occupation declared themselves to be the descendants but apparently could not substantiate this.
One expression of these changes to the system of land tenure was the administrators' views concerning ra'ui in Rarotonga. In Gudgeon's opinion, so long as the Ariki on Rarotonga had the power to ra'ui the use of land or control the harvest of crops through this mechanism, individual rights to land would not be effective. Thus in 1904 the power to institute ra'ui on crops was invested in the newly established Island Councils (Gilson 1980). Other significant pieces of national Cook Islands legislation enacted around the turn of the century were the *Cook and Other Islands Government Amendment Act* (1904) and the 1906 Proclamation. The former act made provision for all lagoons within the Cook Islands that contained pearl shell, to be declared Crown land and in the Proclamation, both the Manihiki and Tongareva lagoons were designated as Crown lands to be set aside as public pearl shell fisheries (Crocombe, 1964). Crocombe reports that regulations governing the use of the lagoons were to be promulgated by the British Resident.

These changes heralded the *Cook Islands Act* (1915) which, while recognising customary ownership of land, determined that all land lying below high-water mark was to be declared Crown land. Under this act, customary ownership of the sea and lagoon spaces were essentially annulled as it was declared that "Native customary title shall not extend or be deemed to have extended to any land below the level of the high-water mark, and all such land... is hereby declared to be Crown land" (Part XII section 419). While land above the high-water mark was still under the control of customary ownership, this decision weakened the ability of landowners to utilise traditional management regimes in the marine space. This act also served to remove the possibility of establishing ra'ui on these areas, at least in the Rarotongan context. In 1908 the *Te Mana Ra'ui* [The power of ra'ui] Act was passed which, asserted that "the ancient right of ra'ui no longer existed in respect of any land which has been investigated by the Native Land Court" (Crocombe, 1964 p325).
In an interview with one of the current Island Council members of Tongareva, Manata Akatapuria, he specifically raised the issue of this legislative change. According to Manata, although legally the Crown established rights to the lagoon under the 1915 Act, this was by no means an uncontested decision:

Manata: ...[T]here are no boundaries in the lagoon now. The thing is, when Christianity came, and then the [New Zealand] government came, they claimed all the waters. So the government's claim, they take it from the mean high water mark. From there to the beach, is all crown property.

Charlie: So the government claimed from the high-water mark into the lagoon?

M: Yes, but this is disputed; the people will not allow it. Our boundaries go right up to the sea, to the watermark. As long as there is a piece of dry land, that's our property, not the governments.

Manata's comments suggest that the power of community rights over the lagoon were seriously undermined by the changes brought about by the 1915 Act, but hints at the resistance to this: 'as long as there is a piece of dry land, that's our property, not the governments'. I discuss this issue further in Chapter Six.

4.6. Cook Islands independence

As a consequence of the far-reaching laws introduced by Gudgeon, Cook Islanders were largely excluded from the governance of their country until 1964 when moves towards independence began (Mason, 2003). Mason explains the shift as in part reflecting a worldwide change in political climate, particularly that associated with the establishment of the United Nations Declaration on the Granting of Independence to Colonial Countries and Peoples and the according emphasis placed on granting independence and autonomy to colonial territories (Gilson, 1980). On the 4th of August 1965, the Cook Islands established their own system of government in free association with New Zealand, taking over from the colonial administration. This meant that while they enjoyed full internal government, Cook Islanders retained citizenship of both countries and accordingly could travel freely between the two (Goodwin, 2003). Indeed, the opening of the international airport at Rarotonga in January of 1974 saw a sudden drop in
population as many Cook Islanders took the opportunity to migrate to New Zealand (Tangimetua, 2003).

The new system of governance was based around a unicameral (one house) parliament with 24 elected members and a parliamentary term of four years (Siikala, 2001). The first premier of this new self-governing period was Albert Henry who had been involved with the Cook Islands Progressive Society (CIPA) since its formation in 1943. Henry had returned to the Cook Islands in 1964 after having lived in New Zealand for 22 years where he had been heavily involved with the New Zealand Labour Party (Mason, 2003). In 1966 the newly established Cook Islands Parliament drew up legislation to create a House of Ariki under the House of Ariki Act (1966). While the House of Ariki was the first formally established 'council of chiefs' within the Cook Islands, the political climate was apparently not sympathetic to a return to the old ways of Ariki dominance. The House of Ariki was thus accorded no legislating power, and was only able to act by advising the Government on issues such as land usage, traditional customs and practices (source: http://www.mfat.govt.nz/Countries/Pacific/Cook-Islands.php). The Act was extended in 1972 and a body called the Koutu Nui was introduced which provided a forum for the mataiapo (heads of tapere). Mason (2003) attributes this move to political dissent from the Ariki towards Albert Henry's government. While Henry was supportive of tradition and custom, he was apparently against the House of Ariki holding an equivalent function to the British House of Lords. The mataiapo, echoing problems that arguably started back in the early mission days, supported Henry and his party. The establishment of the new House further eroded the power accorded Ariki as it simultaneously increased the collective power of the mataiapo. The Koutu Nui brought together the chiefs of the tapere who, while in the past had sometimes met on a district-wide basis, would seldom meet regionally and never convene for the entire Cook Islands. In 2005, the gender division in the House of Ariki was nine men and seven women. There has never been an Ariki from Tongareva in the House of Ariki, despite legislative allowance for one. Campbell (1985) attributes this to the inability of the people of Tongareva to
decide who has seniority and thus should fulfil the role as Ariki for the entire island (Campbell 1985).

4.7. The establishment of the Tongarevan Island Council

The Hau on Tongareva was replaced by the Island Council in 1901, which comprised of six elected members; three members taken from the settlements on Omoka and Te Tautua respectively, two Ariki, as well as the Colonial Resident Agent who functioned as president (Campbell, 1985). This was a key shift away from the traditional Ariki structure of authority which, as already discussed, was determined along patrilineal lines (Mason, 2003). Despite this move towards a seemingly more democratic system of governance (in that it was no longer adjudicated by birth), only men were considered for election in the Island Councillor role. From this time on, the Island Council was empowered to make local ordinances. Four such ordinances were established between the years of 1901 and 1965 and ranged widely in their concerns including dealing with issues of wandering pigs and the use of obscene language (Campbell, 1985). Significantly for my study, the Island Council used its ordinance powers to also impose a rahui over the gathering of copra and pearl shell.

Whereas for pre-European contact Tongarevans, the use of rahui was designed to prevent starvation, these later rahui were generated under an entirely different set of pressures. After European colonisation, pearl shell and copra were incorporated into the rapidly expanding trade networks. Post-contact, rahui decreed by the Island Council was used in a context associated with the protection of resources at the centre of this trade and thereby used to manage the longer-term sustainability of these new sources of wealth and income. This is discussed in greater detail in Chapter Six.
The make-up of contemporary Island Councils today is set out in the *Cook Islands Outer Island Government Act* of 1987. The Act, designed to “consolidate and amend the law relating to Local Government in the Outer Islands of the Cook Islands” (Section One), details the composition and functions of Island Councils throughout the Cook Islands. Of the various functions, notable is their role in assisting in the “co-ordination of any activity relevant to the economic and social development of the Island” (section 7 part b). The composition of the Island Councils consists of the local Ariki (where applicable), the local Member of Parliament, the Island’s Mayor, and other locally elected people. On Tongareva, the Island Council consists of the above, but as the local MP is usually based in Rarotonga, and there is no one Ariki for the island, the council when it meets comprises of two men from Te Tautua village, three from Omoka, the Mayor, the island’s Government Representative (GR) who doesn’t have a vote, and the Island Secretary. Plate 4-2 shows some of the Island Council members in office at the time of my fieldwork.

Plate 4-2: Tongareva’s Island Council members from left to right, Rio Taika (Te Tautua), Papa Takake (Government Representative), Tahaki Paulo (the Mayor), Fana Ivirangi (Omoka) and Manata Akatapuria (Omoka) (Source: C. Chambers).
4.8. Conclusion

This chapter has provided a synopsis of key events in the recent history of the Cook Islands which, as it shall be demonstrated in the following chapters, continue to reverberate in subtle ways today. The main purpose of the preceding discussion was to show the ways in which European colonisation of the Cook Islands has had lasting effects on such practices as rahui, land and marine tenure and the evolution of the contemporary political system. I am wary, however, of suggesting that there can be so clear a line drawn between 'pre-contact' and 'post-contact' society. While the arrival of Europeans in the Cook Islands certainly brought disastrous consequences for the islanders unable to deal with new diseases, and in the case of Tongareva, resulted in widespread depopulation as a consequence of slavery, it is important to note the ways in which the islanders themselves were very determined to take advantage of the new sources of wealth and power that became available (for a further discussion on this point see Cowling, 2006). It is not my intent, therefore, to suggest that the islanders were simply passive victims of the various changes brought about as a consequence of missionisation and European settlement in the Cooks, rather, and particularly for the Ariki, the new opportunities to increase social standing such as those offered through the Church were voraciously seized upon. A summary of key post-contact events as they relate to Tongareva is presented in Table 4.3.

It is important to note moreover, that the impacts of European contact varied considerably from island to island. Indeed, I have suggested that in part due to the pre-existing social structure and the biophysical character of the Tongarevan atoll environment, such incidents as the arrival of the LMS and the subsequent Peruvian slave-traders engendered radical changes to the social fabric of the island that were quite distinct to changes experienced on any of the other islands in the Cooks group. As a consequence of these changes, Tongareva exists today as an island which has a very distinctive identity within the Cook Islands as a whole. Admittedly,
Rarotonga served as a key context for the development of post-contact legislation, particularly those pertaining to land tenure and management.

Nevertheless, while events on Rarotonga have certainly had a strong influence on developments throughout the Cook Islands, my discussion in this chapter has served to highlight some of the key differences in terms of how centralised laws were applied according to island context. The purpose of this historical discussion, then, has been to highlight similarities between Tongareva and Rarotonga in particular, but most importantly, to emphasise the unique character of Tongareva both in terms of pre-contact socio-spatial organisation and how the island functions in the Outer Island context today. In the following chapter, I return to contemporary Tongareva as experienced at the time of my fieldwork. I explore in detail concerns expressed by the residents of Tongareva pertaining to patterns in size distribution and abundance of *pasua*. I explore this very particular manifestation of an environmental management issue through both quantitative and qualitative means, and explore how combining the two perspectives frames the problem in productive ways.
Table 4-3: Summary of key events, dates and approximate population on Tongareva as discussed in this chapter.

<table>
<thead>
<tr>
<th>Significant events in Tongareva</th>
<th>Date</th>
<th>Approximate population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tongareva estimated to have been first settled by Taruia</td>
<td>14th Century AD</td>
<td>Unknown</td>
</tr>
<tr>
<td>Second wave of settlement by Mahuta</td>
<td>14th Century AD</td>
<td>Unknown</td>
</tr>
<tr>
<td>Tongareva sighted by ship <em>Lady Penrhyn</em></td>
<td>1788</td>
<td>2000 +/- 500 (Roscoe, 1987)</td>
</tr>
<tr>
<td>First European contact between Tongarevans and Russian ship <em>Rurick</em></td>
<td>1815</td>
<td>2000 +/- 500 (Roscoe, 1987)</td>
</tr>
<tr>
<td>Chatham wrecked on Tongareva. Lamont to write account of his time <em>Wild life Among the Pacific Islanders</em> published 1867</td>
<td>1853</td>
<td>2000 (Lamont 1867)</td>
</tr>
<tr>
<td>LMS send missionaries to Tongareva</td>
<td>1854</td>
<td>700</td>
</tr>
<tr>
<td>Tongareva depopulated by Peruvian slave traders</td>
<td>1862</td>
<td>700</td>
</tr>
<tr>
<td>William Wyatt Gill (LMS) visits Tongareva to find the island depopulated</td>
<td>1863</td>
<td>88</td>
</tr>
<tr>
<td>111 Gilbert islanders arrive in Omoka and Tongarevan plantation workers return from Tahiti. Population centralised in two settlements of Omoka and Te Tautua</td>
<td>1864</td>
<td>88 original Tongarevans 111 Gilbert Islanders and 130 returning Tongarevans</td>
</tr>
<tr>
<td>British Protectorate declared over Rarotonga and surrounding islands</td>
<td>1888</td>
<td>-</td>
</tr>
<tr>
<td>Tongareva included in Annexation and <em>Hau</em> established</td>
<td>1889</td>
<td>-</td>
</tr>
<tr>
<td>Cook Islands Annexed by New Zealand</td>
<td>1901</td>
<td>445 (1902 census)</td>
</tr>
<tr>
<td><em>Cook Islands Act</em> (1915) established</td>
<td>1915</td>
<td>326 (1916 census)</td>
</tr>
<tr>
<td>Visit by Sir Peter Buck. <em>Ethnology of Tongareva</em> published 1932.</td>
<td>1929</td>
<td>395 (census by Buck)</td>
</tr>
<tr>
<td>Cook Islands Independence granted</td>
<td>1964</td>
<td>545 (1966 census)</td>
</tr>
</tbody>
</table>
Chapter 5. Locating the Problem with *Pasua*: Mapping the Lagoon-Scape

5.1. Introduction

Many people on Tongareva expressed concern that there was a 'problem with *pasua*' at least part of which, as Papa Ben suggested in the introduction to this thesis, relates to the quantities of the clam being sent off the island. The problem is manifest in complaints by locals that they are finding it harder to get *pasua* of a 'decent size', needing to spend longer periods of time harvesting *pasua* in order to attain 'good numbers' as well as having to travel further away in the lagoon to get the quantities desired. For example, one of the policemen on Omoka, Mita Soatini, used the *pasua* problem to illustrate his views on how the lagoon had changed over the last twenty years:

Charlie: How do you think the lagoon has changed over the years? Is there more fish, less fish; is it harder to get fish?
Mita: Yeah, good question, well for example, back in the 1980s, and when I say the '80s that’s 82-83. During that time, when we go out for *pasua*, we just go close (to the village). Say less than a mile and there is heaps over there. And you could go there and come back by say, midday. If you leave in the morning, say eight o'clock, you come back in less than three hours, with a full sack of *pasua*. And there would be heaps over there. But now, today, I'm telling you, you have to go right to the end of the lagoon. Akasusa, Te Puka, Atutahi. And, today, there is even few *pasua* there now. That proves the current situation is no good at the moment.

Mita's recollection of the halcyon days of Tongareva's past is explicitly illustrated with reference to changing *pasua* numbers and the ease with which a good harvest, 'heaps of *pasua*', could be achieved in the 1980s. For Mita, the difficulties associated with 'having to go right to the end of the lagoon' is 'proof' that the situation on Tongareva is 'no good'. Mita's comments also hint at a sense of unease with the biological fabric of the once bountiful lagoon changing at an unexpected and disturbing rate. Like Mita, another interviewee from Omoka, Mama Wait, was
upset at the end of the days where she could harvest *pasua* from the reef out in front of her house:

Charlie: So people tell me now that it's difficult to get *pasua*, they have to go...
Mama Wait: Out in the lagoon
Charlie: Right down the end?
Mama Wait: 'Cause *pasua* grow on the rock, the *kaumibo*. Before, when I was here, I used to go on this bit here (gestures to the *kaumibo* in the lagoon in front of the house), where it was dry, take just enough *pasua* for my family to cook and eat that's all. But there is no more on the rocks here. It's *oho* [finished].

I begin this chapter by considering the 'problem with *pasua*' in light of the findings of a 'standard' technique, that of the ecological survey. This is one possible lens by which to explain where *pasua* grow in the lagoon and to discern possible reasons for the patterns in size distribution and abundance. As a consequence of performing this survey, however, I discovered that understanding and locating the 'problem with *pasua*' required a detailed understanding of the lagoon in ways that my survey was not able to produce. In the second half of this chapter, I describe a mapping exercise that emerged from the survey, which revealed a complex geography of *pasua* in the lagoon that simply counting and measuring *pasua* could not explain. This lagoon-scape as I describe it, suggests that the 'problem with *pasua*' involves much more than declining numbers. Indeed, as interview material with people concerning the findings from my survey suggest, it matters very much where in the lagoon that *pasua* are found. Thus I explore how the 'problem with *pasua*' is bound up in a complex spatialised geography of location, the politics of which concern not only the materialities of harvest practice, but also different spatialised constructions of the lagoon.

5.2. Locating *pasua* I

Helen Verran (2002) suggests that science works by a performance of generalisation. Thus while ecological science frames entities such as Tongareva lagoon as complex ecosystems, with biotic and abiotic elements understood to interact in myriad intricate ways, the lagoon is essentially
viewed to be an area set in space and time. The work of scientists, moreover, is to 'reveal' the properties and patterns of such ecosystems by counting and measuring particular variables and in turn producing generalisations so as to "establish a formal relation where one abstract, real entity - a property - can stand in for, and represent, many actual... areas" (Verran, 2002 p749. See also Latour, 2004).

The survey I designed to assess distribution patterns and abundance of *pasua* in Tongareva lagoon was similarly based on standard scientific practice with explanation for the whole based on the production and analysis of a sample. The lagoon was first sectioned off into a series of gridded zones (see Figure 5-1) and sites selected in a randomised stratified manner; that is, only a selection of the gridded zones of the lagoon that contained coral were surveyed. Existing information on the biological requirements of other *Tridacnid* species suggests that *pasua* will only grow in certain areas where they can successfully attach their byssus to rocks or coral and will rarely grow in sand (for example Lewis, 1987). In Tongareva lagoon, therefore, it was assumed that there are certain areas that would be unsuitable for *pasua* growth due to the absence of coral substrate. In turn, however, the areas where coral was present were treated as homogenous zones; neither proximity to land or distance from the two villages or the local typology of the coral formations that were surveyed was taken into account in terms of stratifying the areas of the lagoon used in the survey although distance from the villages was taken into account in subsequent analysis of the findings. Indeed, at the start of the survey, I was unaware that a detailed Tongarevan typology of coral even existed although I was aware that there were different types of coral formation within the lagoon.

As described in Chapter Three, the coral heads were further refined in the survey process by the presence of transect lines which delineated a fixed area within which the counts and size measurements took place. As these transects were randomly placed over the coral head in question, it was not unusual to end up counting and measuring *pasua* on all of the different faces
of the coral - tops and sides. Moreover, in instances where the coral consisted of many small formations, often existing in shallow water, counts included *pasua* growing on the floor of the lagoon at depths of up to ten metres. Initially, I attempted to disaggregate the counts according to depths of water the *pasua* were growing on the coral, but due to time constraints and the physical difficulties of measuring and counting *pasua* in the lagoon, this practice didn’t continue (see below for further reflection on this).

Figure 5-1: This scanned image shows the gridded map that I used to plot the rough location of the *pasua* survey sites. While the map shows some of the coral formations, it was notoriously difficult to ascertain exactly where we were on the map, and indeed, I relied heavily on the TMRC staff’s familiarity with coral head in location to nearby landmass. The map also shows plots numbered according to date of sample, and gives the names of some of the *motu*.²⁷

²⁷ This map is not the original which was lost off the back of the boat during the course of the survey, but a replica produced as a consequence of a mapping exercise that I describe in the second half of this chapter.
Cross-tabulated with size, the abundance results did not suggest any correlations displayed between either density and size, or total numbers and size. The only relationship displayed was a positive correlation between density and total abundance. The overall density of *pasua* was 0.42 ind m\(^{-2}\) for the stratified area of the lagoon surveyed which equated to 67,500 m\(^2\). As discussed, this was only a proportion of the entire amount of suitable habitat within the lagoon. Given the large area of the lagoon in total (approximately 270 km\(^2\)), and the high variation in coral formations, the densities suggested in this study would need to be extrapolated according to the total area of coral to get an overall picture of *pasua* density (see below).\(^{28}\)

![Figure 5-2: Total number of *pasua* counted during the survey arranged according to average distance away from the two villages. This graph suggests that the number of *pasua* increases dramatically the farther south and the farther away from the villages of Omoka and Te Tautua. *Pasua* numbers peak at the *tuarai* off Moturakinga. The exceptions to this pattern are the *tuarai* off Tepetepe and Akasusa where numbers were well below the overall average of 790 shells per site.](image)

\(^{28}\) I remain unsure if such data exists. The Pacific Islands Applied Geoscience Commission or SOPAC had apparently created a bathymetry map of the lagoon but at the time of my fieldwork I was unable to find out if information pertaining to the area of coral formations had been calculated.
5.2.1. Size distribution

The average length of the *pasa* sampled was 10.59 cm (n=1332 shells) which equates to an average age for the *pasa* sampled of five years. As displayed in Figure 5-3, of the 1332 measured, 83.8 percent were longer than 6 cm (dark blue bars) representing sexual mature males, 59.26 percent were above 10 cm (green bars) representing the proportion of the population sexually mature as both females and males whereas only 21.5 percent were fully sexually mature, that is, above 14 cm (pale blue bars). Sexually immature *pasa* made up 16.2 percent of the population (red bars). Overall the size distribution represented a ‘normal’ bell-shaped curve albeit with slight skewing towards larger sized *pasa*. There also appears to be a slight ‘dip’ in numbers of *pasa* around the six cm to 10 cm size mark which could suggest some form of pressure being exerted on the clams of this size. There is limited information concerning population dynamics of ‘naturally’ occurring populations of *Tridacna maxima*, that is, populations where there is no harvest pressure or a history of random stochastic events such as in the case of Rose atoll in Samoa, ship groundings (Green and Craig, 1999)

The largest sized *pasa* measured was 20.2 cm, found at Te Vo with the smallest sized *pasa* of one cm found at several sites. The largest sized *pasa* on average were found at the Korotini site (total population 29) with an average length of 13.35 cm (n=10). The smallest sized *pasa* on average were found at Motu Unga (total population 89) with average length of 7.64 cm (n=12).

It is important to reiterate here that size measurements were only taken for around four percent of the total numbers of *pasa* counted. Thus at sites where there were high numbers of *pasa*, only every 10th, 20th or even 100th *pasa* were counted. Appendix Five presents graphs of all the size distributions disaggregated according to site sampled.

In aggregated form, there do appear to be some indications that harvesting pressure varies according to size frequency. There is nothing in the survey results to suggest that harvest
pressure is being exerted on the larger sized proportion of the *pasua* population, as might be expected given people's assertions that 'decent sized' *pasua* (*pasua* larger than a man's fist according to interviews) are preferred, but harder to find. The correlation tests suggest that there is a negative correlation between the proportion of the total *pasua* population which are sexually immature (less than six cm) and medium sized (less than 14 cm) and average distance away from the two villages (p<0.05, correlation coefficient = -0.434 and -0.515 respectively). Thus, nearer to the villages, a greater proportion of the *pasua* population consisted of smaller, less mature individuals. This may be an indication of preferential removal of the larger *pasua* and/or that population growth of young *pasua* is enhanced by the removal of their larger competitors. What the study could not distinguish, however, was how these size distribution patterns were changing over time as a consequence of either harvest pressure or other biological factors such as over-crowding, or natural mortality.

![Figure 5-3: This figure shows the combined lengths of the Tongareva *pasua* population sampled in the study. The population roughly fits a normal distribution curve with the majority of the *pasua* 10.5, 11.5 and 12.5 cm in length. There appears to be a slight dip in frequency around the 7.5 cm and 17 cm length marks. The coloured bars differentiate the population according to sexual maturity, with red bars indicating the proportion of the population deemed to be sexually immature and the pale blue bars, fully sexually mature.](image)
Disaggregated, however, the data suggested slightly different length frequencies. For example, restricting the size distribution graph to measurements taken at survey sites in the southern end of the lagoon, which also tended to have the largest counts of *pasua* on average, the graph (Figure 5-4) shows a dip in the *pasua* around nine cm in length. Moreover, this graph suggests a sudden drop in the frequency of the large sized *pasua* at the 17 cm mark.

![Figure 5-4](image)

Figure 5-4: This graph again shows size distribution but is restricted to measurements taken at the following sites in the southern section of the lagoon- Akasusa, Vaiere, Moturakinga, Atutahi, Ahuamiria, Na Akatiri, Tepetepe, Te Vo, Naue, and Ahamiria Kauniho. Note the dips at the nine cm and 16-17 cm mark.

Overall the survey provided some useful insights as to overall patterns in size distribution and abundance patterns of *pasua* at the sites surveyed (Chambers, 2007a). As my survey was the first of its kind, however, there were no other figures available with which to compare this result although it was suggested at the time of my fieldwork that the TMRC would repeat the exercise the following year. This meant that my survey was unable to suggest changes in distribution over time and most importantly, distinguish between different factors that might affect size distribution patterns. Moreover, there was no 'control' for the study, which in the case of investigating the possible effects of harvest pressure, would need to be an area where *pasua* were not being taken so as to examine what some of the underlying reasons behind the patterns could
be. Overall then, figures pertaining to *passua* density and size distribution in the absence of comparable figures were relatively constrained in terms of their ability to suggest whether or not there is a 'problem with *passua*’ and the possible reasons for the distribution patterns displayed. If anything, however, my findings from the survey suggested that there weren’t necessarily problems with finding *passua* of a 'decent’ size, although it did suggest that *passua* certainly were more plentiful in the southern end of the lagoon. As I was soon to learn, however, the failure to stratify counts according to type of coral formation or depth, for example, measurements taken at the top of coral heads, was significant as I go on to describe (for other surveys of *T. maxima* abundance and size distribution see Green and Craig, 1999; Gilbert, Andrefouet et al., 2006).

5.3. Framing the problem: mapping the lagoon-scape

Near the end of my survey, the gridded map that I had been using to navigate around the lagoon and mark the approximate location of the survey sites, blew off the back of the boat and disintegrated in the seawater. This map had recorded approximate locations of our survey sites according to the name of the *motu* we were closest to, and while I still had a record of the names, we no longer had the (im)precise location of our transects according to coral head formation, vital for the TMRC staff and the Island Council who intended to repeat the survey the following year.

Taimana Manata, one of the TMRC staff, suggested that I visit Papa Fana Ivirangi, a member of the Island Council, to re-plot our survey sites, as he apparently had a detailed knowledge of the lagoon and the coral formations. I was to learn from Papa Fana that coral heads were identified according to a detailed local typology. This categorisation system is based on three main divisions thus coral is either *toka*, *tiurai* or *kaunibo*, the translations of which are defined below in Table 5-1. In addition, there are more subtle distinctions which are made on the basis of coral formation, positioning in relation to the lagoon rim, as well as the depth of the coral under the
water. This system is further elaborated with coral formations individually named according to significant events that may have occurred on or near them in the past resulting in a complex history of lagoon-human interaction being charted onto the lagoon space using the coral as semiotic anchor points.

For example, a large coral head which falls equidistant in the lagoon between the two villages of Te Tautua and Omoka is named Te Rakau (the stick), and is so named as it acts as a marker, a dividing line between the two villages. Te Rakau is also particularly significant in marking the boundary of a rahui declared in the lagoon, as will be explained in the next chapter. That some of the coral heads were named was not entirely unexpected as during the course of our survey, the sites which we surveyed were given names by the TMRC staff, although my understanding was that most of these related to the motu or land district that we were closest to. What I hadn't realised at the time, however, was the significance of these names with respect to the local typology of coral formation, how this shaped harvest practice and, most importantly, framed the 'problem with pasua' in different ways to that suggested by the results from my survey.

Plate 5-1: Taimana trying to match up our location in the middle of the lagoon with the new map of our survey sites (Source: C. Chambers).
### Table 5-1: Coral typology, meaning and sub-classification

<table>
<thead>
<tr>
<th>Coral Typology</th>
<th>Literal meaning</th>
<th>Sub-classification:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Toka</strong></td>
<td>Coral head or dry patch of reef</td>
<td>Hotu hohonu: coral head in deep water</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hotu maro: Coral head in shallower water</td>
</tr>
<tr>
<td><strong>Tuarai</strong></td>
<td>Collection of coral patches joined by shallow ridge. Often named in accordance</td>
<td><strong>Tuarai muri</strong>: Tuarai in deeper water</td>
</tr>
<tr>
<td></td>
<td>with the district adjacent</td>
<td><strong>Tuarai tia</strong>: Tuarai in shallow water</td>
</tr>
<tr>
<td><strong>Kauniho</strong></td>
<td>Section of reef which joins the land. Also named in accordance with land</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>bordering</td>
<td></td>
</tr>
<tr>
<td><strong>Aria</strong></td>
<td>Gap between motu. Also named according to motu.</td>
<td>-</td>
</tr>
<tr>
<td><strong>Akau</strong></td>
<td>Back reef from edge to land</td>
<td>-</td>
</tr>
</tbody>
</table>

The mapping exercise with Papa Fana was eventually performed at the house of Papa Takake, the Island’s Government Representative and involved myself and Taimana (see Plate 5-2, Plate 5-3). Further information on typology was provided in interviews with Manata Akatapuria, another member of the Island Council, and is discussed below. In the mapping exercise, we had initially intended to simply re-locate our survey sites by creating a map from scratch but this was abandoned in favour of plotting our location on an ordnance survey (OS) map which Papa Takake had already used to start recording the names of coral formations in the lagoon. I was curious as to how he and Fana knew the names of the different coral heads and was informed...
that they had learnt the names from their fathers who had been employed as divers for pearl shell and used to be out in the lagoon on a daily basis. The men were very knowledgeable of the names of the coral heads close to their village of Omoka but it was far harder for them to name the coral formations in the far south of the lagoon. In this respect, Papa Takake, after some deliberation, suggested that I should ask for assistance from men from Te Tautua to name the coral formations that were closer to their side of the lagoon. Due to circumstance, however, I was unable to speak to anyone from Te Tautua on this matter, although Manata Akatapuria was able to fill in some of the names that the others hadn't identified.

Plate 5-2: Papa Takake begins the mapping process (Source: C. Chambers).
Strang (2000) discusses how maps such as the one which we generated detailing the nomenclature of Tongarevan coral heads, are an important part of recognising alternative experiential worlds and cultural landscapes in such unique locations as Tongareva. This is not to suggest that the alternative cartography revealed during the mapping session was a prerequisite for legitimating the existence of these coral typologies. Nevertheless, in the case of my study, the map produced by Papa Fana, Papa Takake and Papa Manata certainly acted as a powerful signifier of the deeply historical and intricate geography of the lagoon that I had not been made aware of previously (for a rather different mapping exercise which also focussed on coral formations see Feinberg, Dymon et al., 2003). Indeed, while so-called ‘cultural mapping’ is increasingly being used to ‘prove’ the existence of alternative geographies (St. Martin, 2001), Jacobs (1993) makes clear that mapping has a long history as a colonial tool to dispossess others. Moreover, as Strang (2000) asserts, mapping risks ‘fixing’ particular relationships and thus denying or usurping more fluid relations that exist with such environments as the lagoon-space.
What the map of coral typologies revealed, however, particularly compared to my representation of the lagoon generated in the process of the survey, was a very different geography of the lagoon, and most importantly, a more nuanced way of examining the 'problem with *pasua*'.

Literally translated, *toka* refers to an underwater rock or a large patch of coral just beneath the surface. Interestingly it is a term that can also be used to describe stones in general, headstones of graves or ceramic goods (Shibata, 2003). Manata, however, explained to me that there can be more than one type of *toka*. Those venturing out into the lagoon, for example, in order to search for pearl shell were expected to know such fine grained distinctions:

**Manata:** There is the *botu*, the smaller *toka*. The one that is still underneath the water, the submerged coral heads. We call them *botu*. In deeper water, we call them *botu bokamu* and the *botu mao* is the shallow one. We normally mention these words when we go out for pearl shells because there are a lot of pearl shells on the very big patches.

**Charlie:** And the word *toka*, does that mean rock?

**Manata:** *Toka*, it has a different meaning in Penrhyn. When we say rock, we say *pohatu*. *Toka* is a dry patch of reef in the lagoon. We call that *toka*. We don't call stone *toka*, we call it *pohatu*. Only the southern islanders call a stone *toka* whereas here we call our dry patches in the lagoon, the dry reef, *toka*. That's what we call it.

Closer to shore are *tuarai*, clustered or elongated ribbons of coral that people can swim to with ease from the shore. The term *tuarai* is related to two root words. The first is *tua* which has a variety of meanings, and can refer to the back or behind of a person or thing, the side of a house, the direction of wind, or the ocean side of the atoll. The second is *rai* which means quite, still or exactly (Shibata, 2003). While *tuarai* may not be given personalised names, there are sub-categorisations according to depth of water and their proximity to shore tends to give them association with the *motu* to which they lie adjacent. As Manata describes:

**Manata:** *Tuarai* is a collection of coral patches; it's more than four or five. They always come very close to each other and there is always a shallow ridge that joins one to another. That's why we call them *tuarai*. They lie on a single ridge.

**Charlie:** Is the *tuarai* usually close to the shore?
Manata: They are normally, they are all closer to the shore. The only far out ones are in Te Puka (gestures to map), this one is a *tuara*, quite far from land. And there is another one at Tokerau. It comes all the way from Ahuamiria, all this white patchy stuff, comes all the way up to Hangarei. There are *tuara* *muri* and the *tuara* *itia*. *Tuara* *muri* means the *tuara* at the deeper part of the water and *tuara* *itia* is the *tuara* at the shallow part of the lagoon. But most of the *tuara* are called by their name. By the island that they are close to (refers to the map). This is known as the *tuara* of Tokelau, and this is known as the *tuara* of Morokai.

Charlie: And is it the district name used rather than the particular patch of land?

Manata: Yes, the district name.

As mentioned in Chapter Four, the pre-contact population of Tongareva was dispersed around the many *motu* of the island, each according to *huaanga* lineage. The close association of *tuara* with the adjacent land is likely to be related to the presence of *huaanga* boundaries in the adjoining marine space, on both the lagoon and ocean sides (see the following chapter for significance of this). The final coral formation within the local categorisation system is the *kauniho* which is the formation that directly fringes the shore and comprises essentially the reef edge where the shallow water gives way to the deeper blue. *Kau* means to swim and *niho* refers to the underwater extension of a reef. Combined, it refers to the reef on the lagoon side, or a shallow place offshore in the lagoon. As with *tuara*, personalised names given to *kauniho* are closely associated with the relationship to the land adjacent:

Manata: *Kanibo* is the edge of the beach to the land. So from the beach, you walk out and there is a drop, and that’s the *kanibo*. *Akau* is the back reef, *kanibo* is in the lagoon. The space between different *motu* is known as *aria*. The space from the ocean to the lagoon. So we would talk about the *aria* Hangarei. We are talking about the gap between Motu Kasi and Hangarei. These gaps are known by this name. The *aria* of whatever *motu* they lie next to.

As Manata’s explanation suggests, Tongareva lagoon is a highly differentiated space, filled with a diversity of coral formations, categorised according to location, shape and depth under water and named individually according to memories, myths and historical events. While it is relatively easy to identify types of coral formations from looking at aerial photos or from examining maps,
it can be extremely difficult for an untrained eye to pick out the subtle differences in depth and location of the coral formations when out on the water. Understanding and learning the locations, names and differences between the different coral formations is vital in order to successfully navigate around the lagoon, avoid damage to boats and to minimise petrol wastage by getting as quickly as possible to good locations for pipi, pearl shell and paina.

As the work of Raffles (2002a) and Massey (2005a) supports, defining toka, tuarai and kaniibo and bestowing them with names is the work of place-making, the inscription of intimate memories and histories that serve to produce the lagoon and imbue it with shape and meaning. What emerged from the map was an understanding of Tongareva lagoon as a lagoon-scape, not simply an undifferentiated space of water and coral, but a system of detailed pathways and formations, co-constituted by the intermingling of both human and non-human elements.

To invoke the concept of lagoon-scape, as with other various other neologisms such as seascapes (Jackson, 1995), cultural coastscapes (Smythe, 1993) sea-country (Cordell, 1991) or waterscapes (Swyngedouw, 1999) is an attempt to discursively understand marine environments as socionatural spaces with simultaneous cultural and environmental importance.29 As McNiven describes, it is also to acknowledge the way in which the watery space, is “imprinted with meanings, inscribed with sites and mapped with named places” (McNiven, 2004 p331). As Manata’s discussion illustrates, Tongareva lagoon is not simply a homogeneous body of water, rather, it is highly differentiated; used, lived, mapped and named according to both biophysical features such as coral heads and patterns of tenure, resource use and extraction. To describe Tongareva lagoon as a form of a lagoon-scape is, therefore, to attend to the lived interrelations between socionatural assemblages as well as accounting for material engagements.

29 Other work examining alternative understandings of watery environments in a Pacific context include Barber (2004) and Levinson (2008).
with the species that dwell within and that serve to shape the way in which the watery space is divided up and encountered.

To speak of lagoon-scapes, however, activates landscape traditions, and as such is not an innocent interpretive construct (Hinchliffe, 2002). Indeed, in the context of human geography, there has been a great deal of consideration given to the concept of landscape since Carl Sauer first applied it to geography in 1925. Sauer's work encouraged attention to the interrelationships between human influences and biophysical processes, although in a manner that implied such studies were resolutely scientific, moving from 'natural' states into 'cultural forms' (Leighly, 1963). Other work has emphasised landscapes as representational forms, or "pictorial way of representing or symbolising surroundings" (Daniels and Cosgrove, 1988 cited in Hirsch, 1995 p5). Cosgrove in particular sought to re-frame landscapes as being "not merely the world we see... [but rather] landscape [as] a way of seeing the world" (Cosgrove, 1984. See also Berger, 1972 'Ways of Seeing'). Such approaches to landscape, however, risk as Mitchell's (1998) work suggests, treating landscape as something simply to be encountered. Indeed, feminist geographers have focussed on some of the more troubling associations with the idea of landscape such as the masculinist gaze and the associated feminisation of that which is understood to be the object of such vision (Rose, 1992; Nash, 1996). Hirsch (1995), by contrast, draws on the work of Ingold (2000) to argue for an understanding of landscape as a 'cultural process', one which is not just sensitive to the representational aspects of landscape, emphasised by Cosgrove, but also to the way in which landscapes are bound up in everyday life. This is also a response to Cosgrove's (1985) assertion that the very concept of landscape implies a denial of process because of the emphasis on visual consumption and associated ways of being towards that which is under the gaze.

Nevertheless, there are strategic reasons for applying landscape traditions to watery spaces such as Tongareva lagoon. In a similar vein to the work ongoing under the banner of TEK and CMT
discussed in the second chapter of this thesis, Jackson (1995) argues that neglecting other ways of seeing the sea and meanings attached to water and marine environments is to ignore the “deeply embedded maritime relationships in indigenous cultures and communities” (Jackson, 1995 p88). As mentioned in Chapter Two, however, there is a risk in such work of simultaneously romanticising and unproblematically treating that which is ‘other’ as somehow better, or in the context of conservation, somehow more ‘in tune with the environment’ (cf. Haraway, 1991). As Jackson continues, part of the purpose of framing marine spaces as seascape of some kind, is to acknowledge and account for indigenous people’s proprietary rights to marine environments. Indeed, as Davies asserts, Indigenous conceptions of ‘title rights’ rarely stop at the high water mark, and in the case of Australia’s Torres Island communities, ‘country’ includes land and sea [and challenges] more commonly presented mappings of the limits to ‘Australia’ (Davies, 2003 p31).

Indeed, in the case of Tongareva lagoon, there are specific political gains to be made in framing the lagoon-space as a landscape of some sort. As discussed in Chapter Four, since the Cook Islands Act (1915), Cook Islander’s rights to claim the land which lay beneath the high-tide mark were annulled with marine spaces designated Crown property in contrast to terrestrial land where ‘native’ rights were recognised and maintained. The complex lagoon-scape, therefore, pushes against the ontological distinctions implied between sea and land in the 1915 legislation while simultaneously signifying the historical depth of cultural association Tongarevan people maintain with the lagoon. Given this colonial legislative context, the alternative cartographic understanding of the lagoon-scape that emerged in the mapping exercise supports the idea that maps cannot ever be simply representations. Rather, as Jacobs (1993) emphasises, mapping the histories and meanings of such seemingly self-evident formations as Tongarevan lagoon and the coral formations within, is a political act, bound up in postcolonial negotiations over power and rights to governance.
To bring this discussion concerning lagoon-scapes back into the context of the 'problem with pasua', what emerges from the above discussion is a clear sense of how attending to the detailed socionatural character of the lagoon-scape necessitates reframing this problem. While my survey attempted to understand the spatial patterns concerning pasua abundance and distribution in an aggregated manner, the different typologies of coral suggest that patterns of pasua abundance and distribution requires an in-depth understanding of the ways in which the spatial dimension of the lagoon affects people's interactions with this species. In the next section of this chapter, I begin by exploring the relationship between coral typology and harvest practice in the context of a detailed account of a harvest party I followed travelling across Tongareva lagoon in search of pasua. I focus in particular on what appear to be informal local 'rules' that govern the practices of pasua harvest, looking specifically at the significance of the work involved in negotiating and understanding the lagoon and how this shapes the selection of pasua suitable for harvest. I go on to analyse other people's comments and views on the findings from my survey to discuss the significance of the 'problem with pasua' in terms of how this engages with wider debates and contestations over the lagoon, the role of the Island Council and the need for rahui.

5.4. Practices and locations of pasua harvest

It wasn't until my final period of fieldwork that I was invited to accompany members of the Maretapu family out on a trip across the lagoon in order to harvest pasua in time for the Maunga Roe, the inter-island boat, due to arrive in a few weeks time. The harvest party consisted of the older boys in the Maretapu family, accompanied by Tomas, the principal from the local school. Josia, the eldest boy of the family remaining on the island, was at the helm navigating skilfully through the lagoon, with his younger brother Manea sitting at the prow of the skiff, pointing left and right so as to alert Josia to coral patches lurking below the surface glare of the water. We had set out towards Hangarei, slightly south of Omoka on the northern end of the district Mangarongaro. As we neared Hangarei, Josia slowed the boat, and peered intently over the edge,
assessing the coral skimming by beneath our boat for *pasua* numbers. "*Pasua de"* (pasua there!) shouted Manea, but Josia kept cruising until he found a spot that he was happy with. We eventually came to a halt by a medium size patch of coral, a *tuara*, approximately 200 metres off shore, sparkling with *pasua*, their mantles a riot of colour. I asked Josia why he had come to this particular spot:

Josia: Oh, because we can see on the coral heads that there is a lot of *pasua*. So, like if you're coming to a particular spot, before you want to go for *pasua*, you have to search around until you can see as much *pasua* as you can, without letting other people know. So, when you want to get some *pasua*, you come back to this spot, and harvest it until it's finished [until all the *pasua* are taken]. But if you come and there's already someone there, you have to keep looking, and search for another place again.

Charlie: So once someone is at a spot, you can't share it and harvest from it, well, not on the same day at any rate?

Josia: No.

Charlie: So why did you come straight to Hangarei... why didn't you go, say, to some of the *toka* out in the middle of the lagoon?

Josia: Because we already know this place. Before, when we came with our Dad, we went to the southern end of Hangarei and we searched around there. And on our way back we saw there was a lot of *pasua* so we knew that this area, people didn't come around this area. So when our boat arrives, it comes here first. We don't go further out until we've finished this part. By the time we've finished this part, then we go further out onto the big, big coral heads. If there's no *pasua* around on the *tuara*, we go further out on the big, big coral heads.

Josia's explanation suggests informal rules that enable exclusive use; the practice of keeping a sighting of *pasua* secret until a return trip can be made and the need to get to the coral heads first, and without the sighting of others. Harvest practice according to Josia works on the basis that people try to come to the coral heads as close as possible to the villages so as to minimise petrol, and don't go further out until particular 'parts' are 'finished'. He conceded that usually he goes further south into the lagoon, but asserted there would seldom be a set destination for a harvest trip, as much depends on how much petrol is available and how much *pasua* is required. While he 'saw' that there were plenty of *pasua* on the coral heads, it had not been a random decision to come near Hangarei, rather it had been planned on the return from the last harvest trip with his father.
Once Josia had anchored the boat, Tomas spoke a *pure* (prayer), thanking the Lord for the day and for his bounty and remembering friends and family.30 The four men in our party then entered the shallow water on the top of the *tuarai* and started pulling up *pasua*. Using hooks similar to gaffs and wearing gloves to protect their hands from the sharp edge of the shell, they wrenched *pasua* free from the coral, tossing them into a pile at the centre of the working group. Josia sat chest deep in the water by this pile and using a knife, deftly cut through the *pasua* abductor muscles, slicing them open and clean away the *au* or bitter bladder. He then deposited the cleaned meat in a plastic crate, floating in the water. Unlike on other types of fishing trips, the men didn’t bother to keep a look out for sharks as the discarded *au* apparently didn’t attract them. While there were a good number of clams on the top of the *tuarai*, there were many more on the sides of the coral in the deeper water. I was curious as to why the men didn’t dive down to take these bigger clams and asked Josia to explain:

Josia: We don’t dive down for the clams, we only stay on the top
Charlie: How come?
Josia: Because the meat’s better.
Charlie: So how do you know that the one’s down there are not so good?
Josia: Because you can see on the clam, it’s different from the ones on top (of the coral head). Because the one on the top, they look at bit older, and they’re better for eating. You can harvest these ones on top because it’s good time to harvest (its ready for harvest). If there’s a small one on top, then it’s no good. But the *pasua* that are growing on the side of the coral heads, the big ones, you open them up and the meat is small. There’s a few under the coral heads, but most are too young. So usually we stay on the top for the clams.
Charlie: So do you take the small ones?
Josia: No, we only take the big ones.
Charlie: How do you judge whether it’s a big one? Do you have a minimum size?
Josia: We know the big ones, because the big ones, it’s pretty fast to fill up a basket. For the small one’s it takes ages to fill up the basket. We take the large. The size of my hand is a good one.
Charlie: So no smaller than your hand?
Josia: Some people take them, but me and my Dad, we don’t take the small ones.

Josia’s comments explained important information with respect to patterns of harvest and simultaneously suggested how my survey could have been improved so as to disaggregate

30 Almost every activity in Tongareva begins with prayer.
Pasua numbers according to zones they grew on the coral head. In the context of the problems with pasua size cited at the beginning of the chapter, it matters differently if there are large pasua present on the sides of the coral heads because it is only the pasua that grow on the tops of the coral heads that are taken during pasua harvest. Nevertheless, if there are large pasua on the sides, this means that the coral head is more likely to become re-populated with pasua once these larger pasua spawn. Josia's comments suggest that the main reason larger-sized clams growing on the tops of the coral heads are preferred is a consequence of the quality of the flesh but also due to the practicalities of harvest practice. While 'some people' take smaller clams, Josia and his family focus on the bigger ones, partly because of expediency in harvest practice enabled by this choice, but also because small clams are understood to be important to leave for future harvests. Indeed, my survey had no way of 'objectively' assessing this as it was assumed that the size of the shell corresponded with the size of the clam inside, something which Josia suggests isn't necessarily the case.

Plate 5-4 Turua stands on top of the tuarai looking around for any patches of pasua that he may have missed (Source: C. Chambers).
Part of Josia’s decision to focus on the top of coral heads and larger-sized *pasua* relates to the physical work involved in *pasua* harvest. On the trip described above, to fill the crate measuring 50 cm x 25 cm, it took four and three quarter hours of hard work; first wrenching the *pasua* out of the surrounding coral, and then shelling and cleaning the meat, all the while immersed in the water and under the hot sun. For the men to enter the water and take *pasua*, which can grow at depths up to 10 metres, would not only take longer, but be exhausting work. In the following interview excerpt, for example, Baar Tapu, my friend living on Pahonu, asserted that men don’t bother to dive down to get *pasua* because of the physical effort required:

Charlie: Why do people stick to the tops of the *tuarai* and *luka* for harvesting *pasua*?
Baar: Because there’s more there, you know, and it’s easier to get them from the shallows rather than getting them from the deep. Being a nation of pearl shell divers, we can free-dive easily, but going diving for pearl shells is tiring and yet pearl shells are light. Can you imagine diving for *pasua*? Even if the depth isn’t that great!

Baar suggests that there are more *pasua* to be taken from the tops of coral heads, something again that my survey was unable to show statistically because of the aggregated nature of the data collected. Part of the ‘problem with *pasua*’ then, suggested by my observations recorded on the harvest trip, pertains to the amount of work involved in *pasua* harvest not only in the physical act of harvesting *pasua*, but also in the process of locating an area of the lagoon with *pasua* in suitable sizes and numbers and growing in suitable places.

### 5.5. Locating *pasua* II

On the harvest trip described above, Josia had chosen to travel only slightly south of the main village of Omoka to a *tuarai* off Hangarei on the western-side of the lagoon, a relatively short journey of about twenty minutes by boat. In the comments from Mita and Mama Wait cited at the start of this chapter, however, I understood part of the problem with *pasua* to involve the increasing distances that people had to travel away from the village and particularly the need to
travel to the southern end of the lagoon. In this respect, I was curious as to people’s responses to the findings from my survey which supported these assertions. At the end of the mapping exercise, Manata Akatapuria expressed interest to discuss the results from my survey. The interview began by seeking Manata’s views on the low number of pasua recorded at the Akasusa and Vaiere survey sites. Manata was not surprised in the slightest:

Manata: But that’s where most of the pasua is harvested. At Akasusa and Vaiere. Although now they’re starting to harvest from Atutahi and Moturakinga. In general, we know the southern end is the best place to go and harvest from, especially from the tuarai. We go from Te Puka all the way across to Atutahi and we go especially on the tuarai. But then again, people have recently started harvesting from the kaunibo. You can see when you go out there, the empty shells.

Charlie: Well, I went back and I re-surveyed three sites, the Te Vo kaunibo in particular was really interesting, there were still quite a few pasua on the kaunibo but very few on the adjacent tuarai.

Manata: Yes, people come to the kaunibo when they can’t find a patch of tuarai with abundant pasua.

Charlie: So why do they prefer to harvest from the tuarai? Is it easier?

Manata: Yes it is easier. There are dry patches where you can sit and open the shells. With the kaunibo, it’s deeper and while there’s more on the kaunibo, pasua grow faster and grow bigger on the tuarai. The last time I went to Hangarei, there was a lot of small shell on the kaunibo. I was in the water, I wanted to check the pasua content, because I thought that we were at the stage where we were losing out pasua. So back in 2000 I went to check that area. And there were a lot of the small ones. But I’m not sure now, whether they are bigger or whether they have been harvested.

Manata’s comments suggest again that the problem with pasua is far more nuanced than my survey results suggested. While Manata concurs that there does appear to be a problem, the low numbers at the sites of Akasusa and Vaiere are dismissed as a logical outcome because ‘that’s where most of the pasua is harvested’. If, however, as Manata suggests ‘we all know the southern end is the best place to go’ then his comments suggest that the problem with pasua pertains to the increasingly greater distances that people must travel and the petrol which is needed to reach these areas of the lagoon. Manata’s comments do suggest that there is a problem with the shift away from the tuarai onto the kaunibo because of the declining numbers of pasua at these preferred harvesting sites. This recent shift from tuarai to kaunibo was also noted by Baar Tapu who also supported Manata’s comments that pasua harvest always occurs in the southern end of the lagoon:
Baar: They've always taken *pasua* from that side.
Charley: When you say that side, where do you mean?
Baar: From Te Puka all the way to Tepetepe all the way down to Vaiere. The southern half of the lagoon, they take *pasua* from the rocks. It's just now they're going onto the *kauniho*.
Charley: What do you mean?
Baar: They used to just take *pasua* from tuarai or the toka, just the big rocks
Charley: So they never use to go on the *kauniho*?
Baar: No. I first saw them going on to the *kauniho* in 2001.
Charley: Why are they moving to the *kauniho* now?
Baar: Because there's more there, you know.

Both Manata's and Baar's comments, then, propose that harvest pressure is concentrated in the southern end of the lagoon, but imply a problem with the increasing shift in their harvest practices onto the *kauniho*. Given the previous comments suggesting the difficulties of harvesting *pasua* from deeper water, this suggests that part of the 'problem with *pasua*' relates in part to the difficulties associated with harvesting from particular coral formations. It also suggests that part of the problem is due to the way in which harvest practices need to change.

Attending to the specificities of *pasua* harvest, then, suggests how this material interaction with the heterogeneous and deeply socialised fabric of Tongareva lagoon contributes to the increasingly complex nature of the problem concerning *pasua*. The precarious nature of changes in *pasua* locations were consistently emphasised and in response so too are harvest practices by no means fixed or unchanging. In this regard, the information attained in the course of participant observations and interviews was particularly useful in describing changes to *pasua* over time and possible reasons behind these shifts in abundance. Table 5-2 presents a revised summary of coral formations including their significance with respect to *pasua* harvest. What remains unexplored in the previous comments, however, are people's suggestions as to what the drivers are for these changes in *pasua* abundance and distribution. On the harvest trip with the Maretapu boys, the intent was to harvest enough *pasua* to ship on the forthcoming Maunga Roa so that it could be sent down to the members of their family now living in Rarotonga. Such gifting practice is a long-established tradition, as I go on to explore in Chapter Seven. The Transition as described in Chapter One appears to have played a key role in the practice of sending *pasua* away to be sold for money in Rarotonga. Another consequence of this economic
change was a radical increase in the cost of imported goods as government subsidies were removed (Alexeyeff, In Press). In this respect, the cost of petrol and diesel rose dramatically at the same time as income opportunities decreased (see Chapter Seven).

Table 5-2: Table showing coral typology, meaning and significance with respect to *pasua* harvest

<table>
<thead>
<tr>
<th>Coral Typology</th>
<th>Literal meaning</th>
<th>Sub-classification:</th>
<th>Significance with respect to <em>pasua</em> harvest</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Toka</em></td>
<td>Coral head or dry patch of reef</td>
<td>Hotu hohonu: coral head in deep water Hotu maro: Coral head in shallower water</td>
<td>Second preferred spot for <em>pasua</em> harvest although not as popular as <em>tuarai</em>. <em>Toka</em> in southern end of the lagoon preferred and <em>pasua</em> harvested in large quantities to send away. Harvest performed on top.</td>
</tr>
<tr>
<td><em>Tuarai</em></td>
<td>Collection of coral patches joined by shallow ridge. Often named in accordance with the district adjacent</td>
<td><em>Tuarai</em> muri: <em>Tuarai</em> in deeper water <em>Tuarai</em> tia: <em>Tuarai</em> in shallow water</td>
<td>First choice as location for <em>pasua</em> harvest because <em>pasua</em> understood to grow faster and bigger on <em>tuarai</em>. Harvest restricted to top. <em>Pasua</em> taken from <em>tuarai</em> in southern end of lagoon in large scale harvests to send away.</td>
</tr>
<tr>
<td><em>Kaunibo</em></td>
<td>Section of reef which joins the land. Also named in accordance with land bordering.</td>
<td>n/a</td>
<td>Last resort for <em>pasua</em> harvest because requires people to harvest underwater. <em>Pasua</em> taken from <em>kaunibo</em> near villages as food for personal consumption.</td>
</tr>
</tbody>
</table>
In a group discussion I recorded during my fieldwork, I spoke with a group of men who held rather different views with respect to both the problem concerning *pasua* and the manner in which people's concerns with *pasua* had come about. Tangaroa Tai, a local shop keeper on the island who had only recently returned to Tongareva from Sydney in Australia where he had been working as a bus driver, and Tini Ford, a former Mayor of the island, were forthcoming with their views. They argued that people were becoming worried about *pasua* not because numbers were decreasing, but because people had to use more and more petrol to travel to the areas where *pasua* could be found:

**Tangaroa:** Well we always knew that the places close to the land are the easiest place to get the *pasua*. There's not much close to Omoka. But Akasasa and even Te Puka further south, there's a lot there. I'm sure you've been there and seen it.

**Charlie:** Yes there is a lot

**Tini:** Well my point on what you're saying, that people are saying it's too far now to go harvest in the south eh? Well I'll tell you now, that's all rubbish. If I count all the years, it's more than ten years now if you want a lot of *pasua*, you have to go further. If you want only for *kai kai* (*food- personal harvest*) you just go along to the *kaumilo* by the airport. That's their excuse, 'ooh the *pasua* is too far now'. In that ten years past, people have been moving south of the lagoon. Now, they say, 'that's too far'. Well that's not a good reason. The reason for this is, there is no petrol for them to go that far.

**Tangaroa:** They are lazy!

**Tini:** They are lazy. That's a good reason. They can't afford to pay their petrol to go that far.

Tini and Tangaroa state that there has always been *pasua* on the *kaumilo* to be used for personal harvest (*pasua* for 'kai kai'). Their account suggests, however, that in the last ten years, a period of time which corresponds with the start of the Transition, people have needed to travel south if intending to take large numbers away from the lagoon and that this is problematic because of the increased cost of petrol. I explore in more detail in the second half of the following chapter the role of the Transition in terms of changing people's relationships both to the *pasua* and to structures of authority on the island. While Tangaroa and Tini do not elaborate as to why its 'been more than ten years now if you want a lot of *pasua*', what can be taken from their discussion, however, is an understanding of how people's views on the problem with *pasua* are bound up with wider economic and social issues. In particular, they suggest that at least part of
the ‘problem with pasua’ is a problem with petrol, and the increasing difficulties people face in paying for petrol post-Transition.

Embedded in their discourse, moreover, are interesting comments concerning people’s knowledge about where in the lagoon people have to go in order to fulfil particular harvest objectives. This idea that there are certain zones of the lagoon that are designated for kai kai was also repeated in another interview with Mama Tomanu:

**Mama Tomanu:** During hurricane time and the sea is rough, we just go close to the beach [to harvest pasua]. That’s why we never allow people to come close to the beach to take pasua for giving on the boat. If people want to get pasua, they have to go far away to get pasua to take to the boat. Because it’s like this, if we’ve got no petrol, and nothing to eat, all we have to do is to just go out somewhere [close], and get pasua and come back and we can survive for the day. If it’s rough sea, there’s no fish but there’s always pasua.

Mama Tomanu’s description concerning the spatial practices of pasua harvest again hint at informal rules structured around the location of pasua in the lagoon. In this sense, harvest practices are ordered according to awareness of, and respect for, the different spaces in the lagoon that pasua grow, and the associated distances involved in travelling to reach them. Pasua close to shore is food for when the sea is rough, and thus is ineligible for large-scale harvest, although pasua which is far away, the pasua that you have to use petrol to access, is acceptable to sell or send away on the boat. While Mama Wait’s comments at the start of this chapter suggest that it is now much harder to find pasua on the kannibe in front of her house, the harvest patterns are consistent.

This is significant because it suggests that the ‘problem with pasua’ is a product of the interrelationship between where pasua grow and in what quantities and how it is to be used in terms of the harvest destination. Not only do different areas of the lagoon have associations with particular types of interactions, it matters where on the coral heads that pasua is found. Whether pasua are in the lagoon close to shore on kannibe, far away out on toka in the centre, or even once harvested and sold in zip-lock bags down in Rarotonga (as I explore in Chapter
Seven), the location affects its material status. In a sense, then, depending on the location of _pasua_, it becomes a different thing and so too does the ‘problem with _pasua_’ change accordingly. It doesn’t matter if you have to dive down to get the _pasua_ from the _kaumoko_ in front of your house if you only want a few clams in order to provide _kai kai_ for your family. By contrast, _pasua_ far out in the lagoon that requires petrol and a day of hard physical labour in order to reach and harvest, is _pasua_ to be taken in large quantities and sent away. The ‘problem with _pasua_’, then, depends very much on both the origins and intended harvest destinations of _pasua_ and the associated size and numbers of _pasua_ required.

As I have suggested, the ‘problem with _pasua_’ is inextricably bound up with where on the coral head the _pasua_ grow, how much petrol is needed to reach the favoured _tuaroa_ and whether or not there are large _pasua_ present, which maximises the efficiency of the harvest process. The physical location of _pasua_ in the lagoon, however, also shapes its emergence in exchange networks and produces different exchange trajectories that surround this species. I expand in greater detail on the significance of _pasua_ for exchange practices in Chapter Seven and explain the manner in which this further complicates the location of, and problem with, _pasua_.

5.6. Conclusions

This chapter has explored the intimate knowledge required by those who travel across the lagoon in order to harvest _pasua_. I have described how such knowledge is gained through embodied practice, constantly shaping and being re-shaped by the lagoon-scape upon which it depends (Raffles, 2002b). By contrasting the findings from my ecological survey with the information attained from interviews, participant observation and mapping exercises, this chapter has argued that simply looking at numbers and statistics as they relate to patterns in _pasua_ abundance and distribution is not enough to fully grasp the complexities of the problem concerning _pasua_. While the quantitatively-oriented approach was useful at generating detailed
information as to specific densities and size distributions of the *pasa* surveyed, it was limited in
terms of its ability to provide explanations as to how *pasa* abundance and distribution had
changed over time, and reasons. This was partly because no past surveys had ever been done;
doing the survey in a few years time with a disaggregated sampling system may assist with future
research in this respect, but also because of the limitations of the scientific survey itself.

In this regard I would suggest that even if I had been aware of the coral typologies and the
manner in which these affected *pasa* use, my ‘science’ would only ever produce a partial view
because of its inability to account for the socionatural character of the lagoon-scape and the
relational nature of the problem(s) at hand. With the emphasis on the ‘random’ selection of
survey sites so as to generate the all-important statistically valid survey, my science did not
necessarily correspond to where people go to look for *pasa*. My reflections in this respect are
not intended as a dismissal of ecological survey techniques; rather, it suggests the importance of
attending to the gaps between field-practice and data creation, and between social science and
ecological approaches.

Despite its shortcomings, the findings from my survey were swiftly enrolled into local debates
concerning *pasa* ongoing at the time of my visit. Placed in analytical combination, moreover,
people’s views concerning the findings from my survey and their reflections on the material
practices of *pasa* harvest, were able to re-frame the problem with *pasa* in constructive ways. As
a consequence of analysing the practices of harvest trips, I suggest the problem with *pasa* can
be understood as a product of social changes as well as reflecting particular aspects of the
socionatural character of the lagoon-scape. Not only does this problem have a clear spatial
dimension but there is a strong temporal element that frames the problem at the time of my visit
in very particular ways.

In this respect, the ‘problem with *pasa*’ is closely linked to the pressures of economy on harvest
patterns. The problem doesn’t simply relate to where the appropriate or ‘good’ places to harvest

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pasua are, but also relates to the price of petrol, which makes accessing pasua costly in different ways. What is at stake in these differential geographies relating to the 'problem with pasua', are alternative ways of relating to and conceptualising pasua as a resource. The 'problem with pasua', moreover, relates to the spatio-temporal context in how it is defined and who is understood to have the mandate to see it resolved. Embedded within these debates over the problem concerning pasua distribution and abundance is a complex politics of knowledge and authority. The segments of interviews that I have discussed in this chapter are tied in with local practices of knowing and associated claims regarding the status of pasua and the 'health' of the lagoon. It could be argued that there are subtle reasons why Island Council members such as Manata would want to endorse the findings from my survey, and reasons why people such as Mita frame the lagoon as being in such bad shape.

In the next chapter, I explore how these politics of authority and knowledge serve to shape both the 'problem with pasua' in particular ways as well as influence the manner in which both solutions are suggested and received. These issues are explored in the context of the use of rahui, as one of the suggested techniques to address the multifaceted problem at hand. People's views on the status of pasua abundance and distribution are necessarily linked to their views on rahui not in the least because closing the lagoon would jeopardise their ability to continue sending pasua away either to be sold or gifted. In the next chapter, I discuss the significance of the spatialised nature of the lagoon in the context of the planned rahui, with particular reference to the suggested location of the rahui and its role in dividing the lagoon. I discuss in particular the disputed ability of the Island Council to institute rahui and fears that not only does the contemporary Island Council lack the ability to enforce such a decision, but also lacks the ability of police and enforcing punishments if infringements of a rahui occurred.
Chapter 6. Locating Authority in the Changing Practice of *Rahui*

6.1. Introduction

As discussed in the previous chapter, defining the 'problems with pasua' is a complex matter produced in part by the diverse array of socio-spatial relationships ongoing in their negotiation with the Tongareva lagoon-scape. A key part of the 'problem with pasua' pertains to who has the authority to define the patterns of *pasua* distribution and abundance as a 'problem', and indeed, how the idea of *rahui* as a solution to this problem came about in the first place. In the Tongarevan context, the Island Council have the legislated authority to declare *rahui* on either physical areas or prevent harvest of particular species. In the case of *pasua*, the suggestion was that they use *rahui* to 'close' the lagoon and thereby stop *pasua* harvest. This *rahui* would not require a physical boundary; there would no ropes strung across the lagoon to indicate closure. Rather, it would work by public awareness, respect and compliance. This chapter seeks to understand the relationship between *rahui* and authority relations on Tongareva. I explore why the *rahui* was suggested as a solution to the 'problem with pasua', how the *rahui* would work and people's views on whether or not they think it will be successful.

In this chapter, I focus on the relationship between the Island Council as the legislated authority structure for the island and the proposed *rahui* to make three key points. First, I argue that while the Tongarevan Island Council has considerable de-centralised autonomy in terms of island-specific management practices, it is far from being a locally uncontested authority structure. Thus while the Island Council has the ability to decide that resources such as *pasua* require protection through *rahui*, they can't implement *rahui* without wider community support. This, I argue, is in part due to the precarious consolidation of authority that the Island Council represents as a centralised and colonial-inspired governance body. Secondly, while *rahui* as a
'traditional' technique has continued to be used on Tongareva since pre-contact times and is flexible and adaptive up to a point, its continued success as a management tool similarly depends upon the authority of the Island Council to impose, police and enforce it. Finally, I suggest that *rahu* itself is contested because it relies upon a framing of the lagoon-scape as a homogeneous space which, as demonstrated in the previous chapter, is itself part of the problem. In exploring the spatial nature of the power relations invoked by *rahu* and the boundary work involved in sectioning Tongareva lagoon into accessible and inaccessible zones, I assert that the planned *rahu* controversially supersedes the highly differentiated nature of the lagoon space.

An important contextual fact in this account is the nation-wide economic restructuring of 1996 described colloquially as the Transition. The proposed *rahu* would take *pasua* out of circulation in exchange networks which is problematic for many people on Tongareva who, post-Transition, have come to depend on selling *pasua* as a much needed source of income. While I explore this point in detail in the subsequent chapter, I proceed to discuss the economic changes associated with the Transition which I suggest, in the context of *pasua* and *rahu*, served to radically change the context of *pasua* use and management on the island. I argue that the various changes engendered by the Transition pose a fundamental challenge to the authority of the Island Council by encouraging, albeit indirectly, the use of *pasua* in enterprise initiatives which are incompatible with the suggested *rahu*.

I begin this chapter by exploring the legislative basis for the current Tongarevan Island Council and its responsibilities as the officially sanctioned local authority on Tongareva. Specifically, I consider the Island Council’s role with regard to the management of the Tongarevan marine environment and the changing context of the use of *rahu*. As discussed in Chapter Four, *rahu* is one of the key ‘tools’ that the Island Council holds in order to regulate access to species and environments. I focus on locally-held views that a loss of authority in the Island Council of Tongareva is impacting directly not only on the implementation of *rahu* to protect *pasua*, but
also on the regimes by which penalties for breaking rhutu prohibition can be policed and enforced.

In the second half of this chapter, I present people’s accounts of the 1996 Transition, which had widespread impact throughout the Cook Islands. My concern here is with how this economic and political restructuring is narrated by residents and their perception of the events that surrounded this significant period of change. Specifically, the analysis explores the links between the economic, political and social changes associated with the Transition and people’s views concerning the Island Council. Drawing from interview material collected, I consider the significance of the framing in the minds of the residents interviewed of the Transition as a key moment of rupture that distinguishes ‘traditional’ Tongareva from the ‘modern’ environment of resource use and governance.

6.2. The legislative context for the Tongareva Island Council

Since its inception in 1901 when it took over from the Hau, the Tongarevan Island Council has never been a politically neutral body. The Hau and the successive Island Council, as explained in Chapter Four, were essentially colonial instigated structures. They were designed to govern the island after the centralisation of the dispersed and depleted population and the ensuing breakdown in the Ariki structure. Campbell (1985) suggests that, at least initially, this colonial taint would have affected the ability of these structures of authority to enforce judgements. Moreover, he suggests that the men involved would have been susceptible to corruption in that they were simultaneously creator and enforcer of local laws. While, as detailed in Chapter Four, some of the resident LMS missionaries also attempted to assume paramount authority on the island, these positions were also tenuous and frequently exacerbated conflict between remaining lmaanga. Indeed, writing with respect to land disputes, Crocombe (1964) states that inter-tribal conflicts were most acute on islands such as Tongareva which, compared to islands such as
Rarotonga, had a very weak hierarchical 'rank structure'. Crocombe asserts that this social structure, particularly after the centralisation of the disparate population, led to “frequent disturbing fluctuations” (Crocombe, 1964 p162) that saw complete disregard for colonial laws established for the island, particularly where disputes over land were involved. The Island Councils were, in addition to fulfilling their roles as police and judges for the island, encouraged by the colonial administration to take on the role of mediator and manager of the trade relations that sprung up around the pearl shell in the lagoon and later the copra trade.

The significant point for the purposes of my research is that the contemporary Island Council exists as a local structure of governance that has, since inception, involved local conflict and a very particular colonial-inspired flow of power. In present day Tongareva, the structure and purpose of the Tongarevan Island Council remains generally unchanged since its inception. Although there have been a variety of legislative changes the Island Council remains equipped with the ability to establish by-laws, impose fines, and impose *rabui*. Island Councillors are elected by the Tongarevan people three-yearly and although women can technically stand for election, none have ever been elected reflecting local gender conventions (Materau Ford personal communication 9.8.2006). Island Councillors meet regularly and convene in Omoka. Any serious matters are generally raised first by individuals and if deemed serious enough by the Island Council they are then raised at a public forum where they are discussed and debated.

A key power of Island Councils is their ability to establish by-laws for the island. This role, established in 1901, continued unchanged through the *Cook Islands Act* (1915). In the *Cook Islands Amendment Act* (1957), however, by-laws made by Island Councils became subject to approval of the High Commissioner thus, Section 51 Point 3 of the Act reads: “no by-law made by an Island Council shall become law until it has been assented to by the High Commissioner” (see http://www.paclii.org/ck/legis/num_act/ciaa1957212/). In the *Cook Islands Outer Islands Act* (1987), there remains a clear hierarchy of decision-making powers but now any by-law made by Island Councils must first be approved by a national executive council in Rarotonga before
eventually attaining the approval of the relevant MP for the Island and finally ratification by Parliament. The present functions of Island Councils, then, are slightly ambiguous in that they enjoy relative autonomy in the Outer Islands context yet still require centralised Government approval for the establishment of any by-laws.

As a consequence Tongareva, as an Outer Island, has a system of governance that is at once 'local' but also clearly associated with legislative priorities of the central government based in Rarotonga. Indeed, while those distant from Tongareva may construe the Island Council as an effective structure reflecting 'local' interest and needs, this belies the varying social, political and cultural differences that the Island Council must negotiate in producing local decisions and courses of action (cf. Robbins, 1998). The colonial origins of the Tongarevan Island Council and its current relationship to both local and national structures of authority are important for understanding the varying levels of authority and respect garnered by the Island Council in its contemporary manifestation. This is particularly so with regard to its ability to institute rahui on paitu which forms the central focus of this chapter.

As discussed in Chapter Four, the *Cook Islands Outer Islands Act* (1987) frames Island Councils as responsible for resources and management of resource use. Alongside the responsibilities accorded Island Councils in managing the marine environment in particular, the *Marine Resources Act* (1989) serves as the cornerstone of Cook Island's control over fisheries resources.\(^{31}\) Responsibility for fisheries and associated resource matters is vested at a national level in the Ministry of Marine Resources (MMR) and it is the research and training division of the MMR that has nationwide responsibility for marine reserves and protected areas. Their management responsibilities on Outer Islands, however, are effectively devolved to Island Councils. The

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\(^{31}\) Other legislation targeted at environmental management includes the 2003 *Environment Act*, which provides legislation for the protection, conservation, and management of the environment in general, although this only applies to the southern islands of Rarotonga, Aitutaki and Atiu.
MMR has premises on Tongareva in the form of the Tongarevan Marine Research Centre (TMRC) which is where I stayed during my fieldwork. These premises consist of three houses where visiting technicians can stay and two laboratories where pearl shell spat is raised. While the TMRC used to employ up to 50 staff, at the time of my fieldwork there were only three permanent employees in part due to government cut-backs associated with the Transition, but also due to the difficulties in pearl farming on Tongareva (Mataora Marsters personal communication 27.6.2005).

Although the pearl industry started well in the early 1990s, an algal bloom in Tongareva lagoon saw much of the newly seeded pearl shell die and, coupled with increases in the price of petrol post the 1996 re-structuring, many families could not afford to keep such an intensive and costly industry going (Ian Bertram personal communication 12.7.2006). As such, this MMR outpost is seen locally as a site for technical and scientific interventions in the context of a very specific economic initiative - pearl farming. The actual governance of pearl farming, however, rests with the Island Council who holds responsibility for issuing licenses concerning the practice of pearl farming in the lagoon, as well as the imposition of restrictions on the use of scuba gear for the collection of pearl shells.\textsuperscript{32} The MMR’s interest in pearl on Tongareva is consistent with its wider priorities which are to develop fishery-related industries that have high potential for financial return (see http://www.spc.int/coastfish/countries/cookislands/mmr/island_info/penrhyn.htm).

The complex relationship between the TMRC/MMR and the Island Council was illustrated by an initiative suggested at the time of my fieldwork concerning the use of family milk-fish ponds.

\textsuperscript{32} The establishment of the TMRC itself was a highly controversial decision, particularly because many of the Tongarevan people believed that starting pearl farming would poison their lagoon, mistaking the pearl bead ‘nucleus’ for ‘nuclear’. This was associated with concern over the nuclear testing at Mururoa and on going at the time (Baar Tapu and Anale Tonitara personal communication 2006).
Milk-fish ponds are fresh-water ponds used for the rearing of milk-fish (*Chanos chanos*) and are found on many of the motu around Tongareva. All are ‘owned’ by individual families. In 2006, the TMRC made a proposal through the Island Council suggesting that they temporarily take over the management of these ponds to experiment with intensively raising milk-fish as bait for long-line fishing. At the Island Council meeting held to debate this suggestion, members of the public (men) stood in turn to orate their views on the issue at hand. The Island Councillors and Mataora Marsters who was representing the TMRC listened to the arguments and a vote was held to determine the TMRC’s course of action. There is no formal legislative requirement in the 1987 Act for such issues to be taken to a public meeting but my fieldwork confirmed that issues which affect the community as a whole are always debated at such public meetings and initiatives adopted only when this type of vote is taken. At the time of my research there had not been an equivalent public meeting held to discuss placing a *rahui* on *pasua* but, as I go on to discuss, it was widely understood that such a meeting would be required.

It was difficult to determine whose idea the *rahui* was. It was not, for example, a plan of action suggested by the MMR or the TMRC. It was also not an idea simply imposed by the Island Council. At the time of my research the idea of a *pasua rahui* circulated around the island; an issue of concern for the Island Council and a matter worried and negotiated by other islanders, a programme of action, however, that the MMR were not determining and in which they showed little interest. What was determinable is that all discussions about the ‘problem with *pasua*’ seemed to come to the matter of whether or not there should be a *rahui*. As such *rahui* seemed to operate as the default management structure for matters of environmental concern on Tongareva. In the next section of this chapter, I discuss the changing characteristics of *rahui* as a technique in the context of managing the Tongarevan environment.
6.3. The changing application of \textit{rahui}

The fact that the practice of \textit{rahui} remains in use on Tongareva is not insignificant, particularly as mentioned in Chapter Four, its use was explicitly legislated against in the Cook Islands as a whole through the 1908 \textit{Te Mana Ra'ui Act}. Moreover, that \textit{rahui} continues to be used in a marine context is interesting given that the 1915 Act stipulated that “[n]ative customary title shall not extend... to any land below the high-water mark” (Part XII section 419). Indeed, it appears that the isolated nature of the Outer Islands such as Tongareva, combined with the decentralised governance through Island Councils has meant that these islands enjoy relative independence in their decision-making processes one aspect of which is the persistence of \textit{rahui}.

The survival of \textit{rahui} also suggests something of its flexibility as a technique in responding to the changing situations and circumstances of the island as well as the ability of the islanders to make the most out of the cracks of recognition in the colonial systems imposed. As discussed in Chapter Four, in pre-contact times \textit{rahui} was a largely de-centralised tool used by individual families on a day-to-day basis to protect coconut crops, although in Lamont’s account there were also instances where large-scale bans were imposed by \textit{Arki} and \textit{taura} (priests) with the agreement of the \textit{huaanga} in order to prevent starvation.

Post-contact, with a shifting reliance on imported goods, the emphasis was placed on protecting the resources (pearl shell and copra) that fell at the centre of the newly established trade relations upon which island income depended (Buck, 1932). Responsibility for these trade relations were delegated to the Island Council (Campbell, 1985). A key part of their management role was declaring particular \textit{motu rahui} in order to let the coconuts re-grow for subsequent copra harvests. According to people interviewed during my fieldwork, \textit{rahui} was also used to declare certain parts of the lagoon closed in order to allow pearl shell to replenish with the last instance
of this type of rahui occurring in the mid 1990s (Papa Rongo personal communication 24.5.2006).

The way in which the Tongarevan people adapted practices such as rahui to the economic and social changes brought about by European contact is noteworthy. On the one hand, despite the seemingly negative hegemonic influence of missionisation and colonisation of Tongareva, the people were not simply passive in their reception of these forces instead responding actively and modifying them to suit their purposes.\(^{33}\) This, however, is not to imply that the Tongarevan people had total agency, as the 1915 Cook Islands Act best demonstrates. Indeed, as suggested in the Chapter Four, there were very specific socio-spatial restructurings of boundaries and settlement patterns in the post-contact period on Tongareva, which, when combined with the colonial-inspired creation of such bodies as the Island Council, served to change people’s relationships with pasua. Nevertheless, the continued use of rahui suggests a certain flexibility in terms of what such a designation could be applied to, although the basic premise of the technique remained unchanged.

In this respect, Hviding (1998) notes that customary mechanisms can be characterised on the basis of their flexibility and their ability to be applied to changing situations and circumstances. Although Hviding’s comments pertain to a Melanesian context, he suggests with regard to the use of Customary Marine Tenure (CMT) systems, that the success of CMT structures to adapt to change lies precisely in their unwritten and non-codified nature. This characteristic, he asserts,

\(^{33}\) These observations relate to a specific pragmatism noted by other scholars in relation to the alacrity with which Christianity, as one particular consequence of European contact, was adopted throughout the Pacific Islands. For example, writing with respect to the rapid conversion to the LMS inspired Christian faith that spread rapidly throughout the Cooks, Buck notes that “material benefit was associated with the new religion and, if such benefits could be obtained more readily by adopting that religion, why not adopt it?” (Buck 1939 p64 cited in Cowling, 2006 p30). Cowling goes on to cite the LMS missionary John Williams who made clear the relationship between missionisation and the subsequent expansion of commercial interests “Thus, wherever the missionary goes, new channels are cut for the streams of commerce” (Williams 1837 p583 cited in Cowling, 2006 p30).
enables such systems to retain the capacity to rapidly adapt to any sudden changes that might occur, be it in terms of changes to usage patterns or ecological conditions. CMT systems are therefore able to perform “functions in the modern context for which they were not designed” (Polunin 1984 cited in Hviding, 1998 p255). With respect to imposing closures on resources, Hviding further states that closures may not necessarily reflect absolute states of abundance or scarcity of a resource, but rather can be influenced by the “perception of market prices, available transport and other factors that affect the demand for and number of potential harvests of the resource in question” (Hviding, 1998 p263).

It appears, then, that there are many similarities between Hviding’s CMT systems and the flexibility in the way that rahui as a technique was used and adapted in the changing Tongarevan context. Significantly rahui continued to be used in order to conserve resources regardless as to whether they were valued as traditional (subsistence) sources of food or as sources of wealth and income. Moreover, although the structures by which rahui could be imposed had changed from dispersed kin groups to a centralised Island Council, the Island Council system depended on input from the Tongarevan people. Indeed, as I go on to discuss, the inclusive structure of the Island Council and the way rahui requires the agreement of the people it is attempting to manage in order to work, both function to ensure it is a management tool that cannot simply be co-opted by whoever is in power.

Thus far I have argued that changes associated with missionisation and colonisation, although changing the socio-spatial structures of authority in relation to land and resources, did not simply obliterate pre-contact knowledges and practices. Indeed, there were specific provisions for recognising these relationships and interests. Particularly on the Outer Island context of Tongareva the Island Council was able to function in a relatively independent, though not locally uncontested, manner. Rahui as a key ‘tool’ of the Island Council survives as an example of ‘traditional’ knowledge and management practice in relation to land, water and resources.
Rahui, however, is also a very 'modern' product in that it is a form of governing resources that sits within a radically socio-spatially restructured Tongareva. In this regard, tradition, contra to the way in which it is commonly deployed as the binary opposite to the modern, is not meant to imply a state of fixity, that which is unchanging or 'rooted'. Rather, as I go on to demonstrate, tradition as invoked by the people of Tongareva in the context of rahui is inherently dynamic, mutable and ongoing in its negotiation today. In the next section of this chapter, I explore how the specificities of rahui as a technique rests on particular spatial practices as well as requiring particular relations between authority and respect.

6.4. The politics of rahui and boundary work

Rahui works by 'bounding' or 'closing' either physical areas, for example motu in the case of copra, or areas of the lagoon in the case of pearl shell. These areas are protected by the invocation of tapu (sacred, prohibited) so that those who disobey or break rahui are subject to either physical or spiritual sanctions (Hoffmann, 2001). In pre-contact times, Tiraa (2006) discusses how on the southern Cook Island of Atiu, punishments for breaking rahui could be as severe as execution or banishment or having one's house and other property destroyed (Tiraa, 2006). Throughout the Cook Islands, breaking rahui was generally expected to be dealt with by community pressure or in post-contact times, by sanctions imposed by the relevant Island Council (Gilson, 1980). Rahui operates on the basis of very particular spatial practices, central to which is the establishment of a boundary. In this next section, I explore the boundary work that would be required in order to place a rahui on pasua in Tongareva lagoon.
6.4.1. Bounding the lagoon

In literature concerning sustainable management of resources there is a strong emphasis placed on establishing clearly demarcated boundaries in order to effectively govern access to and control over resources. For example, Wollenberg (2003), argues that boundaries in the context of forest management are key statements of the rights of a group to a particular resource as well being necessary in order to protect the resource in question. Boundaries, however, may not always be precise demarcations in practice, and may rely upon shared recognition of their existence and awareness as to their physical location. In a South Pacific context, boundaries are generally accepted as important in defining rights to land and access to marine resources (for example see Hviding, 1996; Aswani, 1999). In a Tongarevan context, boundaries were certainly important in defining *huaanga* rights to land. Lamont, for example, noted the existence of a wide gap of unplanted land extending from sea to lagoon between two 'warring' *huaanga*.

"After about half an hour's walk in a northerly direction, we arrived at a rugged, rocky ground - a perfectly barren space. The natives now urged me to return, and endeavoured to make me understand by signs that if I passed a certain boundary I should be killed. At the same time, the little girl and one or two women began to cry, and as I had no wish to offend their prejudices, I consented to return. I subsequently found that this was the boundary line between Omuka [Omoka] and Mutagohich [Motukohiti], two divisions of an island some four miles in length, which were at war with each other." (Lamont, 1867 p169. See also Plate 4-1 in Chapter Four).

While Lamont doesn't specifically mention boundaries in the context of the lagoon, Buck (1932) does describe how communal rights were exercised over the sea and lagoon. He states:

"Because of the small area of the Tongareva islands there are no large unoccupied back areas of forest land. What corresponds to hinterlands over which communal rights are exercised are the sea and the lagoon. Even within the lagoon, however, communal rights over shellfish grounds and rocks are exercised only by the local groups which live near them." (Buck, 1932 p58).

It is likely, as on other atolls in the South Pacific, that the communal rights of *huaanga* members to certain sections of Tongareva lagoon would have been delineated according to natural coral formations and rocks as Buck suggests, but also patterns of fish movement. D'Arcy (2006) for
example, suggests that marine boundaries tend to be demarcated by use-practices and an awareness of natural features such as coral formations which are often used as marker points (see previous chapter). Nihi Vini (undated), writing in a Tongarevan context, states that family ownership of land used to include the areas of the lagoon adjacent to the motu in question as well as the han ranga ika, or fish aggregates that were associated with the corresponding waters. This was also suggested in an interview with Manata Akatapuria, who described the existence of both land and lagoon based boundaries and how he understood them to have changed over time:

Charlie: Did land boundaries extend to the kaunibo [reef edge]?
Manata: No, they just go to the beach and across to the ocean side. But there are other boundaries that go from the reef and to the kaunibo. There are often small patches of coral that show where boundaries are. It may only be a small patch just beyond. Once, because we only have one piece of land on this side, my uncle called me over, and said 'I want you to know about this boundary'. He pointed to one of the passages in the reef. He asked if I could see a particular patch of rock, just outside the kaunibo. He said 'that's the boundary from here to this passage on the reef.' It was just a little channel on the reef that would come right up to the beach, and from that, all the way to the kaunibo. He told me to watch out for other people, and to tell them to make sure that they didn't fish in that zone. But there are no boundaries in the lagoon now.

As Manata's discussion makes clear, having an awareness of marine based boundaries relies upon a good understanding of the location and significance of particular coral formations, the knowledge of which are passed down within families. Manata's comments suggest that while boundaries may not be obvious, this does not mean they are not present and, particularly where they involve access to fishing grounds, they continue to be observed. As another example of this, I accompanied the Maretapu family out Hapuku fishing on my first visit to Tongareva and recall being astounded at the ease with which they navigated to a pre-set spot in the lagoon where an anchor rope lay waiting. I was told that different family groups each had their own specific spots in the lagoon, allocated along historical kinship lines, where they would anchor and fish. The Maretapu family were very proud of their spot because compared to the other boats anchored at points nearby they were bringing in the largest quantities of fish. The presence of fishing zones according to kinship lineage appears similar to other atoll
communities such as Ulithi atoll in the Caroline Islands where D’Arcy (2006) notes the large lagoon is divided into blocks according to districts. In this context, the most powerful lineage group controls the resources within the blocks, including allocating even more finely differentiated fishing zones. The key point here is that despite the erosion of marine-based boundaries in part due to historical socio-spatial restructurings and legislative changes, people still recognise Tongareva lagoon as having demarcated zones and, albeit informally, confine their fishing practices to such zones. Moreover, while these lagoon zones are less obvious to untrained eyes than terrestrial boundaries on Tongareva this does not mean they do not exist.

Boundaries on Tongareva can thus be understood as ‘hybrid’ social lines of demarcation. On the one hand, boundaries are known and practiced through traditional concepts and patterns of lineage, although in the contemporary context such knowledge is increasingly fragmented as claims to its ownership are eroded. On the other hand, respect for the importance of boundaries are a key part of the colonial structure of governing people and their use of resources via the Island Council be it copra, pearl shell or as in this case-study, pasua. For example, the proposed rahui on pasua harvest in Tongareva lagoon is both historical in conception but has features that are far from traditional. In the first instance, the rahui suggested would override different family rights to the lagoon by sectioning off a large area as a ‘no-go zone’. In the second instance, the social unit that is most active in this bounding is not fine-grained kin-groups nor considerations about pasua distribution but the two villages of Omoka and Te Tautua.

Discussions concerning the location of boundary for the suggested rahui were ongoing while I was present on Tongareva. The two options that appeared available were either dividing the lagoon from north to south or from east to west, in both instances using the coral head Te Rakau (literal translation the tree or marker) as a marker point. As mentioned in the previous chapter, the coral head Te Rakau is a key location in the lagoon, signalling the mid-way point between the two villages of Omoka and Te Tautua. As the distribution patterns of pasua
outlined in the previous chapter suggest, *passua* numbers are concentrated in the southern half of the lagoon. From my point of view, imposing the boundary of the *rahui* from north to south would make sense in that the *passua* in the closed zone could spawn and assist with re-populating *passua* on the adjacent side of the *rahui* boundary (Plate 6-1).

What I didn’t realise, however, was that dividing the lagoon in this manner would disadvantage one or the other villages on either side of the lagoon, as one would have open access to the lagoon at their beachfront, and the other, a no-go zone. Indeed, when I discussed the likely location of the *rahui* boundary with the Island Council, they asserted that the lagoon would be divided in half from east to west from *Te Rakau*. The south-side of *Te Rakau* would be declared *rahui*, and no one would be able to enter into those waters to harvest *passua* from the lagoon.

Plate 6-1: Approximate location of my suggested *rahui* boundary running from south to north in the lagoon (original image taken from google earth).
As can be seen from the above pictures, the boundary of the suggested *rahui* would close off the majority of the lagoon, encompassing all *kauniho, iuarai* and *toka* south of *Te Rakau*. The Island Councillors that I spoke to suggested the *rahui* would last for two to five years so the large-scale closure it creates would produce a no-harvest zone in the majority of the lagoon. If strictly enforced, the *rahui* would restrict people from entering these zones for the purpose of harvesting *pasua* for commercial purposes. People would still be allowed to harvest *pasua* 'for the table' although my understanding of this concession was that people would be restricted to do so from the *kauniho* near to the two villages.

Interestingly, the *rahui* as discussed by the Island Council appears to frame the lagoon as a relatively undifferentiated space. For example, the varied spatial topography of coral formations and how this affects harvest practice and *pasua* growth is not taken into account in the concept for the proposed *rahui*. Nor does the suggested *rahui* boundary (represented as a ‘straight’ line in both plates above) appear to acknowledge finer grained kin-based distinctions of access and use-
rights in the lagoon. Given the continued existence of family based fishing zones in the lagoon, and the wide variety of harvest practice structured around the different coral heads, the proposed rahui as conceived by the Island Council appears a rather blunt tool. In an interview with Twin Tonitara we discussed these characteristics of the mooted rahui. During the interview, Twin spoke of a proposal by the TMRC back in the early 1990s, to make the coral head Te Rakau a 'reserve'. Twin's husband, Arake Tonitara, was working for the TMRC at the time and was one of the key instigators of this suggestion, which certainly influenced the way in which she compared the rahui and the suggested reserve. Nevertheless, Twin's comments illustrate some interesting characteristics of rahui which were also hinted at in other interviews:

Twin: If we say 'reserve', then we know reserve means, like, leave this area don't touch anything in this area, but if we run out, if there is no more in the rest of the lagoon, then we know that there is some there in reserve. It's common sense. Oh it's alright we've got the reserve there, the pasua can spawn, oh we have it there! Maybe the word reserve is more, relevant than rahui. Rahui is 'don't go there!' Sometimes we misinterpret the term rahui. People say, 'who the hell are those Council people to tell me?' Some people aren't happy that the Council decide when to go...

Charlie: So rahui has a power with it, it implies that the Council have the power?

Twin: Yes the power to say 'ok everybody can go now'. But people think 'who the hell is the council to tell me if I want to go to my piece of land?' Rahui means 'don't go there! If we see you we'll tell the police, you're trespassing'. It's different with saying reserve. We've got used to the term reserve with volleyball, netball, rugby, we say 'oh reserve, someone's waiting! There's a reserve there'. So they're happy. With the term reserve they know 'oh! If we run out here, we have some in reserve'. They always think there is something there to look after, for them (laughs).

By contrasting rahui with her conception of reserve, Twin illustrates some of the key concerns with the spatial implications of rahui. Twin’s description of reserve conveys an inherent dynamism, pasua waiting 'in reserve', akin to the players of rugby and netball waiting on the

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34 With respect to the reserve, the TMRC had attempted to attain signatures from residents of Tongareva in order to take the issue to an Island Council meeting. The idea was to make the coral head into a reserve and thus prevent any sort of harvest from the area, be it pīpī pearl, normal pearl shell or pasua. The idea, however, was not well received and the reserve never got further than the petition. The failure of this TMRC inspired proposal was possibly related to the perception that it was an 'outside' decision, rather than something that had been suggested by the Tongarevan people in general.
bench until something untoward happens and they are brought into play. By contrast, she frames the rahui as entailing not only spatial exclusivity - 'don't go there' - but also suggests a re-configuration of the lagoon-scape into a temporary state of closure. The large-scale closure effected by the rahui implies the creation of a 'no go zone' which not only forbids the trespass of people in the closed zone, but removes the pasua from circulation in various networks of use and exchange. Twin's reference to land 'who the hell is the council to tell me if I want to go to my piece of land' is not an accidental slip. Twin's comment suggests that the closure of the lagoon would prevent people from travelling through the closed section and thereby preventing people from going to their family lands on the scattered motu. At least part of the problem with the suggested rahui, then, lies in the spatial consequences of bounding the lagoon. Rahui would set a precedent that would over-ride the complex spatial topography of ownership and interaction with the lagoon-scape.

Twin's contrast of the two terms rahui and reserve has significance at another level. In a political climate where there is a resurgence of interest in 'traditional' or 'customary' practices and management techniques (as described in Chapter Two), Twin's comments suggest that 'local' management solutions such as rahui can generate just as much discord within island communities as more explicitly 'foreign' or external solutions such as the proposed TMRC reserve. In this sense, local or 'traditional' management practices can not be treated a-priori as though they are unproblematically attuned to local needs and use patterns.

As the literature cited earlier in this chapter suggests, boundaries such as those which the rahui depends upon are bound up in particular configurations of authority. The suggested rahui, in order to attend to the 'problem with pasua', not only generates concerns due to the spatial implications associated with the boundary-work involved, but also because of the relationship it requires with the Island Council as the governance structure with the authority to impose rahui.
In the next section of this chapter, I examine the politics that surrounds the relationship between the Island Council and the suggested rahui on pauna.

6.4.2. Authorising rahui

Twin was not the only interviewee to express concern for the suggested rahui. While she and other people were worried about pauna, they were equally concerned that a rahui on pauna would fail if it wasn’t supported by the island populace as a whole. In particular, it was not uncommon for people to discuss their concerns pertaining to rahui by questioning how the Island Council would be able to enforce the proposed closure on the lagoon. In order to understand the significance of these contemporary concerns, it is useful to compare them with people’s memories as to how rahui functioned on Tongareva in the past.

In an interview with Mita Soatini, one of the policemen from Omoka, he gave an eloquent description of the use of rahui when Tongareva was still involved in the copra trade. The use of rahui to close down motu around Tongareva was functioning up until the early 1980s but ceased with the collapse in the copra trade. Mita’s comments are significant for they show how people were quite literally ‘called in’ to observe the rahui placed on particular motu in order to allow the coconuts to replenish:

Mita: I recall I was a young boy, the rahui was still enforced over here. I still remember the time when the papa would come, an old man, with a paati [slit drum], making a noise, calling out ‘the rahui, the rahui,’ and the name of the motu that would be closed. He tried to make everyone aware that there would be a rahui. Then there would be a public notice put up by the Island Council. Everybody knew there would be a rahui. And if the rahui is enforced, no one was allowed to go over to that island. As a kid here, I know, I still remember, the time when we go [to the island], everybody would say a prayer. A prayer for the rahui to close, and then, for the rahui to open.

As this quote from Mita illustrates, the ability to ‘call’ the rahui was contingent on the whole community first being aware of the planned closure and second, abiding by the spiritually
enforced sanctions, physically enacted by the people going to the site of the rahui and participating in prayer. Implied in his account is a community-wide recognition of the mana (strength, power) of the elders who would call in the rahui, and in turn, respect for the tapu (sacred) nature of the closed motu. As Mita testifies, the rahui would start by producing a closure not just on the coconuts, but closing off physical access to the motu in question. This bounding of both resource and surrounding area as tapu was achieved by the imposition of a normative rule that while relying upon community recognition and adherence, also depended upon the tacit recognition of the authority of the Island Council as the appropriate body to make such declarations and as having the right to punish those who disobeyed. Once the period of rahui was over, a prayer was again used to unbound the motu and open up the resource, once again allowing people to enter the area of land and harvest coconuts for copra. In terms of how the rahui works, then, the Island Council played a key role in terms of adjudicating the need for rahui, where this rahui was to be located, and how long it would last. This role, at least according to Mita’s account, appeared to be endorsed by Tongarevan society more generally.

As demonstrated in Mita’s account, the association of a spiritual sanction with rahui invoked by way of prayer was an important way in which the Island Council generated compliance. As explained in Chapter Four, the practice of rahui historically was intrinsically related to the concept of mana. As Gilson states: “mana denote[s] a quality which command[s] public recognition and implic[s] the ability to exercise authority... either directly or indirectly, through physical force or more subtle influences” (Gilson, 1980 p11). Pre-contact, mana was either viewed as inherited (through Ariki lines), or else could be earned in non-ritualised ways through acquisition of skills or knowledge. In the case of Tongareva, hereditary mana would have been limited with the dissolution of the Ariki line as a consequence of the Peruvian slave trade. Gilson (1980) further notes that social structures, albeit speaking with respect to a Rarotongan context, were generally the most stable where there were marked differences in levels of mana because this forestalled competitions for power or quarrels over land. Thus Gilson explains:
“Even when an alliance of mataiapo (lesser chiefs)... produced a political unit with sufficient strength to make a bid for material independence, their inferior ritual position led them to recognise the mana of their Ariki... thus ritual, political and economic power were interrelated in the case of each chief.” (Gilson, 1980 p14-15). Moreover, with the Island Council effectively a colonial authority structure created as a consequence of the LMS driven socio-spatial restructuring on the Island, mana was just as likely to have been associated with those involved with the Church. It is significant, then, that in Mita’s account, prayers were used both to close and to open the motu in question because the spiritual powers of the Church would have been key in asserting the motu as tapu. In sum, there was a complex relationship between authority and spiritual powers in generating an environment of compliance with rahi.

Comments made by other people interviewed suggest a considerable shift between how Mita recalled rahi to have worked in the past and the implications of placing a rahi on passua at the time of my fieldwork. Instead of the ritualised ‘calling in’ of the rahi of old, and the clear and unproblematic obedience to the bounded motu and resource in question, other people suggested that placing rahi on passua now would be problematic and difficult to enforce. In a group interview, for example, Tangaroa Tai and his friend Tini Ford debated this point:

Tini: Well for the passua, and how they are thinking of closing it now? I remember the last time, about ten or fifteen years ago, we started closing the shell, the mother pearl shell. They [the Island Council] closed the lagoon for two years. You know what happened? They never put someone in charge or whatever. People to look after the rahi. And by the time it came to open the lagoon, there was no shell! What was the point of closing it! What was the point? If they want to close it again now for the passua, they need to get everyone, or select a team, make them police the boundary of the rahi...
Charlie: and monitor it?
Tini: And monitor it, yeah.
Tangaroa: “But the main thing with the passua, they cannot close the passua without the people’s say.
Tini: That’s what I said before!
Tangaroa: Yes, they cannot do it.
Charlie: Because people won’t listen?
Tangaroa: It is the people who will say close the lagoon or keep it open. It’s the people who say. Not the Council.
Tangaroa’s comments hint at a considerable shift in the authority vested in the Island Council. He emphasises the need to have ‘the people’ involved in deciding whether or not to ‘close the lagoon or keep it open’. Moreover, if a closure was instated by the Council alone without the people’s say, Tini suggests that it would fail if didn’t also have people involved to monitor and enforce compliance. Indeed, concurrent with Tini and Tangaroa’s comments, it was not uncommon for people to suggest that the Island Council should formalise a *rahui on pasua* by creating a specific by-law. Take for example, the following suggestion from Twin Tonitara:

**Charlie:** Do you think people will respect *rahui* now?

**Twin:** If it’s a by-law. Only if it’s going to be a by-law. If it’s going to be a verbal meeting in the Island Council chamber over here, no. If it’s just a notice up on the notice board there, that the Council is saying there is no more *pasua* for selling, people won’t listen. People will just ignore that notice. But they will respect it if it’s a by-law. Because a by-law will give the police the right to check people’s boats and follow it up. Only if it’s a by-law. If it’s just a verbal thing, people won’t give a damn. They won’t listen.

Twin’s comments, echoing again the frustrations expressed by Tini and Tangaroa, suggest that it would only be through legal means, by the Island Council generating a by-law for the police to enforce, that people would adhere to a *rahui on pasua*. The power of the designation of *tapu nor* a ‘verbal meeting’ nor even a ‘notice’ appear enough to guarantee compliance with the restricted access planned for the lagoon south of Te Rakau. Twin’s comments suggest that *rahui* needs combining with alternatively authorised structures, that of the by-law. While the Tongarevan Island Council has had since its inception the legislative power to make by-laws, *rahui* has never required formalisation in the form of a by-law in order for it to be effective. Making the *rahui* a by-law would, as Twin suggests, make the enforcement of the *rahui* a matter for the police, and in turn anyone who broke the *rahui* would be punishable by law. The implication of Tini, Tangaroa and Twin’s comments is that the Council seems to lack the ability to monitor and enforce *rahui* in relation to *pasua*. This suggests a significant change in the ability of the Island Council to effectively govern the marine environment in the current Tongarevan context and
also implies that there may be specific features of the conventions of *pasua* use that make it resistant to *rahui*.

Concerns for the strength of practices such as *rahui* in a contemporary context are not unique to Tongareva. Writing with regard to the recently re-established *ru'iu* (Rarotongan for *rahui*) on Rarotongan, Tiraa (2006) echoes the concerns of Twin, that the *Koutu Nui*, a formalised group of *mataiapo* which sit underneath the House of *Ariki*, have lost the ability to punish people who fail to observe the five *ru'iu* areas established around the island. The Rarotongan *ru'iu* is an interesting case in point. The last *ru'iu* decreed in Rarotonga was in the late 1950s. Tiraa notes how the effort to institute *ru'iu* was part of a broader process to reinvigorate respect for both the authority of the traditional chiefs and the continued relevance of traditional practices and 'old ways'. The World Wide Fund for nature (WWF) were quick to support this initiative, as were local tourism bodies who saw opportunity to capitalise on their proximity to the protected areas. Echoing the comments of Twin, there is debate on Rarotonga as to whether the various *ru'iu* could be given legal recognition under the *Environment Act (2003)* which would make the *ru'iu* a matter for the Ministry and give the police powers to punish those who break the *ru'iu*. Many support this proposal so as to limit the number of infringements and thus to increase the effectiveness of the *ru'iu* in protecting the marine environment. While some members of the *Koutu Nui* are supportive of this plan, other members see the lack of respect for *ru'iu* as a lack of respect for the *mana* of the traditional leaders. They feel that giving *ru'iu* a legal basis would further erode this respect as it would foster an approach to conservation learnt by fear rather than by traditional conventions of *mana* and *tapu* (Tiraa 1996 p13).

On Tongareva, there were similar sentiments expressed. For example, in an interview with Papa Takake, Tiraa's comments regarding the connections between respect, authority, and *rahui* were reiterated in the context of the *pasua rahui*. For Takake, failing to support an Island Council
declared *rahui* amounts to an overall lack of respect; respect for traditional ways of running the island, respect for other residents and respect for the importance of wider social relations:

**Charlie:** How well do you think traditional laws and regulations like *rahui* have been working in recent years?

**Papa Takake:** Well, that's one thing, 'cause, during the past years, if people knew that part of the lagoon, or any *motu* been *rahui*, it's a *rahui*. They don't go there. They don't touch anything from there. They honoured the *rahui*. They honoured it. Not these days. This young generation, these new generations, they don't care to bother. A *motu* may be *rahui*, they go round there, and they might take something away. We don't know. But to my mind a *rahui* has got to be honoured. It is there as a *rahui* and it has to be honoured. Because by doing that, you will see the progress of the *rahui* and er, you will gain something from the *rahui*. But the *rahui* has to be honoured.

**Charlie:** So why do you think things have changed? Why do you think people are not so conscious about it anymore?

**Papa Takake:** Well, I think parents have got to say something to the children. What they have known during past days, and the benefits from those. They should tell this to the children. Give more education to their children to look after the island. Look after what is *rahui* on the island. Show them the traditional ways of running the island, or caring for each other you know. I think one thing is, that during these days, the modern people these days, they can't respect each other. I think that is important. You have got to respect each other, by not doing that, it means you don't see the importance of relations, you got to know all this. So it's very important to have our own traditional ways of running the island.

For Papa Takake, abiding by *rahui* is to acknowledge and participate in a broader ethic of care and responsibility for Tongareva as well as respecting the value in ‘our own traditional ways’. In his view, honouring *rahui* is part of an awareness and respect for the heritage of Tongareva which for Takake makes sense because *rahui* is designated in order that people will ‘gain something’. Takake is nostalgic for his memories of the traditional ways of running the island, contrasting the benefits of ‘past days’ with the changes associated with the climate of ‘modern’ Tongareva.

Indeed, many of the people interviewed during my fieldwork aligned issues to do with respect, authority and the act of *rahui*, with observations pertaining to the economic re-structuring that affected Tongareva in 1996. As noted in Chapter One, this restructuring targeted the public-sector workforce which was the main employer on most of the Outer Islands like Tongareva.

The term 'Transition', while actually derived from the name of the associated Transition Project,
is used colloquially to describe that entire period of economic and social change. In many interviews, the Transition was consistently cited as a significant point of departure between the ‘good times of the past’ and the negative situation of the present. Importantly for the concerns of this study, it was also often cited as the main reason why people had recently started to sell pasua for cash in Rarotonga as well as shifting the levels of respect vested in the Island Council, and by extension, rahi. In the next section of this chapter, I detail what was described to me as ‘these times of changes’ brought about by the Transition in order to explore how this economic re-structuring presented a significant challenge to structures of authority such as the Island Council and simultaneously engendered new views on resource use and management regimes on Tongareva.

6.5. These times of changes

The structural adjustment programme implemented on the recommendation of the Asian Development Bank (ADB) and New Zealand Overseas Development Aid (NZODA now, New Zealand Agency for International Development, NZAID) in 1996 had a wide-spread impact throughout the Cook Islands. One of the most immediate effects of the reforms implemented were the drastic cuts in public service jobs, with 57 percent made redundant on Tongareva alone. At the same time, the cost of basic items also increased dramatically as government subsidies were removed (Alexeyeff, In Press). As the Cook Islands’ census statistics portray, these economic changes engendered a large-scale exodus with outer islands such as Tongareva experiencing some of the most dramatic population declines (41.1 percent) (Tangimeta, 2003 p13). Even at the time of my fieldwork, many of the people who travelled down to Rarotonga for the 2005 Constitution celebrations had failed to return by my second visit in 2006, either picking up work in Rarotonga, or else moving on to join family now living in either New Zealand or Australia. Indeed, in the recently released 2006 census statistics, Tongareva experienced the greatest decline in population; while the Cook Islands as a whole experienced a
population increase of 8.6 percent, Tongareva's population declined by 29.7 percent taking it to the lowest ever population count (257 individuals) since the census began in 1902 (see https://www.stats.gov.ck/Statistics/CensusSurveys/censurvnav.htm).

Associated with the reforms was an NZODA sponsored project called the Transition Project. This project involved 'up-skilling' the public servants who were made redundant as a result of the reforms. The up-skilling involved the provision of training in small business enterprises focussing mainly on primary production associated activities such as market gardening or fishing. There was also an emphasis on tourism related areas such as craft production, and food and beverage preparation (Alexeyeff, In Press). One of the NZODA reports, for example, stated that "[a]griculture and fishing have been identified by government as two of the most viable sectors in which to generate new employment activity. Most of the enterprise assistance provided to public servants in transition has gone to creating self-employment in these two sectors." (NZODA, 1997 p9).

The reforms prompted a fundamental socio-spatial re-structuring, rearranging the spatial configuration of home islands and specifically producing a less insular geographic context for the seemingly 'isolated' islands. Indeed, in the Tongarevan context, out-migration drew the atoll into more complex webs of association as networks of families came to stretch far beyond the bounds of the island (Gershon, 2007). Siikala (2001) has argued that the ensuing migration was one of the only positive aspects of the reform programme. In his view, migration served to extend the reach of traditional structures of authority such as Ariki on Rarotonga, and Island Councils in the Outer Islands to include members of the Cook Island communities overseas. He argues that prior to the reforms, the national Cook Islands' Government acted as the mediator between the 'local' and the 'global' but after Transition this role was circumvented by the family connections that now spanned from home island and variously located diasporic community. For the island of Tongareva, however, while the Transition certainly stimulated a new geography
of home and kin, the spread of people seemed to attenuate the influence of the Island Council instead of strengthen it. Along with the post-Transition shift, came a change in the geography of kin-based gift obligations, the significance of which for *pasua* is discussed in further detail in the following Chapter.

As mentioned in the introduction to this thesis, the Transition was deeply flawed in its assumption that those who remained in the Cooks would cope with the dramatic job-losses by reverting back to more 'traditional' practices of resource utilisation. In an Outer Island context establishing new enterprises around agriculture was not practical, not in the least because of the limited land available for agricultural purposes and the high costs associated with transporting produce to and from the islands in a timely manner. Tongareva certainly has an abundant supply of fish but developing a formalised fishing industry would require considerable initial outlay particularly for the profitable fin-fish industry which requires considerable investment in boats and additional technology in order to make it a viable enterprise. As with agricultural production, there remain the difficulties and costs associated with getting fish out of Tongareva quickly in order to be sold fresh.

Moreover, people living on Tongareva have since the arrival of the LMS depended upon a range of imported goods such as flour, rice, milk powder, sugar and more recently different types of meat, diesel and petrol for transport as well as running the islands generator to support various domestic appliances. While people rely heavily upon the sea in order to provide fish and still utilise coconuts in a variety of forms, the sudden removal of much-needed income through the cut back in government jobs presented serious problems for the community. With no unemployment benefit to fall back on, the lack of jobs and the increasing price of goods has meant serious cash-flow problems for many of the islanders, particularly as their dependence on imported goods has not changed. The Transition, then, failed to take into account just how much had changed in terms of 'traditional' systems of production, while simultaneously making
it extremely challenging for people to develop new forms of self-employment due to the nature of the changes experienced.

Overall the reforms associated with the Transition served to achieve an environment of general scarcity; many people left in order to find work in Rarotonga, or to move to Australia and New Zealand again either to find work or to receive unemployment benefits. Those who remained were faced with the very real problem of finding alternative sources of income on an island where the government had formerly been the main employer. The new context of scarcity engendered by the Transition also led to a radical re-structuring of people’s relationships to their home islands and the resources at their disposal. Ironically, the practice of selling pasa’a which appeared to start soon after Transition (see Chapter Seven) was perhaps exactly the type of enterprise initiative that the Transition project intended.

The change in people’s views on pasa’a from being a special food for personal use to becoming a much needed source of income was in many ways a familiar pattern of change. As the first section of this chapter demonstrates, the people of Tongareva had frequently sought to make money from the resources at their disposal such as pearl shell and copra. In the case of the pearl shell and copra, however, commercialisation appeared to have consolidated the practice of rubui and the authority of the Island Council and encouraged the application of rubui as a centralised management tool for the entire island. My research seems to have captured something of this post-Transition transformation which was producing not only dramatic population movements and associated expansion of place, but also engendering significant attitudinal shifts with regard to both people’s views concerning pasa’a and in turn to the relevance and role of rubui.

For the purposes of my study, the Transition can be seen as a key moment in defining the problem with pasa’a circulating around the island at the time of my fieldwork. As I go on to demonstrate, people’s comments concerning the impact of the Transition suggest that decisions
regarding management practice are deeply embedded in these broader struggles associated with ‘making a living’ in order to cope with changing social and economic conditions. For example, Twin Tonitura framed the economic events surrounding Transition as causal factors in attitudinal changes pertaining not only the authority accorded the Island Council, but also to changes in the social and ecological environment of the island itself:

**Charlie**: How did structures like the Island Council operate pre-Transition? Was it stronger back then?

**Twin**: Yes, to me, it was stronger during those times, because they are elected by the people and the regulations, the by-laws, they were enforced. Everybody respects them. If the Council says don’t do this, everybody will know and respect it. Compared to these days I don’t think people listen to the Council. There is a big change. People don’t care, people take the law into their own hands, they say ‘who cares about the Council I’ll do what I want’. Not like in previous years.

**Charlie**: So why do you think that is?

**Twin**: I think it’s the changing environment, it’s the generational change. ... The young kids, they are taught with all the technology, new things ... they think they know more about things than the old people. ... They know more about New Zealand and Raro, and they develop ideas, they think ‘who cares’ if Mum’s mad with me, because when I go to NZ I’m going to look for work and earn some money’. They are living for the future. For that lifestyle in the future. Not any more the Penrhyn lifestyle. They say, ‘who cares’. There is a big change.

Twin articulates her experience of the Transition by describing a weakening of the power of the Island Council from being an institution that ‘everybody will know and respect it’ to existing in a post-Transition environment where ‘who cares about the Council?’ Twin relates this decline in island-based authority to a general lack of respect among the younger generation. The generational differences are illustrated for Twin by the presence of new technologies such as televisions (TVs), computers and freezers. By comparing her memories of an idealised ‘Penrhyn lifestyle’ to her interpretation of the aspirations of contemporary Tongarevan children who ‘have the same attitude as children raised in New Zealand and Rarotonga’, Twin suggests a distinct change in commitment to the home island. Indeed, for some the Transition has produced a feeling of powerlessness in resisting the seemingly inevitable economic and social consequences of the re-structuring where the easiest thing to do has been to leave. Among others it has encouraged them to seek out new ways of existing in the radically re-structured
environment which for many has meant ‘taking the law into their own hands’ and disobeying the Island Council. As she continued:

**Twin:** These social changes on the island, they affect the environment, the *pasua*, the fish, you know? Because of the increase in the cost of living, during the Transition, people don’t care about the by-laws, like what I told you before about the Council? If the Council say ‘don’t take any more *pasua*’, the people will say ‘huh, well who’s going to stop me? I’m going to get some *pasua*, send it to Raro, get some money for me.’ The people won’t listen, they don’t care, they want money and they need it. And that’s [selling *pasua*] the only source of income, the only way to make fast money. So it affects, you know! Even the fish, you’re not supposed to go to the passage with a spear-gun, but people want fast ways of fishing, they won’t even listen. It’s the social that’s changed people. That’s my opinion. It’s changed the way people act today. And also the cost of living, and all this technology and things, you want that, we want that flash house, a computer, fax, new freezer, you know? So people see these things now, and its money, they need money to have this, so it’s changing!

The sudden re-structuring of economic and social practices enacted around the Transition combined with the desire for the ‘trappings’ of modern life such as ‘flash houses’ encouraged people to seek new economic opportunities from the resources like *pasua* they have at their disposal. As suggested earlier in this chapter, this was precisely what the Transition project had intended. Twin emphasises the economic impacts of this change with explicit reference to the marine environment and a new desire to access species such as *pasua* ‘fast’ so as to maximise financial gain. Crucially, however, Twin suggests that the manner in which people operate and the ‘fast ways’ that ensue, affect not just the context of resource use, but also pose serious implications for the Island Council. Indeed, instead of the Island Council stepping in and acting as mediator and manager of the new economic opportunities presented by *pasua*, their role is not only unwanted but also made untenable in the post-Transition environment.

For Twin and others interviewed like Papa Takake, the hardships associated with life post-Transition have stimulated an almost romanticised longing for the past, a desire to return to times when respect for traditional structures of authority was still seen to be strong. It is important to note that I am not suggesting that the Transition amounts to a modern/traditional binary. Rather, I am signalling the power of the Transition as a moment of subjection (Gibson,
2001), a change which has produced a feeling of radical discontinuity between the ‘past’ and the ‘future’ on Tongareva due to the change in the context of resource use and people's relations to structures of authority.

6.6. Conclusions

This chapter has shown through attention to historical and contemporary changes to Tongareva, that people’s views concerning techniques such as rahui are closely linked to the strength of authority structures and the relationships that people maintain with different resources at their disposal such as pasua. By tracing the changing use of rahui over time, I have attempted to show how decisions pertaining to rahui are often embedded in contestations that reflect local struggles, but how these too are linked to social relations that stretch beyond the locality in question. In particular I have attended to how, as an institution, the respect afforded (or not afforded) the Island Council is indicative of wider processes of economic and social change. This chapter has thus attempted to contextualise contemporary events and processes ongoing at the time of my fieldwork in light of pre-contact and post-contact events and associated political relations.

Rahui is, in a sense, the default tool the Island Council uses to manage the practices surrounding resource use on Tongareva. I suggested that as a management tool rahui works by particular spatial practices central to which is the establishment of a power-laden boundary. I suggest that part of the controversy concerning the mooted pasua rahui relates to the boundary work that would close off a large section of the lagoon and, in so doing, override different harvest practices and kin-based ownership-rights. My focus on the politics of the Tongarevan rahui, then highlights the power laden and hybrid nature of this ‘traditional’ technique and in many ways serves to challenge the romantic notion that practices such as rahui are more effective resource management tools because they are sensitive to local needs.
By contrasting the way in which rahui worked in the past with people's concerns as to how it might fail in the present, I explored the relationship between changing levels of respect accorded the contemporary Tongareva Island Council and associated concerns that a pasa rahui would require formalisation as a by-law. People interviewed appeared to be pushing for a 'hybrid' rahui, one that still worked on traditional principals, but had the added strength of legal protection in order to garner the necessary compliance. In contrast with those who believed the rahui structure required legal enhancement, were interviewees who expressed nostalgia for the Tongareva of past where respect for the Island Council was still strong. In this regard, I argued that the recent economic and social changes associated with the Transition represented an integral part of both the problem with pasa in the first place, as well as the difficulties faced by the Island Council in attempting to impose rahui. My analysis explored how the economic changes associated with the Transition created a radically re-structured social and biophysical environment on Tongareva. I suggest that pasa and rahui are emerging as problems on Tongareva because they are getting pulled into a broader debate about existing in an economically deprived community post-Transition. As I go on to explore in the next chapter, my research captured this negotiation in process. Significantly, while the Transition project encouraged a shift in the way pasa was used on Tongareva, it simultaneously eroded the ability of the Island Council to maintain its role as the manager of these new trade relations.

In the next chapter, I return to people's material interactions with pasa. Alongside the new ways of relating to pasa stimulated by the Transition, pasa have always featured as a key item in exchange practices. Returning back to my earlier premise, that environmental management requires a shared understanding of the problem at hand, I consider how certain instances of selling pasa can dislodge the seemingly entirely negative effects of the Transition and illuminate the complex relationships that people maintain with each other, with species such as pasa, and how these relate to the practices of rahui and environmental management on Tongareva.
Chapter 7. Environmental Management and the Politics of Exchange

7.1. Introduction

As explored in the previous chapter, the Transition was viewed by many as a key circumstantial change that altered the context in which rahui could be applied. Post-Transition there were new demands placed on pasua as a source of much-needed income and the Island Council’s role in managing the marine environment appeared more tenuous. Many people left Tongareva in order to seek work, and as I show in this chapter, so too did gift obligations broaden as the sea of families spread. In seeking out people’s interpretations of the ‘problems with pasua’ I encountered diverse views with respect to the need for rahui. Decoding this diversity required that I start to understand the role of pasua in the complex social relations surrounding gifting practice. As I explain, while selling pasua was suggested as having started just the year before my fieldwork, there has always been a history of harvesting pasua for gift exchange. In what follows, I explore how pasua is mobilised in different exchange trajectories and the importance of these gift exchange practices for the maintenance of kinship ties and wider social relations.

A key focus of this chapter is on the tensions that have manifested around different uses of pasua and specifically, sending pasua as gifts to family or friends versus the practice of sending pasua to be sold in Rarotonga. As suggested at the outset of this thesis, many people on Tongareva have come to depend upon selling pasua in Rarotonga as a means of generating much-needed income, and yet harvesting pasua to be sold was consistently cited as one of the primary drivers of the ‘problem with pasua’. I argue that while sending pasua off the island may seem to exacerbate the problems faced by the Island Council in managing pasua on Tongareva, examining the complex justifications for particular instances of pasua harvest and exchange can shift the framing of the ‘problem’ considerably. Indeed, my analysis of the complex and
contested relationships people maintain with each other and pasua vis-à-vis exchange practices, brings to the fore a new geographical context of identity relations that has direct implications for the establishment of rahui and compliance with such a designation.

In the first section of this chapter, I focus on the affective relations embodied in the practice of gifting food. I specifically explore the significance of pasua in reciprocal relations spun between Tongareva and the diasporic Tongarevan community. I pay particular attention to the discursive framing of pasua as 'God’s Gift', and explore how many people understand ‘God’s Gift’ to suggest something that must be taken advantage of for the benefit of the Tongarevan people. Following on from previous chapters, I discuss the ways in which religion, as structured through the Cook Islands Christian Church (CICC), operates as a political terrain through which pasua and the lagoon are framed. I also explore the manner in which different exchange networks serve to shape the socionatural identity of pasua and become key to the building of charisma for both pasua and the island. I go on to detail the distinctions made between gifting pasua and more recent exchange systems that mobilise pasua on Tongareva as a saleable commodity. Such use of pasua is discussed in relation to different village-based views regarding legitimate uses of pasua. It is observed how these views are shaped by tensions between what certain individuals see as beneficial for their villages, as opposed to the island overall.

7.2 Apinga aroha: to give it for love

Flies are lazily threading around my ankles as I wait amid the heat and laughter for the plane back to Rarotonga to be loaded. Rosa calls me aside and presses a warm plastic-bag bundle into my hands. “Don’t let Warwick see”, she whispers. “Give it to my sister Gertrude, she’ll be waiting at the airport”. I smile and add the parcel to my pile of bags and begin the hugging and

35 Warwick is a New Zealander who runs both the Meteorological station on Tongareva and is also the Air Rarotonga representative on the island responsible for ensuring the plane’s load is within the weight guidelines.
kissing of farewells. Four hours later, I'm blinking in the cool Rarotongan drizzle and gasping at how big Gertrude’s pregnancy has grown since I last saw her. “Oh, pasua!” she exclaims in delight and gratefully takes the parcel of cooked clam from me to take home for her and her brother Poe to share. For Gertrude and Poe, both now living in Rarotonga, the parcel of pasua, still warm from her mother’s frying pan, is simultaneously a gift of love and an edible reminder of home. For Rosa, it is a chance for her to share the bounty of Tongareva lagoon with her brother and sister no longer living on the home island.

During my time on Tongareva, I witnessed a constant flow of food and other goods, arriving and leaving on every boat and coming and going on each flight of the sporadic Air Rarotonga planes. While the range of goods that can be sent down south from Tongareva is relatively limited, these exchanges are by no means one-sided. For each freezer of chops, bread and chicken to arrive on the Maunga Roa, another would be sent in return, filled to the brim most often with pasua, but also with parau (pearl meat), hapuku (cod) and other local delicacies (see Plate 6-3). The practice of sending distinctive food stuffs, often those which are unavailable elsewhere, to family and friends is common practice throughout the Cook Islands. As the work of anthropologists Epeli Hau’ofa (1994) and Margaret Jolly (2001) among others point out, these flows of goods are part of larger reciprocal relations. As Hau’ofa argues these exchanges may appear at first glance to suggest local dependence on diasporic communities but just as often “homeland relatives... reciprocate with goods they themselves produce... this is not dependence, but rather interdependence (Hau’ofa 1994 p157).36

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36 Although Hau’ofa is writing in response to the arguments that MIRAB economies are unproductive systems (see Chapter One), his quote gestures to the positive and elaborate social relations that are created and sustained by such gifting practices.
Anthropologist Kalissa Alexeyeff (2004) has explored the wide range and variety of food stuffs that are exchanged between family and friends in Pacific Island cultures, and the informal rules that structure such practices. Alexeyeff reminds us that while such gifts certainly embody love (or in Maori *aroha*), neglecting to send gifts can be a serious breach of the unspoken obligations that are involved in gift exchange. The double meaning of term for gifting, *apinga aroha*, is significant as *aroha* in most dialects of Cook Islands Maori means both love and to give (for example, in Tongarevan Maori *kura aroha ana au iaia kiti sei poreho* translates as 'I have given him/her a cowri shell necklace (Shibata, 2003 p20). *Apinga*, or in Rarotongan Maori, *atinga* as mentioned in Chapter Four, means to pay tribute, or to levy goods, hinting at the need to reciprocate with another act of exchange. The performance of gifting, therefore, according to Maori etymology involves far more than just the simple act of material exchange.

Plate 6-3: A freezer of food is lifted off the *Maunga Roa* onto Omoka wharf (Source: C. Chambers)
The reciprocal bonds that are created and maintained in the process of gifting can be understood as a vital part of a broader “economy of affect” (Besnier, 1995 p99) that flows throughout the Cook Islands. Indeed, particular foods (such as the pasua sent down to Gertrude and Poe now living in Rarotonga) convey not just familial love but also help sustain a feeling of connection to home, family, place and culture. As explained in Chapter One, there are now twice the numbers of Cook Islanders living abroad as there are in the archipelago and, especially post-Transition, very few Tongarevans still live on their home island. As Bell and Valentine (1997) discuss, food consumption plays a vital role in the maintenance of identity and history for such diasporic communities where the consumption of particular foods not only serves to reinforce, but also to construct, reminders of place and identity. Similarly, the work of Nadia Seremetakis (1994) deals with the important role played by food in enabling sensory experiences of place and historical connection. She asserts that cultural identities are embedded in the “reciprocities, aesthetics and sensory strata of material objects” (Seremetakis, 1994 p3). Extrapolating for Tongareva it is possible to see that for islanders living away from home, gifts of food are vital in the maintenance of connections to their home islands, and important in the sensorial construction of their memories of home. With regard to the movement of pasua in exchange networks pasua takes the ‘place’ of its origin with it in very important ways. Pasua sent to family and friends no longer living on Tongareva becomes much more than simply food, taking on significance as the ‘love food’ that Alexeyeff speaks of because of how and where it is ‘placed’.

While not always attending to the important role of food, much anthropological work has emphasised the role of gifts in maintaining bonds created between persons through the act of giving a possession (see for example Mauss, 1969 [1924]; Parry, 1986; Carrier, 1991; Hagen, 1999; Goddard, 2000). Mauss in his classic text *The Gift*, which looked at the practices of giving in Polynesia, Melanesia and the north-West coast of North America asserted that bonds created by ‘things’ are actually bonds between persons since “the thing itself is a person or pertains to a
person... it follows that to give something is to give a part of oneself” (Mauss, 1969 [1924] p10). He goes on to note that “[t]he thing given is not inert. It is alive and often personified, and strives to bring to its original clan and homeland some equivalent to take its place.” (Mauss, 1969 [1924] p10). Anthropologist Jonathan Parry extends Mauss’ interpretation of the gift arguing that the general principle to be taken from his work is that there can be no absolute disjunction between people and things because gifts “[create] spiritual bonds between persons by means of things which embody persons” (Parry, 1986 p457). Parry's reading of gift exchange points to the importance of understanding the exchange of *pasua* and other food stuffs distinctive to Tongareva, as both creating and sustaining broader social relations.

Mauss also showed how the giving of gifts was part of a system of power, again hinting at the obligatory nature of gifting practice, suggested above. Moreover, and crucially for my analysis on the significance of *pasua* in networks of exchange, Parry’s reading of Mauss down plays Mauss’ original emphasis on the significance of exchange practice for the building of charisma. As such, it is also important to consider the place-people-thing relation in terms of what gifts are sent, and why. As Alexeyeff suggests “… food [is] not simply [a] symbolic lubricant of economic exchange, but [has] material and affective exchange value in and of [itself]” (Alexeyeff, 2004 p70). For example, sending family or friends a gift of *pasua* from Tongareva lagoon is doubly significant not only because it achieves the conveyance of familial love, but also because serves to enhance and produce the charisma of the person, place, and species exchanged. This is particularly so when the foods that are sent overseas are those which are rarely available elsewhere. Indeed, in the case of *pasua* from Tongareva, although it grows on the nearby island of Manihiki, there was a *rahu* on *pasua* on Manihiki at the time of my fieldwork, making *pasua* even scarcer throughout the Cook Islands as a whole. The status of Tongareva and its people is enhanced every time the delicacy of *pasua* is shared with someone else offshore as well as the bountiful nature of Tongareva lagoon as one of the few places in the Cook Islands where *pasua* grows and can still be taken in large quantities.
In recent years there have been a number of travelling groups (tere pati) from other islands who move between the different Cook Island communities. These groups bring gifts from their home island and receive gifts from the host island in return. Previously these groups from other islands had been prevented from visiting Tongareva (whether by isolation or other reasons), so such visitations were relatively new. In an interview with Baar Tapu these groups were mentioned in the context of pasua harvest: As he explained:

Baar: We first opened our doors to the Outer Islands to come up here in 1994. Mangaia was the first island to come up as a tere pati [travelling party]. Before we’d never allowed other islands to come. I don’t specifically know why, but it was never allowed. If it was a tere pati, it had to be a Penrhyn tere pati [diasporic group returning home]. If it was a group, it had to be government group, but a pati from another island, it was never allowed.

Charlie: What did they bring from their island?

Baar: They brought things like taro, baskets, manioc, stuff we can’t grow but things that they had. So, when they went, we gave them something. It was like a customary thing, when they left we gave them a gift. This gift was pasua. So after Mangaia came, next was the Mauke tere pati, and then Atiu and then Mitiaro. We’re still waiting to know when Rarotonga and then Aitutaki are going to come.

Charlie: Why pasua specifically as a gift?

Baar: Because they don’t have it on their islands. And it’s one of their favourite things. Southern group islanders love seafood, fish. It’s not as abundant down there as it is here. They’ve got a higher population, they haven’t even seen some of the fish that we have. They’ve never seen fish like we have before.

For visiting groups pasua were gifted because of their preferential status as a rare species in the southern Cooks. Pasua in such gift exchange constitute a key aspect of the unique identity bounty and charisma of Tongareva compared to the other islands of the Cooks group. Baar’s comments also explain the importance of food in reciprocal gift practice and the key role of pasua in such acts of exchange. In another interview with Rio Taika, an Island Councillor from Te Tautua (see second half of this Chapter) he also discussed the amounts of pasua taken by these inter-island tere patis. Rio explained in a similar vein to Baar’s comments that while pasua were not specifically requested by the visiting tere, they were presented as the main gift from the

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37 Tere pati literally translated means as a verb, to tour in a group, or as a noun, to describe a tour group from other islands. More detail on the significance of tere is given below.
island because of their preferential status as an important food due to their scarcity and their role in building charisma for Tongareva:

Charlie: So how much *pasua* did the different *tere pati* come and take?
Rio: You know, I'm telling you the truth, Mangaia took about 40-50 barrels and...
Charlie: That's plenty!
Rio: Plenty. And Mauke, took about the same
Charlie: So, I don't understand, did they ask to come here for *pasua* specifically?
Rio: No, they didn't, but they wanted to eat it. That's their favourite meat while they were here. So the Island Council thought about it, and decided that *pasua* would be the gift from this island. There was no other thing that they wanted to eat. That's what they wanted the most.

At the time of my first visit to Tongareva, I witnessed the large quantities of *pasua* that were being sent to Mangaia (Plate 6-4) This *pasua* was harvested by a Tongarevan *tere pati* to take to Mangaia as part of a reciprocal arrangement that followed the original Mangaian visit in 1994.

Plate 6-4: Barrels of *pasua* waiting to be loaded for the 2005 Mangaia *tere*. (Source: C. Chambers).
An elaboration of the charisma bound up with sending pasua from Tongareva is the framing of both the lagoon and the pasua it supports as 'God’s Gift'. Early on in my fieldwork, for example, I recorded the following observation in my fieldnotes - “...two delegations of islanders from Tongareva are travelling to Mangaia and Rarotonga, taking large quantities of pasua with them as gifts and from what I can tell, as examples of their national pride; pasua being 'God's Gift'.” This spiritual framing adds another dimension to the problem with pasua discussed in Chapter Five as well as issues pertaining to structures of authority explored in Chapter Six. Not only are there cultural obligations to be met in the practice of sending food, but the harvest of pasua explicitly for the purpose of sending away, is also justified by locals as part of one's religious duties to God, not only doing God's work but also quite literally helping to share God's bountiful love expressed as pasua.

The framing of a particular resource as a gift from God is also implicated in the justification of either complying or failing to comply with the rules for protecting important species like pasua. Since the arrival of the LMS on Tongareva as detailed in Chapter Four, there continues to be considerable authority both moral and otherwise invested in the Church and Christian ideals of love and sharing have blended with older practices around meeting familial obligations through gifting (Crocombe and Crocombe, 2003). For example, the CICC Minister for Tongareva, Reverend Aratangi, claimed that there would be no need to rahui the pasua so long as people harvested pasua ‘in the proper way’:

Charlie: So what do you think about the closure, if they rahui the lagoon? Do you think they should?
Rev. Aratangi: I don’t think so.
Charlie: Why? Do you think there’s plenty of pasua?
Rev. Aratangi: That’s a hard question to answer. To me, the ocean is owned by God. And He gave all those things to help us with our life. He gave all those things for love.
Charlie: So what happens if people take too many?
Rev. Aratangi: It’s their fault. I think, if you take just for, for your friends, sharing the love of God, He will refill what is taken from the ocean, with the power of our mighty God. If we do it in the proper way.
Charlie: So what is the proper way?
Rev. Aratangi: The proper way is to give it for love
Charlie: So not to sell?
Rev. Aratangi: I don’t think so. I don’t think that is why He gave us those things. He gave that for love. So we have to return it by love.

As the Reverend’s comments suggest, many of the people of Tongareva understand divine ownership of the lagoon to be vested in the hands of God. The ocean, the lagoon and the pasua are framed as representing His love for the people of Tongareva. These ideas of divine ownership and responsibility are important for if as the Reverend suggests God has given these things ‘for love’, so too in the eyes of the Tongarevan people, is there a spiritual imperative for them to share this love. This imperative to harvest in order to share is not only morally justifiable, but, if the motivation for taking the pasua is ‘proper’, in the spirit of ‘sharing the love of God’, then there is no need to place rahui on the lagoon. As the Reverend states, “God will refill what is taken from the ocean... but only if we do it in the proper way”.

This framing of the resources from the lagoon as gifts from God is not to imply that they can be freely appropriated by anyone who visits the island. Indeed, Kristine Maretapu (one of my initial hosts on the island), articulated the principles of a broader ethos relating to resources and possessions which she dubbed the ‘Tongarevan way’. This ‘way’ encompassed a set of rules applicable to both locals and visitors that structured what can be taken, by whom, and from where. According to Kristine, God’s Gifts’ were to be freely shared, so long as there wasn’t personal financial cost borne as a result. She illustrated this principle to me by asking if I understood why she would ask people to pay for fish that her family had caught, but she would give pasua away freely:

Kristine: Do you know why we share pasua but not fish? No commonsense idea why? The difference between the fish and the pasua is that the pasua is already there. You don’t need to run around after it. Yes, you need petrol to go far out to the areas in the lagoon where it grows, but once you’re there, you don’t run around in the boat to catch it. You just go there and use your own energy to catch it, but with the fish, no! For fish, you go out there in your boat and you run after the fish. And this uses a lot of petrol.
Embedded in Kristine's comments are quite explicit rules governing the appropriateness of certain reciprocities. As she states some resources require more work to harvest and so require that work to be remunerated according to the personal financial cost borne. Her comments also hint at the spatialised nature of such rules. To 'go far out' and 'run after' the fish is a costly exercise requiring more time and petrol as opposed to the more sedentary practices involved in *pasua* harvest and part of recognising this 'work' is through direct remuneration.

In a similar way, no one interviewed in the course of my research ever expressed concern with the practice of harvesting *pasua* 'for the table'. Even in discussions with people most in favour of imposing an immediate *rahui* on Tongareva lagoon, it was made clear that they would only support the *rahui* if it did not prohibit people from harvesting *pasua* for their own home consumption. For example, in an interview with the government representative for the island, Papa Takake, I queried how he envisaged the *rahui* taking into account the diverse reasons behind *pasua* harvest:

**Papa Takake:** We don't really want to *rahui* the whole lagoon without leaving any *pasua* for the table [for people to eat at home]. We're looking to stop, you know, exploiting the *pasua* so that we will always have it here.

There is a strong moral undercurrent, then, that frames both people's views on the appropriateness of particular harvest practices, and the need and justification for such protective techniques as *rahui*. The 'proper Tongarevan way' involves doing God's work, acknowledging and sustaining the affective relations embodied in exchange practices as well as practicing an awareness and adherence to the spatialised rules that structure *pasua* harvest. In this regard, it is interesting to consider how sending *pasua* off the island to be sold appears to both comply with but also pose a challenge to these gifting practices that constitute 'giving it for love' and the framing of *pasua* as a gift from God.
7.3. Moral ambiguities and the *pasua* commodity

The practice of selling Tongarevan *pasua* for money has been stimulated by changes associated with the Transition and according to my informants started just before the year of my first visit to Tongareva in 2005. One snap-lock bag of *pasua*, for example, can be sold for approximately $10 NZD in Rarotonga with each bag containing according to estimates, around 15-20 *pasua*, depending on the size of the shell harvested (see Plate 6-5). Tongarevan *pasua* is particularly popular in the southern Cook Islands because of its scarcity not only due to localised extinction on some of the southern islands, but also because of a *rabui* placed on *pasua* harvest on the northern island of Manihiki. People living on Rarotonga are thus happy to pay good money for this delicacy. In an interview with Tini Ford he stated that it was not uncommon for people to occasionally ‘smuggle’ *pasua* off the island to sell in small quantities but it wasn’t until the 2005 Constitution celebrations\(^{38}\) that the widespread selling of *pasua* began:

**Tini:** The group that were going down to Raro for the Constitution celebrations, they took *pasua* there to eat and live off, but when they arrived there, they didn’t want to eat it, they decided to sell it out! They should have taken it down there for their families, or to give to people who helped them by providing food, or whatever. To give in return to the people for goods. But then, they announced it on the radio; *pasua* from Penrhyn Island, from the terepati, is going to be sold, they were selling it to the public.

**Charlie:** And what did people here think about it?

**Tini:** Well, that’s when people started to say, well we don’t want to close it (*rabui* the lagoon). We want to go ahead, take *pasua* and sell it for money.

**Charlie:** When was this, 2005?

**Tini:** Yes, just last year

As Tini’s comments suggest, the decision by the *tere pati* to sell the *pasua* that would normally have been used to sustain them, or to repay other friends and family who gave them assistance or provided them with food on Rarotonga, was controversial. Not only did their decision to sell the *pasua* break with existing gift practice, it also challenged unspoken rules as to the appropriateness of selling God’s Gift. This problem was placed into sharp relief because the

\(^{38}\) The Constitution celebrations refer to the yearly commemoration of the Cook Islands independence, as mentioned in Chapter One.
whole community of Tongareva had pitched in to harvest the *pasua* that was sent down with the Constitution *tere pati*. That collective effort was now being appropriated by those in the party who sold the *pasua*. The act of selling shifted the status of the clam from being a gift from Tongareva into a monetised commodity benefiting the individuals at the Constitution celebrations as opposed to the Tongarevan community as a whole. Although this move was controversial, once the precedent of openly selling *pasua* for money had been set, it was widely seized upon and the economic gains from selling *pasua* used as further justification variously to either place or withhold a *rahui* on the lagoon.

Plate 6-5: Individual zip-lock bag containing approximately 15-20 individual *pasua* (Source: C. Chambers).

For the residents of Tongareva with limited income opportunities, particularly post-Transition, the precedent for selling *pasua* set by the Constitution party was seen firstly as the production of a market that they might exploit to their benefit and secondly, as justification for all families to participate in this fast and highly profitable means of generating income. On the other hand,
however, it suggests a fairly rapid moral restructuring that enabled the people to appropriate God's Gift and turn it into a commodity. Significantly, however, although the act of selling pasua appeared to usurp prior gift practices, Tini explained that even the act of selling pasua still required the presence of a reciprocal social system:

Tini: People here make friends, they have friends in Raro who can sell the pasua for them, they make an agreement, I'll send a freezer of pasua, you sell my pasua in Raro, send my money and I'll pay you, or give some pasua for that friend, in exchange for doing the selling.

The ability to sell pasua down in Rarotonga while predicated on the popularity accorded a scarce resource was only enabled by prior relations between the Tongarevan people who were seeking to sell pasua and either family or friends living on Rarotonga. While pasua changed into a cash commodity, the labour of selling the clam remained in a reciprocal context in that friends or family required recompense for the labour involved in selling pasua. Thus although the selling of pasua, as I go on to suggest, played a key role in shaping pre-existing gift economies, it also built upon the presence of these exchange-related connections in important ways.

As suggested in the previous chapters, the debates ongoing at the time of my fieldwork concerning the varied reasons for harvesting pasua, were contentious. Indeed, the lack of consensus over both justification for continuing to harvest pasua or preventing harvest suggests that my fieldwork occurred at a time where these debates over pasua and rahui were still in the process of being resolved. In the course of interviews, however, a common message that people were keen to convey was an overriding concern for the large-scale harvests of pasua destined to be sold in Rarotonga. Not only did people frame these harvests as presenting the greatest threat to future pasua populations in the lagoon, in the following interview with Twin Tonitara, she framed the decision to sell pasua as an act of individualistic selfishness, contrasting it with more appropriate community-oriented practices and beliefs:
Charlie: So what did people think of the move to sell the *pasua*?
Twin: The Island Council had a meeting, because some of the people some of the people were complaining to the mayor, to the Council that it's not fair because we never used to sell the *pasua*. Some people are getting greedy now, making money, wanting to sell the *pasua*. But if all of us get the *pasua* and sell it, who knows what might happen in the future? We might lose the *pasua*. Who knows? That's the main issue. We want the Island Council to stop it. To preserve the *pasua*. Leave it for our future generations. If all of us go and get *pasua*, send it down to Raro on every boat, send it, send it, how many freezers will we send! We might be like Aitutaki. No more *pasua*. Some people are trying to put a stop to it, but some you know, they don't care. But they want money, they don't really care. They think who cares if they finish the *pasua*. They think as long as they get some money, they want to buy things!

Twin’s comments highlight the uncertainty that surrounds the new relationships developing around *pasua*—‘we never used to sell *pasua*’, ‘who knows what might happen in the future?’. People on Tongareva know what happened to the *pasua* supplies on other islands such as Aitutaki, for it is in part this scarcity on other islands that is stimulating the lucrative market for *pasua* down in Rarotonga. Although ‘some people are trying to put a stop to it’, Twin suggests that those who continue the wanton harvest of *pasua* to sell in Rarotonga are no longer exhibiting commitment to their island. In line with Twin’s comments, in the course of overheard gossip it was not uncommon for me to hear certain families described disparagingly as being ‘greedy’ by staying out in the lagoon too long, or by being obvious as to the large amounts of *pasua* they had harvested.

Unsurprisingly, despite the seemingly widespread practice of harvesting *pasua* to be sold, very few individuals that I interviewed were forthright about their personal harvest practices. Their reluctance suggests a certain degree of unease about openly discussing forms of exchange that are connected to money (however see Parry, 1989; Toren, 1989) and most people were quick to assure me that they were sending their *pasua* as gifts for friends and relations, despite other people telling me that ‘so and so’ were definitely sending *pasua* to be sold. One individual who did agree to speak openly about his intention to sell *pasua* requested to remain anonymous and asked that I take notes instead of record the conversation. He, like the Reverend, asserted both the lagoon and *pasua* as gifts from God, but unlike the Reverend, argued that it was entirely
appropriate for him to make the most of what God had provided him through selling *pasua* for his personal benefit. This man’s views were illuminating for they troubled the seemingly clear-cut moral distinction that the Reverend was keen to present. At the same time, justifying selling *pasua* by appeal to God is further recognition of the contentious status of *pasua* as a commodified resource.

According to Toren’s anthropological analysis of the moral value of money in a Fijian context, money becomes morally perilous when its use calls into question the “ideal distinction between commodity and gift and thus [calls] into question existing social relations” (Toren, 1989 p144). On Tongareva, it appears that I captured something of this process of negotiation. *Pasua* which was once securely framed as a species to be gifted is now being taken up as a commodity to be sold. This process is uneven in that some appear to sell compared to others and ambiguous in that some are open about their selling practice, but others are less willing to disclose their practices. The selling of *pasua* has therefore generated a series of moral ambiguities about community versus individual resources that at the time of my fieldwork were still in the process of being reconciled.

Here, Gezelius’ (2004) analysis of the role of community compliance in fishing communities is useful. Gezelius presents empirical findings concerning the degree of compliance with state fishery regulations in two separate fishing communities, and analyses them as a series of morally-based choices. He argues that fishing activities aimed towards supplying food for the good of the community tend to be regarded as ‘morally innocent’. By contrast, any economic activities geared towards large scale commercial purposes, and those that were based around monetary exchange with people outside of the community were viewed as ‘morally perilous’ by the community as a whole (Gezelius, 2004 p626). In the Tongarevan context, people’s views on *pasua* harvest are not so easily compartmentalised, but there are certainly some similarities regarding the moral ambiguities that have sprung up around the sale of *pasua*. As Papa Takake’s
comments earlier on in this chapter suggest, harvesting pasua for the table is the most basic and uncontroversial use of pasua. Harvesting pasua to use it as food neither requires payment for those who have gone out in the boat (as Kristine explained), nor is it perceived as a key source of the ‘problem with pasua’. By contrast, harvesting pasua to be sold down in Rarotonga requires travel to particular sections of the lagoon, and works to change the material status of pasua into something that can be sold.

This example illustrates the moral rupture and antagonism produced by the opening of the market in pasua and the ways that the Tongarevan community are struggling to accommodate the associated changes, provide an appropriate moral infrastructure for it, manage the exchange network so that pasua do not disappear from the lagoon and ensure that some people do not benefit from the resource over others. In this regard, it would be fair to suggest that the rahui is not just about saving pasua, but is also about regulating and governing those individuals who have strayed from the God’s Gift structure of relating to pasua and entered into the commodified system for personal gain.

So far, this chapter has explored the role of gifting pasua and the affective relations embodied in such acts of exchange. I have argued that there are varied reasons behind sending such lagoon-based resources as pasua down to Rarotonga as gifts for family and friends, and that these are embedded in a complex moral framework. In the next section I examine a very particular instance where pasua was being sold by the residents of Te Tautua for the purpose of raising funds to buy a new tractor for the village. This narrative account of harvesting pasua to be sold is illuminating for it simultaneously highlights a very different interpretation of the ‘problem with pasua’ and suggests that the people of Te Tautua are negotiating broader intra-island inequalities that have particular consequences for their views on rahui.
7.4. Redefining the 'problem with *pasua*; *rahui*, *tere patis* and the Te Tautua tractor

On a clear day standing alongside the post office in Omoka, you can just see the lumps of Te Tautua village on the other side of the lagoon, a distant view, misted with spray. To reach Te Tautua from Omoka usually takes forty minutes by boat, depending on the speed of the motor and the swell on the lagoon. On particularly rough days, people do not even bother trying to cross. Te Tautua village is quiet. The bay in front of the village is thick with sharks, lazily cruising the calm water, sheltered from the strong winds that blow across from the ocean-side. Not many people live on Te Tautua now. The school has just one teacher and the pupils are few.

Rio Taika, one of the two men that represent Te Tautua on the Island Council, recorded 57 people, including children, when he last did his personal census of the village population. He keeps this record to monitor how many people are leaving his village. Every year, he tells me, the number staying on the island gets less. I was eager to interview Rio because, unlike the other members of the Island Council from Omoka, he did not appear to support the idea of instituting *rahui* on the lagoon. Moreover, I had heard that he was directly involved with some of the large-scale harvests of *pasua* that were destined to be sold down in Rarotonga.

Early on in our interview, Rio expressed frustration with the lack of opportunities for his people, and the difficulties of living in his village. From his perspective, it was Omoka, the settlement across the lagoon, which enjoyed better resourcing and the majority of facilities such as the post office, a full time doctor, and the bank. Rio explained that his people were struggling in particular to maintain their village given that the only tractor on the island was also over in Omoka. He argued that his village needed their own tractor in order to dump rubbish and shift heavy goods.
Plate 6-6: The village of Te Tautua, viewed from lagoon-side. (Source: C. Chambers)

Rio had considered taking this issue up with the Island Council, but with Te Tautua having only two votes on the Island Council, he felt it was simply easier to organise his village to do their own fundraising rather than trying to pass a motion which might fail to receive the necessary support from the Omokan dominant Island Council. His plan was to fundraise enough money to enable people from his village to travel down to Rarotonga and onwards to Australia and New Zealand, visiting Cook Island communities and performing songs and dances and in turn, collecting money so as to raise enough funds to purchase the tractor that he believed represented the salvation of his village. As he explained:

Charlie: So you’re specifically going to fundraise?
Rio: Yes, for buying tractors and loaders. Yes, my thinking is that I need to do that, to organise a team to go for fundraising money. To help buy this equipment and sort out our village. But I don’t know. If I get through the next [Island Council] election, if I get another term, I’ll try to put this tractor to good use. I don’t want to sit on my bum! People have put me in this role; I can’t get money for nothing! I always say that in our meeting. We don’t look forward! But we have to look forward for our people and our kids. So get into it! Ask for help! I’m telling you, all my life I believe in God...
Charlie: You’re quite happy to stay here, and make a living and keep the village going?
Rio: Yes that’s what I’m thinking. Never mind those people who are going leaving the island. I’m trying to build this place! So I don’t know but God knows.

Rio’s portrayal reflected a hard-working personality, dedicated to God and to ‘helping his people’. While many of his people were leaving the village, either moving across to Omoka or emigrating to Rarotonga or beyond, Rio had chosen to stay and ‘help build the place’, aided by his belief and trust in God. The longer-term sustainability that Rio hoped would be gained by purchasing a tractor for his village was in his view predicated on immediate action. In order to purchase the tractor however, this required Rio and nearly all the remaining villagers to leave the village en-masse, travelling by boat down to Rarotonga and then onwards to New Zealand and Australia, moving between the diasporic communities of Tongarevans now living away from the home island.

Tere means both to travel or tour in a group. As a noun it can also be referred to as a tere pati or travelling party (pati being a neologism of the English party). As noted, tere can also be used to refer to a visiting group from other islands. Tere is a phenomenon unique to the Cook Islands, although one which is yet to receive much academic attention. According to Crocombe and Crocombe (2003), and commensurate with my observations on Tongareva, tere usually have an explicit fundraising purpose, and are often associated with church activities. In the case of the Te Tautua tere the travelling islanders would perform songs and dances to the communities they were visiting and in return, receive money that they would put toward purchasing a tractor. Undertaking a tere is thus an important community event for not only does it require fundraising in order for the home group to leave, it also serves to re-forge bonds between friends and family living overseas. For Rio’s people to start this fundraising trip, they needed fast money to pay for their boat fares down to Rarotonga and flights overseas. Rio had decided the quickest way to get

[39] It is interesting in and of itself that Rio and his village viewed purchasing a tractor as such an important move for his village. It would be interesting to pursue specifically what it is about the tractor that makes it such a symbol of prosperity for Te Tautua but this is beyond the scope of the current study.
the money was to harvest the abundant *pasua* found to the south of his village and sell it in Rarotonga.

Charlie: So for your *tere*, you’ve been harvesting a lot of *pasua* to sell in Rarotonga?
Rio: That’s why, that’s the reason why we’ve been selling *pasua* in Rarotonga. That’s also why I’ve asked the Island Council at our meeting, not to close it [the lagoon i.e. impose a *rahui*]. As I was saying, there is no other way for people here to get money. The [pearl] shell is gone, the pearls are gone. So, this is the way, a good reason for us to make money to get people to pay their fare. That’s the main reason. So… what can I say! Give it to the people, for my people here. You see? They need to go to Rarotonga, but where are they going to get the money to pay for that travel? This is our *pasua* and our home. Who else are we growing this *pasua* for? For some other guy from some other island to come and take it for free? That’s not a good idea!

Rio spoke passionately of the need for his people to make the most of the resources that were available to them. He understood his people living on Te Tautua as doubly disadvantaged by living on an island where economic opportunities are few and in a village on the other side of the island from the main administrative centre. In his view, selling *pasua* was the only way to get the cash needed to sustain his village in the long term. Not only does Rio frame the *pasua* has something that ‘we have grown’ but also asserts distinct rights to *pasua* as a resource that God has bestowed on his people, contrasting the potential for his people to sell it in Rarotonga, with people from ‘other islands, coming to take it for free’. This is a significant comment, because it illustrates quite a different representation of *pasua* no longer as God’s Gift to share freely with other people, but now framed as an individual resource that God has provided, for the people of Te Tautua to exploit for their own gain.

Unlike some of the people interviewed on Omoka, Rio’s justification for continuing the harvest of *pasua* was based on the fact that it was necessary to assist the Te Tautua community for which he is responsible: ‘give it to the people, for my people here’. In this regard, his comments emphasise the importance of identity and allegiance; differences not only between Tongareva and other islands, but also different identities and priorities that exist between the two villages of Te Tautua and Omoka. These tensions between what Rio sees as beneficial for his village, as opposed to the island overall, are significant and, given that Tongareva now has such a small
population, it is easy for an outsider such as myself to overlook the political and social differences that exist between the two villages on Tongareva. Indeed, Rio's comments are evocative of the pre-colonial hititangata enmities described in Chapter Four. Most importantly, however, Rio's refusal to support the rahui, which he views as a prerogative of the Omokan dominant Island Council, signals a distinct re-definition of the 'problem with pasua'. Indeed, while there appears to be a terrain of conflict on Tongareva between gift commitments and individual exploiters, Rio intends to exploit pasua with a collective in mind, a collective that sees itself disenfranchised and under-resourced vis à vis the Island Council.

Embedded in Rio's statement are significant views concerning the use of pasua in gift exchange. When he asks 'who else are we growing this pasua for? Rio is referring to another type of tere discussed in the first section of this chapter. Rio's comments, however, clearly imply that he views the inter-island tere patis as taking pasua in a manner that he feels fails to benefit his people in any tangible way. By contrast, Rio's pasua harvest is justified explicitly as being for the benefit of the people living in Te Tautua. By selling this pasua that the people of Tongareva have 'grown', this is a chance for Rio to do God's work, to make the most of the resources available to him and simultaneously re-dress the economic inequalities between the two villages. In this regard, Rio was against the suggestion that a rahui be imposed on the lagoon until after he and his village had completed the large-scale harvest of pasua and attained enough money to begin their tere. Significantly, Rio did not disagree with the rahui in its entirety, but did question the timing of the closure:

Rio: They [the Island Council] are forcing me to this motion [to rahui the lagoon]. But I don't think it's fair. The pasua is what God gave us, to eat and give it for you. But we are in a time of trouble. We don't have any [unemployment] benefit. So, keep the lagoon open. Allow us to sell the pasua, for our benefit in this time of need. And anyway, when our tere pati comes back, we will close the lagoon. Rahui. So that's our reason. We didn't have any other income for us to help us overseas, and now we're closing the pasua? No! We have the right to use it. That's the only way. That's why I'm arguing for the pasua to be open for our people to sell. To help with our fare. We aren't killing the pasua for any other reason, to open up new markets (laughs), No. That's not why we are doing this, we are doing it to help ourselves.
Rio's comments openly reflect the frustrations he feels for his village coping with 'no [unemployment] benefit', no 'other income', trying to exist in a 'time of need' where they feel disenfranchised by the Island Council and the changes engendered by the Transition. Crucially, Rio signals that his reason for wanting to sell the *pasua* is not to 'open up new markets', rather, he is seeking to engage in a temporary commodification of *pasua*. The money that Rio would obtain from this act of commodification is justified in that it would enable his village to participate in another form of exchange practice - that of *tere* and the reciprocities structured around the performance of songs and dances for the diasporic Tongarevans. *Pasua* funds would be used, therefore, to seed this second more sustainable economic initiative in which a cultural resource is traded in return for donations and payments that would enable the villagers to 'help' themselves.

Rio's comments pertaining to the planned *tere*, and his views concerning the appropriateness and timing of *rahui* on the lagoon place the problem with *pasua* in a different spatial and political context. Although people interviewed from Te Tautua were concerned about decreasing yields of *pasua*, the main 'problem with *pasua*' from their perspective is posed by the *rahui* limiting their ability to harvest the clam for short-term strategic purposes. The priority of the Te Tautuan people is using *pasua* in order to seed another more sustainable activity that could not only 'rebuild' their village (through the purchase of a tractor) but also provide an important opportunity for villagers to visit relatives, rekindle ties and call in remittance-style payments from diasporic Islanders. The suggested *rahui* is not supported by Rio because his allegiance is to his village which he views as doubly disenfranchised in the current system. Although an Island Councillor, his loyalties are not to the island as a whole, but rather to 'putting the tractor to good use', to supporting his people who put him in the role of Island Councillor for Te Tautua in the first place.
Rio's comments serve to illustrate the uneven and contentious moral and material terrain of post-Transition Tongareva. As can be read in his comments, the Transition served to re-shape people's relationships to the *pasua* growing in their lagoon, and to the authority structures that are invested with the responsibility to manage them. In this sense, debates over *pasua* and *rahui* reflect broader conflicts over existing in an economically deprived island, and the finer-grained manifestations of these inequalities within the island as a whole. On the one hand, this example is evocative of other environmental management 'problems' where communities appear to end up privileging 'immediate needs' over ostensible 'ecological realities' (cf Larrue, 2006). On the other, it suggests that the problems with *pasua* and the conflicts over *rahui* emerge concurrent with political struggles concerning loyalties to place circulating around Tongareva. It is important to recognise then, that the 'community' of Tongareva is not a homogenised cohesive whole, fixed in a state of geographic isolation by the boundaries of Tongareva's coral rim. Rather, the island supports a diverse range of interests fluctuating in their relations to the resources at their disposal and the techniques such as *rahui* designed to manage them according to shifting trajectories of exchange. Indeed, the various exchange networks that surround *pasua*, embody many of the different threads of this thesis. Crucially, it suggests the complex relationships that people maintain with each other, with species such as *pasua* and how these fluctuate over time are at the core of why people debate *rahui* and what it means to 'do' environmental management in this context.

### 7.5. Conclusions

In this chapter, I have presented a detailed exploration of the different ways in which *pasua* are taken up in the complex practices of gift and commodity exchange. *Pasua* is shown to be highly valued both within and without Tongareva in a number of different although not mutually exclusive ways. The varying exchange networks that surround *pasua*, particularly those concerning *pasua* as a monetised commodity, have become intensely politicised in the post-
As I have explored in this chapter, they are embedded in debates over what is beneficial for individuals living within the island, various village collectives and the island as a whole. Indeed, for Rio and his people living on Te Tautua, the problems surrounding *pasua* and the need for *rahui* have become an emblem of broader economic and social inequalities faced by Tongarevans who remain on the home island.

This chapter began by examining the affective relations embodied in the practice of gifting. I explored the symbolic and instrumental values of *pasua* in reciprocal relations spun between existing residents on Tongareva and diasporic communities in Rarotonga and beyond. *Pasua* sent down to friends or relatives in Rarotonga is never just food, but represents a tangible, edible reminder of home. As God's Gift, *pasua* is imbued with moral value and so too are practices of reciprocal exchange encouraged and justified. The charisma bound up in gifting and selling *pasua* is predicated in the rarity of the clam throughout the Cook Islands, and simultaneously, serves to emphasise the bounty of Tongareva lagoon and the generosity of the people who, in combination with the lagoon, gift produce.

My fieldwork appears to have captured *pasua* in the process of transformation. The comments from interviewees concerning the different valuations of *pasua* as either God's Gift or monetised commodity, hint at the complex and contentious nature of the debates surrounding this change. Crucially, my analysis suggests that this process of transformation is not linear; *pasua* is shown to be enrolled in networks of competing relations of valuation but none of these are necessarily mutually exclusive or fixed in their trajectory. On the one hand, the people of Tongareva post-Transition were encouraged to seek out new enterprises from the marine resources at their disposal, but, having discovered the presence of a relatively lucrative market in Rarotonga there is increasing pressure from within the community to preserve the resource via *rahui*. 
The second half of this chapter focussed on a very particular case of exchange practice and resistance to the *rahui* considered by the Island Council. The story of the Te Tautua tractor illuminated an alternative framing of the 'problem with *pasua*' and suggested an instance of a strategic moment of commodification, predicated on the need to raise funds to buy a tractor for the village of Te Tautua. Although it is widely acknowledged that environmental management decisions are driven by an array of economic and cultural factors (cf Cinner, Marnane *et al.*, 2004), it is less clearly explored how these sociocultural factors have a clear spatial dimension. Rio's story illustrates how decisions to variously harvest or impose *rahui on pasua* is embedded in and produced by particular social relations that are inextricable from questions of place. Many Te Tautuan people left Tongareva not only because they were living on an island where post-Transition jobs were few, but also because they were living on the opposite side of the lagoon from the main administrative centre of Omoka. In a sense then, Rio sees his people as doubly affected by the island-specific consequences engendered by the Transition.

While on the one hand, the risks involved with selling *pasua* are of great concern to the people of Tongareva, as inter-island economic opportunities decrease, so too do some people on Tongareva see it as vital to keep utilising their resources in order that their island life may be sustained in the future. My fieldwork period ended before Rio and his *tere pati* had left to travel down to Rarotonga. After I had returned to Edinburgh, however, I received a letter from a friend who told me that the *tere* had been a great success, raising over $100,000 NZD, more than enough for Rio to purchase a tractor and other equipment for his village. The village was in great spirits, I was told, and things were looking up. I was unable to find out if the *pasua* harvest for sale down in Rarotonga continued.
Chapter 8. Bounding the Lagoon: Conclusions

For a relatively sedentary organism, *pasua* is remarkably mobile, capable of travelling great distances between the watery domain of Tongareva lagoon to places as far away as New Zealand. As *pasua* travels, it takes the place of its origin with it, the salty essence of Tongareva lagoon, as well as traces of the affective labour associated with its initial location in the lagoon-scape, subsequent extraction and entry into the social networks of exchange. *Pasua* embodies what Raffles terms a “transformative translocality” (2002a p159), the ability to retain a deeply localised and particular signification of place despite its trans-local nature.

This ability for species such as *pasua* to bound beyond the narrow coral rim of Tongareva lagoon, to be simultaneously local and inextricably connected to “innumerable elsewheres” (Raffles, 2002b p329) is an important insight of this research. Indeed, for a study that began by questioning what exactly was ‘local’ about the ‘problem with *pasua*’, it was soon apparent that the answer implicated processes and events that were linked into issues and practices at multiple spatial scales and differing geographical locations. The relational approach upon which this thesis is based has used the metaphor of boundaries to signal these bounded (localised and localising) and bounding (reaching out and extending) socio-spatial logics. As this thesis has explored, these relations serve to place both the island of Tongareva and the *pasua* which grows within it, in very particular ways. In this concluding chapter, I reiterate the main contributions of the thesis, suggest limitations of the research and recommend further avenues for investigation.
8.1. Placing *pasua*.

At the outset of this thesis, I framed my study as an examination of the intensely politicised practices that surround harvest of *pasua*, variously valued as a staple food and gift item, and more recently, a lucrative source of income for an economically deprived community. The focus for this analysis was Tongarevan people’s views over the need for and appropriateness of a harvest closure on *pasua*, facilitated by the use of a ‘traditional’ technique of *rahui*. I sought to understand how these events unfolding in this corner of the South Pacific could simultaneously challenge and inform ideas as to what it means to ‘do’ environmental management in a South Pacific context. My research turned out to capture a complex process of transformation in which *pasua* was fluctuating between gift and commodity; this fluctuation requiring a new form of hybrid *rahui* through which flowed the contentious politics of socio-economic change. The ‘problem with *pasua*’ was revealed to be multiple competing problems as a consequence of these wider processes of socio-economic change. Problems that were demonstrated to be contextual and situated both in terms of where *pasua* grows within Tongareva lagoon, as well as how *pasua* comes to be mobilised in networks of exchange.

In Chapter Two, I sketched out the theoretical arguments that underpin the analysis of the empirical material in this thesis. In my critique of TEK and associated literature, I sought to highlight a range of epistemological and ontological impediments. Notably I drew out the way TEK perspectives on environmental management fall into two approaches to knowledge. On the one hand there are studies that are predicated on assimilating ‘local’ or ‘traditional’ knowledge within the epistemological framework of ‘science’. On the other there are those TEK studies that privilege local knowledges as somehow more attuned and appropriate for conservation practice. I outlined in detail an alternative epistemological and ontological framework based around a relational understanding of space, place and power. I utilised this
relational perspective in order to identify and analyse the socio-political-ecological nexus that produces the complex politics of *pasma* management on Tongareva.

In reflecting on the methodologies that enabled this investigation, Chapter Three explored the benefits of combining qualitative social science and quantitative physical science techniques in order to attend to the different dimensions of the case-study. In so doing I attempted to apply theoretical arguments concerning the situated nature of all knowledge, thus ecological ‘facts’ were not used to verify social ‘beliefs’, but rather both were treated as equally valid if differently empowered forms of knowledge. In Chapter Four, I detailed key historical events on Rarotonga and Tongareva pertaining to missionisation and colonisation in order to provide a historically informed context for the subsequent analysis. I demonstrated that Tongareva exists as an island with a very distinct identity despite experiencing colonial-inspired changes that were common throughout the Cook Islands. I explored how the unique pre-contact social structure of Tongareva combined with key changes engendered by missionisation and colonisation have had lasting effects on practices such as *rahui* and the efficacy of the contemporary Island Council.

In Chapter Five, I argued that the problem people described pertaining to *pasma* was not as simple as declining numbers, decreasing yields and smaller clams as a consequence of people harvesting *pasma* to sell in Rarotonga. Rather, my analysis served to show the diverse and multiple problems with *pasma* and how these different interpretations were entangled with broader socio-political issues, particularly those associated with the 1996 Transition. As my reflection on the differential geographies of *pasma* in Chapter Five suggests, these problems are contextual, and situated in a complex politics of knowing and practices of spatialisation. For example, it matters very much precisely where in the lagoon that *pasma* are found, both for people like Mama Wait seeking *pasma* for her daily *kai kai* but also for those harvest parties seeking large quantities of *pasma* to send away. The varying nature of the ‘problem with *pasma*’,
then, is bound up with different spatialised patterns of *pasua* growth and harvest practice and must be examined in light of the different social relations that produce it.

By enacting the quantitative survey of *pasua* abundance and distribution in the lagoon, I revealed a certain ambivalence of the Tongarevan people to my science-based ecological imaginaries. Indeed, it was soon apparent that my ‘science’ was ill-equipped to deal with the heterogeneous nature of the lagoon space and how this affected patterns of *pasua* growth. Crucially, my study was unable to examine how this translated into harvest practice, or to explore how *pasua* numbers had changed over time. My reflections on the limitations of my survey, however, are not meant as a simplistic critique of my poor survey design or a more ill-conceived dismissal of ecology as though it were inherently a ‘bad science’. Rather, my reflections on the survey are intended as a consideration of the gaps between field-practice and data creation and, in the light of the contested nature of the problem(s) itself, the need to move beyond an epistemic privileging of science as though it is better able to account for the ‘ecological realities’ of environmental management problems.

Nevertheless, the survey was useful in producing a wide-range of important discursive insights. As a result of attending to local knowledges and expressions that circulated in and around my science in action, I came to see and later to map, a local system of knowing and naming the lagoon. In this chapter, then, I also argued for an understanding of Tongareva lagoon as a ‘lagoon-sc ape’ neither natural context nor social construct, but a place formed from the complex intermingling of social relations and biophysical peculiarities as shaped through space and time. At any one time, this sociocultural lagoon can operate as justification for the varying practices adopted in relation to the continuing harvest of *or rubui* on *pasua*. In terms of future research, it would be extremely useful to repeat the survey of *pasua* taking into account the topography of the lagoon and stratifying the survey accordingly. Moreover, it would be interesting to further
investigate harvest practices in greater detail through the use of Catch per Unit Effort (CPUE) techniques and to trace harvest efforts over time.

At a more general level, my research speaks to the differential empowerment of knowledge, particularly in terms of how knowledge is variously authorised in practices of environmental management. On the one hand, scientific knowledge assumes a certain authority to speak of and for the biophysical environment. Similarly, local knowledges are gaining a certain currency as being more attuned to and appropriate in environmental management practice. This thesis has sought to move beyond the reification of the local and the traditional as used in the context of TEK approaches to environmental management while simultaneously challenging the epistemological superiority accorded science. My argument in this regard suggests that what counts as knowledge is inherently situated. Knowledge of pasua is always in process, circulating according to scale and circumstance, emergent in the intimate practices of harvest and daily interaction with the lagoon-scape. Ultimately, the ability for certain discourses concerning the nature of the problems with pasua to emerge as dominant is a consequence of fluctuating power-relations and structures of authority. The most visible manifestation of this was people’s reactions to the suggested rahui which in itself was a very particular invocation of the problem at hand.

8.2. Politics of governance

A key aspect of this research was attending to the manner in which environmental management decisions are related to structures of authority and relations of power. In Chapter Six I considered the ways in which changes to management practice both reflect and serve to constitute changes in structures of authority and, moreover, how ‘traditional’ practices and the social context in which they operate, are challenged and transformed by external economic and political events. A key finding in this regard is that in the context of environmental management
decision making processes, the locus of power is not necessarily to be found with the formalised local authority, in this case the Tongarevan Island Council. Rather, as people’s comments pertaining to rahui suggest, the Island Council’s authority is not secure. Its power to effect decisions is limited by perceived lack of policing power but also because among islanders there are other kin-based and village based loyalties that are operating and competing against the authority of the Island Council. The ability for the Island Council to impose a rahui, then, appears to rest in the hands of the Tongarevan people and the extent to which they see it necessary and beneficial to comply. This speaks back to Allen’s (1999) ideas concerning authority as produced out of broader social relations, something that can not be held or wielded but emerges out of and continues to fluctuate according to wider social relations.

The second question posed at the outset of this thesis pertained to the technique of rahui, a seemingly ‘traditional’ practice devised in order to close or restrict access to species such as pasua and thus protect them from over-harvest. As suggested in my review of current environmental management literature discussed in Chapter Two, environmental agendas, particularly those in a South Pacific context, have become increasingly focussed on reviving and maintaining local or traditional tenure systems, associated bodies of knowledge and practices. Framed as traditional, rahui appears from such a TEK perspective as an antecedent to successful and de-centralised local management, and its continued usage suggestive of local cultural cohesion. As this study showed, however, rahui as a practice has multiple layers of significance and meaning. For the people of Tongareva who have used it since pre-contact times it is a technique bound up in complex relations of mana, tapu and, when used as a tool by the Island Council, shifting structures of colonial-inspired governance. Simultaneously, for some it functions as a symbol of respect and commitment to the ways of Tongareva past, or as Kristine Maretapu frames it, the ‘Tongarevan way’. Indeed, many people interviewed aligned their concerns over the lack of respect for rahui with wider changes affecting the island, particularly the rapid economic and demographic changes associated with the Transition. Debating the need for rahui, however,
revealed a range of political and pragmatic reasons why people might not want the closure on the lagoon. Comments from people such as Tini and Tangaroa suggested that practices such as rahui are far more likely to succeed when there is wide-spread agreement within the Tongarevan populace as to the need for closure but in current times such consensus is difficult to achieve. People’s suggestion that the rahui needs to be either legislated in bylaws or actively policed suggest that rahui is moving towards becoming a hybrid structure, one which still embodies traditional principles but also requires the added strength of legal protection.

My research, moreover, suggested that while rahui is certainly traditional, in that it has been used since pre-contact times, this does not mean that it is neither unchanging in its application nor uncontested in its use. Indeed, although rahui was routinely used in pre-contact times by huaanga to protect coconut crops, the centralised use of rahui to close pasua harvest by sectioning off a large section of the lagoon for a lengthy period of time is quite different not in the least because of the contemporary conditions on Tongareva and the changing significance of pasua. In this regard, I suggested that people’s hesitation to imposing a rahui in the current context is partly due to the tenuous consolidation of authority vested in the Island Council, but also due to the changing socio-spatial context of people’s interactions with the lagoon and the pasua within at the time of my fieldwork.

My attention to the spatialised implications of this closure system further suggests that rahui is ill-equipped to deal with the heterogeneous nature of both the lagoon-scape and the range of harvest practices that surround pasua. As a practice, it works on the basis of a number of spatialising practices, and although the boundary upon which its deployment depends is essentially permeable and intangible, the closure operates on the basis of conferring a sense of spatial fixity; ‘don’t go there’! What this example suggests overall is how both the problem with pasua and the suggested rahui to address it is produced by an intersection of social, ecological and political changes, many of which are particular to Tongareva. As suggested throughout this
thesis, however, these changes are always already imbricated with broader social relations that stretch beyond the island.

It would be interesting to do more research in order to explore in greater detail the differences between *rahui* applied in a terrestrial context and *rahui* applied in a marine context to see if there are any significant differences both in terms of the spatialising practices, but also in terms of the proprietal rights associated with these different domains. It would also be useful to attain a fuller understanding of how *rahui* would be ‘called in’ in a contemporary context and to explore people’s behaviour with respect to species such as *pasua* when a *rahui* is in force. This is one of the limitations of my research in that I left before the debate over *rahui* was resolved. The arguments in my thesis would certainly have been strengthened had I been able to trace *pasua* management on Tongareva through the different stages of *rahui*; pre-rahui (as this thesis represents), practices during *rahui* and then responses once the *rahui* had been lifted. Such a longitudinal study on Tongareva would be challenging but would be extremely valuable in terms of consolidating issues raised in this study pertaining to the politics of traditional management techniques in a contemporary South Pacific context.

### 8.3. Practicing environmental management

Another conclusion that can be drawn from this study is that unsurprisingly, environmental management is inevitably complex, and necessarily contextual. It is a practice that necessitates attending to the mutually co-constitutive realms of social practices, biophysical processes and structures of governance at multiple spatial scales. In the context of debates concerning *pasua*, I have pushed for a relational understanding of environmental management, one which is produced by the particular socionatural configurations, but rather than a linear causality, both processes and their outcomes are embedded within each other.
Recognising environmental management as a relational practice is to bring to the fore of analysis the complex, contested and affective associations people maintain and meditate with each other, as well as with species such as *pasua*. It also shows how these relationships serve to shape decisions concerning the need for management techniques such as *rahui*. Indeed, as my discussion on the varying responses to the changes engendered by the Transition suggests, despite the magnitude of changes experiences and particularly the shifting relationship to *pasua* that resulted, this does not necessarily mean that Tongareva is on a fixed trajectory towards environmental and social decline. As Chapter Seven in particular sought to demonstrate, the people of Te Tautua, led by Rio Taika, are seeking to re-define the nature of the problems they are facing and are in pursuit of goals that they have adopted and identified as their own. By going against the suggestion that the lagoon be closed before they have completed their large-scale harvest of *pasua* to sell in Rarotonga, they may appear to be acting in response to 'immediate need' but are actually redefining the nature of the problems at hand and acting accordingly.

Attending to environmental management as a relational practice then, is to accept that it is never straight forward in part because of the plethora of local variations that will shape people's views on whether there are problems in the first place that need addressing, what the nature of these problems are and how best to see them resolved. Working within the relational framework suggested in the course of this thesis, enables an analytic focus on the historical intimacies, shifting patterns of resource use and protection, circulating knowledges and the constant ongoing negotiation of place. *Pasua* in all of its guises, gift, commodity, and food is inherently place-related. The geography of *pasua* is shaped by these competing structures of valuation which see it either remain 'in place', bounded by the *rahui* placed on Tongareva lagoon, or continually moving in the various networks of exchange. This then, is the politics of *pasua* management. It would be useful, however, to research in greater depth the Rarotongan end of the *pasua* exchange cycle. In particular, it would be interesting to explore how the selling of *pasua*
relies on existing kin relations as opposed to the 'friends’ that Tini spoke of. Moreover, it would be useful to attempt a quantification of the amounts of *pasua* that were leaving the island for the different exchange purposes for example, *pasua for tere*, *pasua* to be sold for individual profit, and *pasua* sent as gifts for family and friends.

Overall, despite focussing on events within a very particular locality, this thesis suggests a different analytic lens for examining environmental management. For one, it challenges the self-evidence of place, the existence of clear-cut 'environmental problems' and the idea that traditional practices can be unproblematically implemented as solutions. Understanding the relational nature of management is not to preclude political action, but it is to encourage a far more nuanced and attentive approach one that moves beyond binaristic understandings of nature and culture, rather seeing these as mutually co-constituted and constantly in process. In the case of Tongareva, it seems that solutions to the problems facing *pasua* must be prepared in a sense to travel. Recognising the social, mobile and networked characteristics of the species, people and places under consideration is to encourage attention to the varied changing topography of environmental problems, and to develop similarly nuanced solutions accordingly.
APPENDICES

Appendix 1: Summary of Interviews performed on Tongareva

<table>
<thead>
<tr>
<th>Person interviewed</th>
<th>Gender</th>
<th>Community Status</th>
<th>Date of interview</th>
<th>Length of interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mataora Marsters</td>
<td>Male</td>
<td>Acting director of TMRC</td>
<td>2005</td>
<td>0.30.12</td>
</tr>
<tr>
<td>Kristine Maretapu and Tomanu Samuel</td>
<td>Both female</td>
<td>Kristine runs bakery on island and Mama Tomanu is a respected writer of traditional songs</td>
<td>2005</td>
<td>0.40.18</td>
</tr>
<tr>
<td>Warwick Latham</td>
<td>Male</td>
<td>Runs the Meteorological station on the island, also Air Raro contact</td>
<td>2005</td>
<td>0.43.06</td>
</tr>
<tr>
<td>Manata Akatapuria</td>
<td>Male</td>
<td>Member of Island Council and Deacon of CICC</td>
<td>27.06.2005</td>
<td>0.42.28</td>
</tr>
<tr>
<td>Ben Samuel</td>
<td>Male</td>
<td>Former Island Council member</td>
<td>27.06.2005</td>
<td>0.19.36</td>
</tr>
<tr>
<td>Takake Akatapuria a</td>
<td>Male</td>
<td></td>
<td>28.04.2006</td>
<td>0.32.40</td>
</tr>
<tr>
<td>Takake Akatapuria b</td>
<td>Male</td>
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<td>Tangaroa Taia</td>
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<td>Male</td>
<td>CICC Minister</td>
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Appendix 2: Summary of interviews performed on Rarotonga

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<td>Patrick Fitzsimons Local branch of World Wide Fund for Nature (WWF)</td>
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<tr>
<td>Ian Bertram Secretary of Cook Islands MMR</td>
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<td>Koroa Raumea Acting Director of Aquaculture and Inshore Fisheries MMR</td>
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Appendix 3: Interviews on Aitutaki

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<td>Richard Story: Manager of Marine Hatchery</td>
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<tr>
<td>Michael Lee: Resident starting up pa‘ua export business</td>
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<td>Papa Re: Former member of Aitutaki Island Council</td>
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Appendix 4: Summary of statistical *pasua* data collected

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<th>Av. size (cm)</th>
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<th>Density (shells m⁻²)</th>
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**Appendix 5: Individual *pasua* length graphs according to site surveyed**

**Akasusa (tuarei)**

[Bar graph showing frequency distribution of sizes]
Vaiere

Moturakinga (Tuarei)
REFERENCES


