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Defending the lagoons: Insider/outsider struggles over the Tuamotuan pearl industry

Rapaport, Moshe, Ph.D.

University of Hawaii, 1994
DEFENDING THE LAGOONS:
INSIDER/OUTSIDER STRUGGLES OVER THE
TUAMOTUAN PEARL INDUSTRY

A DISSERTATION SUBMITTED TO THE GRADUATE DIVISION OF THE UNIVERSITY OF HAWAII IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN GEOGRAPHY MAY 1993

By
Moshe Rapaport

Dissertation Committee:

Nancy Lewis, Chairperson
Everett Wingert
Brian Murton
John Bardach
Jack Ward
Les Sponsel
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ABSTRACT

Because of their natural stocks of black pearl oysters, Tuamotuan lagoons have attracted the covetous interests of external society since the early 19th century. Under the French colonial administration, land was individualized and lagoons were declared public domain. Island populations responded to these intrusions through hidden and open forms of resistance. Nevertheless, pearl oyster stocks were overexploited and became nearly extinct on many atolls. By 1970, the mother-of-pearl industry ended. It was replaced by a pearl farming industry, now pitting Tuamotuan populations against the Tahitian administration. The struggle over land and sea resources parallels a deeper struggle over ideology and meaning.

Keywords: Hegemony, Resistance, Ideology, Black Pearl Farming, French Polynesia
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<td>BO</td>
<td>Bulletin Officiel des Etablissements Français de l’Océanide</td>
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<td>CATG</td>
<td>Circonscription Administrative des Iles Tuamotu-Gambier (Administrative Division of Tuamotu-Gambier), Papeete</td>
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<tr>
<td>CM</td>
<td>Conseil des Ministres (Council of Ministers), Papeete</td>
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<tr>
<td>CCDP</td>
<td>Commission Consultative des Demandes d’Occupation du Domaine Public (Consultative Commission on Public Domain), Papeete</td>
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<tr>
<td>CEP</td>
<td>Centre d’Expérimentation du Pacifique, (Pacific Testing Center), Papeete</td>
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<tr>
<td>CEPP</td>
<td>Commission d’Etude des Problèmes de la Perliculture (Commission for the Study of Pearl Culture Problems), Papeete</td>
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<tr>
<td>CG</td>
<td>Procès-Verbaux des Séances du Conseil Général des EFO, Papeete</td>
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<tr>
<td>DT</td>
<td>La Dépêche de Tahiti, Papeete</td>
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<td>EFO</td>
<td>Etablissements Français de l’Océanide</td>
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<td>EVAAM</td>
<td>Etablissement pour la Valorisation des Activités Aquacoles et Maritimes (Institute for the Promotion of Aquacultural and Maritime Activities), Papeete</td>
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<td>FADIP</td>
<td>Fonds d’Aménagement et de Développement des Iles de la Polynésie Française (Funds for the Management and Development of the Outer Islands of French Polynesia), Papeete</td>
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<tr>
<td>FEI</td>
<td>Fonds d’Entraide aux Iles (Funds for Outer Island Assistance), Papeete</td>
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<td>GIE</td>
<td>Groupement d’Intérêt Economique Poe Rava Nui (Territorial Pearl Cooperative), Papeete</td>
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<tr>
<td>Abbreviation</td>
<td>Description</td>
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<tr>
<td>HC</td>
<td>Haut Commissariat (High Commissioner), Papeete</td>
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<td>ISTAT</td>
<td>Institut Territorial de la Statistique (Territorial Institute of Statistics), Papeete</td>
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<td>JOEFO</td>
<td>Journal Officiel des EFO, Papeete</td>
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<td>JOPF</td>
<td>Journal Officiel de la Polynésie Française, Papeete</td>
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<tr>
<td>MMA</td>
<td>Ministère de la Mer et de l'Aquaculture, Papeete</td>
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<tr>
<td>MOP</td>
<td>Mother-of-pearl</td>
</tr>
<tr>
<td>MT</td>
<td>Messager de Tahiti</td>
</tr>
<tr>
<td>n.d.</td>
<td>no data</td>
</tr>
<tr>
<td>NT</td>
<td>Les Nouvelles de Tahiti, Papeete</td>
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<tr>
<td>ORERO</td>
<td>Office de Recherche et d'Exploitation des Ressources Océaniques (Office for the Research and Exploitation of Oceanic Resources), Papeete</td>
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<td>ORSTOM</td>
<td>Institut Français de Recherche Scientifique Pour le Développement en Coopération (French Institute of Scientific Research for Development and Cooperation), Papeete</td>
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<td>PF1</td>
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<td>RA</td>
<td>Rapport Annuel (Annual Report)</td>
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<td>SC</td>
<td>Service du Cadastre (Department of Survey), Papeete</td>
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<td>SDE</td>
<td>Service du Domaine et de l'Enregistrement (Department of Domain and Registration), Papeete</td>
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<td>SER</td>
<td>Service de l'Économie Rurale (Department of Rural Economy), Papeete</td>
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<tr>
<td>SMA</td>
<td>Service de la Mer et de l'Aquaculture (Department of Sea and Aquaculture), Papeete</td>
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SOCREDO  Société pour le Crédit et le Développement de l'Océanie (Company of Credit and Development of Oceania), Papeete

SP    Service de la Pêche (Department of Fisheries), Papeete

SPC   South Pacific Commission, Noumea

TA    Assemblée Territoriale (Territorial Assembly), Papeete

TP    Tahiti-Pacifique, Papeete
CHAPTER 1
INTRODUCTION

Given the radically asymmetric balance of power that has prevailed since the first European explorers sailed into Pacific waters until this day (in the various guises of pillager/pillaged, colonizer/colonized, and center/periphery) it is perhaps only predictable that external forces have long been viewed as the dominant elements in local historical process. Island populations, on the other hand, have all too often been portrayed passively--their initiatives and responses either ignored altogether, or at most, viewed as an attempt to cope with imposed changes over which they had little voice or control. The above bias is evident in a range of studies on imposed acculturation (Danielsson, 1955), relocation (Doumenge, 1966), dispossession (Ward, 1969; Newbury, 1972); peasantization (Finney, 1973; Grossman, 1984), proletarianization (Finney, 1973), and resource despoliation (Doumenge, 1966).

However, as most of the former colonies, territories, and trusts began the transition toward independence, it was widely acknowledged that the above stance, now derided by Pacific historigraphers (Howe, 1984) as fatal impact theory, had not only ignored an important aspect of the
"clash of cultures", but may thereby have altogether misrepresented the actual sequence of historical events (Howe, 1984). Subsequent studies, including new works by the above-cited authors, reflect a reversal of conceptual stance; island populations are now being portrayed as having been actively involved in the processes of economic, demographic, and cultural change (Howe, 1984; Finney, 1986; Connell, 1987, 1989; Bayliss-Smith et al, 1988; Lowenthal, 1990).

However, by foregrounding local action and initiative, the new island-oriented (or islander-oriented) perspective has also led to misrepresentations. Sahlins (1981) and Howe (1984) have been criticized for presenting a version of local action which diminished the power asymmetries of the colonial encounter. Similarly, Dening (1988) has been taken to task for sometimes taking a culturally relativistic or "narcissistic" stance (Thomas, 1990). Even in post-colonial Pacific societies, patterns of dominance and subordination have not disappeared and cannot be ignored. A more integrated approach would not view agency as an independent and unrelated frame of analysis. It would not abandon the orientation toward islands, toward local events and representations, but would attempt to grasp the meaningful contradictions
of relations among and between islanders and outside forces (Thomas, 1990).

The above conceptual shift reflects the growing interest in human agency in wider social theory (Thompson, 1978; Ortner, 1984) and has attracted the attention of geographers as well. Gregory (1981) traces this shift to a reawakened interest in humanism within a critically informed, but broadly defined tradition of human-environment studies. Building on the early work of Vidal de la Blache (1903), there has been an increasing interest in human initiative vis-a-vis the natural and social milieu (Gregory, 1981). Pacific geographers have intuitively recognized the significance of human agency as a consequence of both a direct research involvement in small-scale societies (Brookfield, 1973; Bayliss-Smith and Feachem, 1977) and the inescapable evidence of political activism during the process of decolonization (Brookfield, 1972; Connell, 1987; 1989).

However, the perspective on human agency, as reflected in the work of Pacific geographers, has varied considerably. In one perspective, defined more by the relative absence of agency than by its presence, the vulnerability of islanders is highlighted. Due partly to isolation, small populations, and meager resources, island society has been viewed as necessarily yielding to
the influences and pressures of external society. For example, Watters (1969), in his study of economic and social change in Koro (Fiji), refers repeatedly to the "anachronistic attitudes expressing the collective ideal" and leaves no doubt that they will soon be stamped out by "Western" values and agricultural technology (for a critical and detailed response, see Crocombe's [1971a] review article).

A second perspective highlights the adaptability of islanders. Islanders could not have survived for many centuries in these remote habitats without a substantive amount of cultural resilience. The willingness of some island societies to abandon traditional values and practices in the pursuit of economic goals has itself been viewed as evidence of adaptation (Fox and Cumberland, 1962; Watters, 1969; Ward, 1965). It has since, however, been recognized that an uncritical acceptance of Western ideas and technology may be ineffective and even counterproductive (Clarke, 1971, 1973; Hardaker et al, 1984a, 1984b). Attention has therefore focussed on adaptations that are ecologically and culturally appropriate (Waddell, 1973; Bayliss-Smith and Peachem, 1977; Lewis, 1986; Bayliss-Smith et al, 1988).

However, studies of adaptation do not convey the fact that island populations--especially after European
contract--have continually had to contend with powerful external forces. Thus confronted, acquiescence may seem a rational and even adaptive response. But island societies have not always easily capitulated to external pressure. Reexamination of the historical evidence now indicates that an intense, prolonged struggle was often mounted by relatively weak and isolated communities; in some cases a limited degree of victory or concessions was achieved (Hempenstall, 1978; Mamak et al, 1979; Howe, 1984). This leads to the third perspective on island agency, one that highlights the resistance of islanders to external domination.

The focus on island resistance has been inspired by recent independence and post-independence struggles (Brookfield, 1972; Connell, 1987; Connell and Howitt, 1991). In contrast to other perspectives on island agency--which were useful in the analysis of resource use and production systems--the resistance perspective is particularly concerned with issues of resource control and allocation. A central area of interest here is resistance to dispossession--how islanders have attempted to protect their land, sea, and mineral resources from alienation by external settlers and governments. Dispossession is an issue which is well suited for the elaboration of a perspective on island agency which also takes
into account the larger political, economic, and ecological context.

One would not have expected islanders to easily part with their vital land and sea resources. Nevertheless, dispossession is one of the most important consequences of the colonial encounter. In Hawaii, New Zealand, Guam, Nauru, and New Caledonia, a majority of the land was alienated for settlement, agriculture, mineral extraction, and strategic purposes. In (what is now) Papua New Guinea, the Solomon Islands, Vanuatu, Fiji, and Western Samoa, large tracts of land were alienated. Some degree of land alienation also occurred on many of the smaller islands (see Oliver, 1989; Crocombe, 1971b). In many areas, traditional control of lagoons and reefs was abolished, leading to ecological degradation (Johannes, 1978). However, the problem of islander resistance to dispossession (or its absence) has thus far been inadequately addressed by geographers.

We have yet to learn about the details of islander responses to important historical events such as Hawaii's Great Māhele (though see the recent study by Kameeleihiwa [1992]), the "confinement" of the natives of New Caledonia (Doumenge, 1966), or the extraction of phosphates from Nauru and other islands (Doumenge, 1966; Newbury, 1972). The resistance of islanders is obvious in situations of
militant violence (such as New Caledonia or New Zealand), but it is only relatively recently that the historical documents on even some of these incidents have been reviewed and reinterpreted (Hempenstall, 1978; Howe, 1984). Similarly, studies of recent resistance movements (Connell, 1987, 1989; Connell and Howitt, 1991; Bonnemaison, 1985a, 1985b) have only marginally or partially addressed the complex social dynamics of resistance at the local level.

Many Pacific scholars apparently feel more comfortable dealing with patterns of land use and transfer that can be empirically measured or with the types of resistance covered by archival evidence or even with the interpretation of culture and perception treated as fixed, static entities than with the more elusive aspects of social interaction and transformation, such as that which occurs during the course of conflict, natural disasters, or other social stresses. As argued above, however, the processes of dispossession and resistance cannot be adequately analyzed—at least from an island-oriented viewpoint—without attempting to investigate the activities, ideologies, and interactions of the individuals and groups involved.
Geography, Dispossession, and Resistance

The perceived attachment of people to their natural environment is an essential area of interest in geographic human-environment studies. This attachment is a powerful one for indigenous peoples in general, among whom society cannot even be conceived independent of the territory occupied (Sack, 1980; Soja, 1971). Indigenous populations are tied to their homes with a detailed knowledge of place and imbued with a mythical view of their land and lagoons. Territorial rights are validated by reference to ancestors who are held to still inhabit the area. Rights are obtained only through being or becoming a bona-fide member of the society. Due to the intimate bonds linking indigenous society and their environment, territorial alienation was normally impossible, except by separation from the resident group (Murton, 1987).

Identification with the environment is also a characteristic feature of island communities throughout the world. The fact that most islands are so limited in area, being essentially oases in oceanic deserts, tends to heighten the perceived value of land and lagoon resources. Moreover, generations of isolation and confinement on small islands, however stifling, links islanders with common genealogies, histories, traditions, language dialects, and worldviews. A powerful sense of
community often exists on islands, particularly when facing challenges from the exterior (Lowenthal, 1985). In view of the above, it is not very surprising that island populations have historically displayed a strong resistance to the incursion of outsiders, especially when they are threatened with resource alienation (Lowenthal, 1990).

Land alienation has been a key source of conflict throughout Melanesia (Brookfield and Hart, 1971; Brookfield, 1972). Geographers have investigated the importance of land in conflicts over copper and gold mining projects in Bougainville and the New Guinea Highlands (Connell, 1989; Jackson, 1991; Connell and Howitt, 1991), the New Caledonia independence movement (Connell, 1987; Doumenge, 1987), and regional conflicts in Vanuatu (Bonnemaison, 1985b). Land alienation in New Zealand has been studied by several geographers (Murton, 1966; Stokes, 1978, 1992; Pawson and Cant, 1992). Land alienation in Fiji has also been a focus of study (Ward, 1969; Bayliss-Smith et al, 1988), but the lack of attention to the related social and political tensions was an important lacuna in UNESCO's Man and the Biosphere study of Eastern Fiji (Bayliss-Smith et al, 1988).

Due, perhaps, to the paucity of historically documented resistance, land alienation in Micronesia and
Island Polynesia has received relatively little attention by geographers, with the exception of French Polynesia (Ravault, 1978, 1982; Tetiarahi, 1987). However, there have been studies of land alienation in Hawaii by non-geographers (Kameelehiwa, 1992). With a few notable exceptions (Doumenge, 1966; Ward, 1972), Pacific Island geographers have also made little contribution to the study of the historical pillaging of sandalwood, phosphates, and marine resources, some of which continues today. However, there is an unpublished paper by Tetiarahi (1990) on lagoon alienation in Tahiti and there have also been studies on indigenous marine tenure claims in the Solomon Islands and the Torres Straits (Hviding, 1988; Nietschmann, 1988).

While sharing the same subject problem, studies of dispossession reflect a variety of topical and theoretical interests. Brookfield (1972) discusses land alienation in the context of colonialism, development, and core-periphery domination. Bonnemaison (1981, 1985a, 1985b) analyzes indigenous metaphors of land and the impact of colonial contact. Other studies have focused on land alienation as a consequence of development (Connell, 1989), as a source of inequity (Connell, 1989), and as a factor in arousing nationalist and secessionist sentiments (Connell, 1987; Lowenthal, 1990). Land
alienation has also been considered from the perspective of indigenous rights (Connell and Howitt, 1991; Pawson and Cant, 1992). Still other studies have focussed on the decline of traditional conservation practices (Hviding, 1988; Nietschmann, 1988).

However, the above studies do not provide a substantive, island-oriented theoretical framework for the analysis of dispossession. There is generally little attempt to unpack resistance in terms of local activities, interactions, ideologies, and systems of meaning. Quiet, veiled, and disguised forms of resistance are generally ignored. The problem of consent is also neglected. But domination is seldom accomplished by force alone, and is generally reinforced by social legitimation and ideological persuasion (see below). The majority of the above studies have been based primarily on archival data rather than original ethnographic research. Not surprisingly, the way resource alienation was viewed, spoken about, and acted upon by the societies studied is inadequately elucidated (however, see the ethnohistorical study by Stokes, 1978).

Bonnemaison (1985a, 1985b) does approach land alienation from a more island-oriented perspective. He shows that how external intrusion in Vanuatu led to social upheavals which profoundly altered indigenous linkages
with their ancestral environment. The disruption of these bonds was one of the primary grievances in the campaign for decolonization. But independence did not automatically rectify the problems of dispossession. New settlement patterns, modes of production, and religious identity all mandated a redefinition of the traditional relationship with the environment. Western intruders were expelled, but the cultural changes they had brought remained imbedded in post-colonial society and new internal conflicts are emerging. Bonnemaison provides a sensitive analysis of dispossession on Vanuatu, but he does not connect this with wider theoretical discussions on domination and resistance.

Some useful guideposts are provided by recent geographic studies of dispossession in African societies. Africa (like the Pacific) is not now, and never has been, a region of landlords and tenants like large parts of southern Asia, or of armed conflict between latifundistas and minifundistas like large parts of South America. Consequently, some studies have underestimated the extent and significance of land shortage (Shipton and Goheen, 1992). However, resource alienation does affect the lives of millions of people and has evoked increasing concern about its social implications. Contemporary studies of resource alienation in Africa seek to integrate political,
economic, and cultural perspectives; triangulating human ambitions of power, wealth, and meaning, and looking for the linkages between them (Shipton and Goheen, 1992; Berry, 1992; Watts, 1988).

This approach is exemplified in a recent study of a rural village in Gambia (Watts, 1988). Due to an international rice development scheme--part of the African green revolution--an intense struggle over land has developed within village households. Land formerly utilized by women has been arbitrarily, and without recompense, appropriated by men (primarily used to "purchase additional women"). In the process, women have become increasingly proletarianized, working as sharecroppers and gang laborers. Resource re-allocation (to use a slightly euphemistic term) has resulted in a joint material and ideological struggle and evoked changes in consciousness. Traditional patriarchy is increasingly challenged. Women are refusing to cook for men and there has been a sharp rise in domestic violence, divorce, and litigation (over land), and an increasingly articulate assertion of the rights of women.

Watts' analysis is very much people-oriented and he counterbalances local metaphor with social theory. He shows that resistance is related to material factors but the issue is not reduced to a narrow economic determinism;
instead, he shows how the struggle is ideologically grounded and culturally manifested. Watts cites the work of James Scott (1976, 1985) on peasant resistance in Southeast Asia. Scott has argued that peasant resistance—manifested in situationally specific cultural patterns—occurs when, due to encroaching capitalism, landlords abrogate their customary paternalistic responsibilities. Similarly, Watts suggests that the resistance of African women—also thickly "layered"—is due to the violation of traditional norms and expectations of reciprocity.

The following study, of dispossession in a small Pacific Island community, is also concerned with domination and resistance. But the sociocultural context and the material circumstances are quite different. The struggle is not between social strata long bound by traditional obligations; it is rather a jarring clash between insiders and outsiders, a situation considerably more akin to the early encounters studied by Sahlins and Dening. In one sense, to paraphrase Watts (and Kautsky [1979], quoted in Watts), it is the compelling narrative of how power and capital take hold of territory, shaking it loose from its traditional fetters. It also shows how dispossession is perceived by the inhabitants of small islands, the complex—often hidden—forms in which
resistance is culturally expressed, and the insidious fashion in which dispossession is legitimated and resistance subverted.

This study begins by addressing several significant lacunae in the existing studies of dispossession:

1) Given Brookfield's (1963) statement on Geography's "human frontiers", it is not sufficient for geographers to study when and where dispossession occurred; it is also necessary to inquire how and why it occurred.

2) Dispossession and resistance involve relations of power which need to be explored. Existing theories on hegemony (Gramsci, 1971) and everyday resistance (Scott, 1990) need to be discussed and reconciled.

3) Dispossession and resistance involve struggles over material resources, but they parallel struggles over ideology and meaning. Indigenous resistance to dispossession can be usefully compared and differentiated from peasant resistance to economic exploitation (Scott, 1976).

Modes of Resistance

Overt defiance, such as the Melanesian cases cited above, provides ample evidence that islanders made vigorous attempts to defend their territorial resources. These initiatives were not always successful—in most cases they were defeated relatively easily—but they do
show that dispossession was not effected passively. In the majority of cases, however, militant resistance did not occur, due to the overwhelming power imbalance during the contact or post-contact periods. It is this apparent passivity which indeed has given rise to the so-called fatal impact perspective. Given that this perspective is now seen as flawed, what are we then to make of the overwhelming absence of island resistance in the historical and ethnographic record?

One answer may be that scholars and other chroniclers were simply absent, uninterested, or even discouraged from recording the numerous small acts of resistance which may well have taken place in remote parts of the Pacific. But it is also possible that resistance is not always manifested through open defiance. Over the past two decades, it has become increasingly recognized that resistance is frequently present in the form of disguised, low profile, or undisclosed resistance, also called "quiet" or "everyday" resistance (Hall and Jefferson, 1976; Scott, 1985, 1990; Kerkvliet, 1990). This theory has been successfully extended to cases of power asymmetry worldwide, including societies as diverse as Appalachian minetowns, plantation and slave societies, 18th century England, African development schemes, and even the German
concentration camps (Scott, 1990; Watts, 1988; Clarke et al, 1976; Gaventa, 1980).

Open or defiant resistance includes such acts as demonstrations, boycotts, petitions, strikes, land invasions, open revolts, public desecration of the status symbols of the dominant order, and public counterideologies propagating equality, revolution, or negating the dominant ideology. In contrast, everyday resistance includes acts such as poaching, desertion, evasion, footdragging, masked appropriation, anonymous threats; other masked or disguised acts which allow the expression of anger, aggression, or assertion of self-dignity such as ritual aggression, tales of revenge, carnival symbolism, gossip, rumor; and the development of dissident subcultures such as millennial religions, slave hush arbors, folk religion, myths of social banditry and class heroes, and world-upside-down imagery (Scott, 1990).

It is the category of everyday resistance which has often been missed, ignored, or misinterpreted. For it is in the interest of dominant as well as subordinate societies not to recognize the acts for what they really represent. Recognition of this resistance would require a lengthy, costly, dangerous, and perhaps even unfruitful intervention and retaliation into a little known social realm. For both sides, "infrapolitics" provides for an
acceptable form of resistance, allowing anger to be vented—even allowing a certain measure of victory and retaliation—provided that mutually understood limits are not transgressed. External observers, not being in the game altogether, might well miss the significance of these acts (Scott, 1990).

What differentiates everyday resistance from simple recalcitrance and lawlessness—with which it is often dissimulated—are the unvoiced, accompanying feelings of anger, aggression, and moral claims which Scott (1990) has termed "hidden transcripts". These are forms of expression which, taken together, provide an ideological basis, self-justification, and even a legitimation of what would otherwise be truly anarchic behavior. Although normally hidden, these transcripts can be discovered in two ways: through discussions that are conducted offstage, away from the theaters of power; and from the momentous occasions when the experienced anger and frustration can no longer be quietly contained, resistance becomes increasingly defiant, and the previously hidden ideologies openly emerge.

The occasional emergence of defiant resistance occurs when the mutually accepted limits in the game of domination and resistance are transgressed. When the burden imposed by the dominant order becomes insufferable,
when in the words of Scott—"the water has reached shoulderline"—open defiance becomes the only recourse. This may occur due to rises in taxes or food prices, intolerable government legislation, declines in crop prices, natural disasters such as droughts, floods, and crop failures, or any other events which make life increasingly intolerable. In these circumstances, deceptively meek and docile populations that had formerly contented themselves with disguised or low profile forms of resistance may rise together in retribution and open defiance of the dominant order.

The emergence of defiant resistance—which Scott has called the "Saturnalia of power"—provides an opportunity for the first public declaration of the hidden transcripts. The moment is one of great danger to the individuals involved, but it provides an intoxicating feeling of fulfillment and satisfaction, no longer having to feign deference to a despised master. An ideology which has long been suppressed is now openly aired, imbuing the proponents with charisma and galvanizing previously docile populations. At the same time, the dominant order can no longer afford to turn its eyes from the expression of resistance. It must quickly react, using a combination of force, negotiation, and persuasion, to regain control. As a challenge to the dominant order,
the effort may be doomed from the start and a substantial price may be paid, but important symbolic and psychological points may be made, and material concessions can also sometimes be gained.

The Ideology of Resistance

The clearest and most succinct expression of resistance (the situation is similar with domination, as we shall see later) comes not from poaching, footdragging, and tax evasion, nor from dissident religions, rituals, plays, and myths, but rather from the discussions, meetings, petitions, and manifestos which openly articulate the ideology and goals of organized demonstrations, strikes, land invasions, and revolts. Even when it is spread only by word of mouth, the ideology of resistance—expressed in the "teeth of power"—is potentially more electrifying (for subordinate populations) and more threatening (to the dominant order) than material acts of resistance. Accordingly, it will well be worth exploring the nature and origins of the ideologies upon which different instances of resistance are based.

As a point of departure, we begin with the theoretical propositions of Scott, here rather narrowly formulated for the case of peasant resistance in Southeast Asia. Scott
contends that resistance occurs naturally due to the oppressive conditions imposed by landlords and governments. This resistance is usually mitigated, but manifested covertly, due to a longstanding history of domination, softened by a certain measure of mutuality in the dominant order, which Scott (1976) terms a "moral economy". Peasants owed a portion of their harvest to the landlords and the state; in turn, landlords were expected to assist the peasants during times of harvest shortfall and to provide other necessary services. The status quo depended on the maintenance of this social contract. If these obligations were not discharged, resistance would escalate in accordance with the perceived violation of contract.

Scott's moral economy theory contrasts sharply with the classical Marxist view of peasants ("potatoes in a sack"), in which they are considered more of a hindrance than an aid to revolution and incapable of even conceiving resistance without their preliminary transformation to proletarians (Marx, 1963). The theory has also been criticized by Popkin (1979), whose self-proclaimed political economy perspective is based on the rational self-interested peasant and rejects the core assumptions of Scott. However, Popkin misrepresents the moral economy school by creating a moral, efficient, and stable straw.
man, levels criticisms that Scott himself addresses, and inaccurately characterizes peasants as "risk averse whigs" or "Schumpeterian gamblers" (Watts, 1983). In any case, neither of the above theories would seem particularly appropriate for explaining resistance to dispossession in Pacific Island societies.

Pacific Islanders have been labelled peasants in the academic literature of the past two decades (Finney, 1973; Connell, 1979; Grossman, 1984), but most scholars would agree that there is a vast difference between the historical and present situation of most rural Pacific Islanders and that of the oppressed, landless tenants of tiny plots in the parts of Southeast Asia studied by Scott (1976), characterized as lying on the brink between survival and starvation—although some critics have argued that here too, the situation is not nearly as severe and as widespread as Scott contends (Popkin, 1979). In contrast, resistance in Pacific Island societies has seldom been a reaction against oppressive landlords; more often, it has occurred in an attempt to prevent the alienation of ancestral resources by external governments, businesses, and settlers.

The argument here is that indigenous resistance to dispossession is substantively different from peasant resistance to overexploitation. Indigenous (claiming
original possession) resistance does not have a moral economic foundation. Instead, it is based on what might be called a moral ecology: An ecological relationship (a historical, actual, and conceptual society/environment linkage) generates a moral claim (rights, obligations, justice). The problem is territorial dispossession; not extractive rents, high food prices, or inhumane working conditions. Resentment is not due to the callous abrogation of a traditional social contract or a subsistence ethic, but rather to the jarring breach of the age-old bond between an indigenous society and its vital land and sea resources (Table 1.1).

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<th>Motivation</th>
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<td>Obligation</td>
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<td>To Landlord</td>
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Resistance may be ultimately based on material factors, but its rationale and expression depend on the underlying cultures and systems of meaning. Peasant resistance, according to Scott, is channelled along class lines and arises out of the fear of poverty and resentment at the violation of reciprocal economic obligations. Resistance occurs, but it is usually relatively quiet and
often unperceived, due to the extreme powerlessness implicit in the essentially feudal relationship. By contrast, in indigenous resistance, social cleavages develop primarily along an axis of ascribed identity (native/alien, insider/outside) and resentment is due to the violation of a perceived immutable bond to ancestral land and lagoons. Island populations are minute, but continued occupation and control of ancestral territory provides a source of strategic and ideological strength, and resistance can more easily emerge in public rhetoric and practice.

**Hegemony**

If it is indeed a gross—and now generally discredited—oversimplification to portray islanders as passive victims of the fatal impact of colonialism, it would be equally erroneous to claim that the attempted resource alienation by outsiders is always countered by a (hidden or overt) manifestation of resistance. The history of the Pacific is replete with cases in which substantial amounts of territory were given, exchanged, or otherwise appropriated voluntarily by island populations. While the chiefs and powerful individuals may have benefited through these transactions, the populations as a whole usually lost. Trickery and misunderstandings were
certainly occasionally involved, but they cannot account for all cases of land alienation. This suggests that some alternative ideology may have been formulated, propagated, and accepted, nullifying traditional attitudes toward land, and allowing the cession of highly valued ancestral resources to unrelated outsiders.

A comprehensive—though by no means concise— theoretical approach to domination and consent is provided in Gramsci’s writings on hegemony. Gramsci (1971) argued that the apparent acceptance by European peasants and workers of oppressive conditions imposed by landowners and capitalist forces (contrary to Marxist predictions of imminent revolution) was indicative of the operation of powerful persuasive and coercive mechanisms of control. Due to the political and civil apparatus of the state, the resistance potential of subject populations is eroded. Hegemony (like resistance) can be exercised covertly or openly: Given the appropriate circumstances, domination can be achieved quietly and discretely. In other circumstances, it may become necessary to utilize an intensive persuasive campaign.

There has been considerable debate—due partly to the ambiguities and contradictions of Gramsci’s own voluminous writings—on the extent of hegemony’s ultimate persuasiveness. In the "strong" version of hegemony,
control is achieved by convincing a population of the genuine justice of the dominant order. In the "weak" version, subordinate populations rarely become truly convinced; it is rather that they become persuaded of the "inevitability" of the prevailing order. Some theorists—notably Scott himself—reject both of these versions of hegemony, arguing that a society is hardly ever totally convinced of either the justice or the inevitability of its subjugation (however, Gramsci himself never quite went this far [see Femia, 1975]). Nevertheless, few scholars doubt that ideological persuasion plays a key role in domination worldwide (Gaventa, 1980; Willis, 1977; Hall, 1977; Stokes, 1991).

Just as the ideology of resistance varies depending on the social, economic, and political context, so too, with hegemony. Exploitation in peasant societies, according to Scott, occurs within a longstanding power hierarchy of related demographic strata in which mutual obligations of fealty and paternalism are the basis of the hegemonic ideology. In contrast, indigenous dispossession juxtaposes unrelated populations, and hegemony is based on an ethic of individualism and free enterprise rather than on subservience and mutual obligations. Inheritance becomes a means for acquiring territory rather than a mechanism for safeguarding a relationship. Land can be
impersonally sold, purchased, and exchanged. Relatives and neighbors cannot prevent individuals from alienating their share of the ancestral resources.

Although individual self-interest can play an important role in dispossession, the expected reprobation, regret, and retaliations by those who do not benefit from the alienation of ancestral resources is likely to be quite discouraging unless it is socially legitimated. Continuous ideological reinforcement is provided through government legislation which promotes capitalism and Western rationality. The interests of wealthy entrepreneurs are protected through the institution of the private ownership of land and through public appropriation of lagoons and so-called unclaimed land (which can then be leased to the highest bidders). Legitimation and consent are further reinforced by co-opting local leaders and prominent community members as well as through cultural influences such as education, religion, language, and the media.

Three Propositions

The above arguments can be concisely summarized in the following propositions (Table 1.2):
The above propositions have been applied in the analysis of territorial dispossession in the Tuamotus, an archipelago of coral atolls in French Polynesia (Map 1.1). Naturally endowed with stocks of *Pinctada margaritifera*, the black pearl oyster, a pearl farming industry has recently been developed through the pioneering efforts of private investors and the Tahitian administration. The lucrative opportunities have now attracted a pearl rush, comprised of return migrants as well as aliens (unrelated outsiders) from Tahiti and neighboring islands. While standards of living have generally improved, indigenous atoll populations are
Map 1.1. TUAMOTU ARCHIPELAGO

300 KMS.
rapidly losing control of their ancestral land and lagoon space. Of particular interest to this study are the overt and covert actions of islanders, the ideologies and systems of meaning on which these initiatives are putatively based, and the political and economical hegemony under the weight of which resistance is nullified.

Tuamotuan pearl farming represents a rather special case in the worldwide dispossession of indigenous territorial resources. Most atolls have little land, impoverished soil, scarce fresh water supplies, and are poorly suited for agriculture. Due to ciguatera (fish poisoning), even local fish are consumed with caution. Periodic droughts and hurricanes also make life hazardous. Pearl farming, the sole valuable resource, was only developed and is still supported through the efforts of external political and economic interests. The traditional chiefs and power hierarchies were eradicated by the early 19th century and replaced by elected mayors from Tahiti who neither live on nor are native to the atolls. The Tuamotuans have showed little desire for any real political self-determination and their archipelago remains a willing dependency of Tahiti, itself an overseas territory of France.
Under such difficult circumstances, it would indeed be surprising if external encroachment was met by substantial resistance by the islanders. Evidence of resistance (compare Hempenstall, 1978) is conspicuously lacking in decades of rapacious exploitation of phosphates in Makatea, a raised atoll in the Western sector of the archipelago. Resistance has also been notably muted on the issue of the French nuclear testing program, probably the greatest threat to contemporary atoll populations, due to its potentially widespread environmental pollution. If open resistance does occur in the Tuamotus, one would expect it to occur only sporadically, when the threat has seemed intolerable; or due to the fortuitous intervention by a charismatic, radical leader. One would expect resistance to command an uncertain, wavering, and divided support from local populations.

Tuamotuan pearl farming is itself unique in that the farms are actually only a series of "lines" or cables suspended several meters under the lagoon surface (see Chapter 2). The farms are observable only indirectly, via the activities of divers and through the occasional buoys rising to the surface. Each farmer must pay a fee for a maritime concession from the Tahitian administration. However, the location, scale of production, areal occupation, and even the identity of the concessionaires
are often not known to anybody except for the farmers themselves. Insofar as the extent and attribution of dispossession can be assessed only imprecisely and even incorrectly, a resistance movement faces a difficult and potentially hazardous challenge. The problem is exacerbated by uncertainty over the long-term ecological implications of the different types of pearl farming activities, thus far an understudied area.

Another peculiarity is that the forces of capital are represented by local entrepreneurs, not powerful transnational corporations (such as in the case of phosphate mining). To protect local interests, foreign investment is prohibited in the Tuamotuan pearl industry. Consequently, most farms are run by relatively small-scale private entrepreneurs, the largest of whom are Chinese-Tahitians who are themselves concerned about external incursion by even larger investors. The political power supporting these entrepreneurs is the Tahitian territorial government, whose authoritative weight is relatively Lilliputian. The above circumstances all help to reduce the extent of power asymmetry, enhancing the potential of resistance and rendering the struggle a more even one.
In this study, I will show that the roots of the current struggle are historically deep and that there are repetitive patterns in resistance to dispossession. Beginning with the exploitation of mother-of-pearl in the early 19th century, the interests of atoll populations have been pitted against external and economic powers. Then as now, land has been alienated, lagoon space has been occupied, and stocks have been endangered against the will of a substantial portion of the indigenous populations. Then as now, resistance has repeatedly emerged in the two fashions described above— as covert, everyday resistance, and as overt, defiant resistance. External hegemony has also been effective in both situations, inducing consent among many of the islanders themselves and ultimately limiting the scope of resistance.

It will become evident that land and lagoon tenure regimes represent an important everyday terrain for the contest of domination and resistance. Due to laws propogated by colonial government, land tenure became increasingly individualized, allowing for sales, leases, and other forms of alienation. To some extent, these modifications have been accepted by indigenous populations. Much land was lost in Tahiti as well as in the Tuamotus due to sales, often related to trickery and
debt. However, Tuamotuans have effectively resisted dispossession up to this day by obstinately—to the administration, unreasonably—clinging to a number of traditional tenure practices including the principles of residence and descent, collective ownership, and the simple unwillingness to sell.

Traditional lagoon tenure was even more easily expropriated. The colonial administration simply declared all lagoons to be public domain; the state—not individual atoll communities—would henceforth control and allocate the use of lagoons and their resources. These policies continued even after administrative power over public domain was transferred to the territorial government, as part of the increasing devolution of internal autonomy from France to Tahiti. To a certain extent, most islanders did accept this expropriation, following administrative schedule of lagoon closures, duly applying to Tahiti for concessions, and sometimes even allowing government authorized outsiders to exploit their lagoons. But traditional claims have not been laid to rest. Atoll communities have quietly contested external control of their lagoons through a variety of everyday resistance practices.

Ordinarily, the above methods were reasonably effective in protecting territorial resources for the
indigenous population. However, where populations were threatened by a massive external intervention, quiet resistance did not suffice. Accordingly, a defiant resistance was occasionally manifested by Tuamotuan communities. The few historically documented occurrences of this kind are analytically valuable not only because they illustrate a second, more dynamic category of resistance, but because, as indigenous communities become increasingly embattled and divided within themselves, previously hidden transcripts can emerge more or less explicitly, providing the forum for a clear articulation of the contrasting ideology of resistance and consent, as expressed in petitions, meetings, and other forms of public and private rhetoric, and as expressed through actual practice.

The title of this study, *Defending the Lagoons: Insider/Outsider Struggles over the Tuamotuan Pearl Industry*, intends to highlight the perspective of islanders as actors, the key role of resistance to dispossession—manifest in everyday and open forms, the nature of the contested resource (lagoon space), and why lagoon space has become so important (the black pearl farming industry). It also signals the contention that indigenous resistance has an important distinctive feature. The lines of social cleavage are
self-consciously drawn between insiders (those of "original" Takaroa descent), and outsiders (all others). The latter term is deliberately inclusive, indicating that the problem is not only the evident land and lagoon acquisitions by alien investors on Takaroa, but also the more insidious intrusion by the Tahitian political authorities.

Approach

To describe and analyze the dialectic of dispossession and resistance, viewed in terms of the ethnographic present as well as the historical origins, I have structured the study as follows: I begin with a presentation of current scientific knowledge concerning the biology and habitat of the Tuamotuan black pearl oyster, followed by a technical and historical overview of the different ways this resource has been exploited, and a brief description of the boom which resulted (Chapter 2). I then move directly to Takaroa, an oyster-rich atoll in the Western Tuamotus which is a center of the pearl farming industry. I show that on Takaroa, distinctions in descent and migration history both correlate with significantly different demographic and economic characteristics. However, it is criterion of descent (indigenous/alien), rather than migration
(oldtimer/newcomer), which is pivotal in the emerging conflict (Chapter 3).

Land tenure plays an indirect role in the Takaroa conflict, but it is important because lagoon rights are traditionally held to derive from rights to the adjacent land parcels. I begin with a historical review showing how land tenure was increasingly individualized and altered under the combined influence of powerful administrative and economic interests. By retrospectively tracing 100 years of real estate transactions and genealogies for the 51 land parcels used in pearl farming on Takaroa, I show that alien practices—including sales and alienation—have been adopted by Tuamotuan populations. I argue, however, that the obstinate preservation of key aspects of traditional tenure practices—and even the co-optation of some introduced practices—represent a form of everyday resistance, enabling Tuamotuan populations to maintain control over their highly valued ancestral land (Chapter 4).

I then consider lagoon tenure, showing how lagoons that were formerly controlled by local atoll populations were expropriated by colonial and later the Tahitian territorial administrations, serving the interest of external capital. Domination has been resisted through quiet methods such as unauthorized spat collection and
pearl farms, evasion of fees and periodic government surveys, pilfering and arson against alien pearl farmers; as well as through openly defiant methods such as demonstrations, confiscations, and organized associations of protection. I show that—to a much greater degree than with land—indigenous populations are rapidly losing control of their lagoons. A handful of alien investors has recently come to acquire a substantial portion of the authorized pearl farming concessions; and the actual area of their lagoon occupation is even more extensive (Chapter 5).

Next, I show that resistance to external investors has historically rapidly escalated on those occasions when overexploitation threatened the viability of natural pearl oyster stocks. For reasons best known to the administration, very few of these incidents has been preserved in the historical record, but the available information is briefly presented. This sets the ground for a discussion of possible ecological perturbation today. Through spat collection, oysters are added rather than taken from the lagoons; however, overexploitation may well cause epidemic oyster disease due to high, dense populations of large farms, aggravated by a potentially infectious tissue transplant and the implantation of a
nucleus, all conducted in the absence of the most basic sterile surgical technique (Chapter 6).

The recent emergence of an organized resistance movement on Takaroa is shown to have begun with the arrival of the first alien pearl farmers. At first, the population was apprehensive, but it consented to the arrival and establishment of the aliens due primarily to promises that oysters would be purchased from the population. Resistance deepened after new aliens arrived without any previous authorization and when even some of the alien pearl farmers were observed to have violated previous agreements with the community. Under the influence of a charismatic return migrant, an Association to Protect Takaroa was founded, with the explicit purpose of preventing the establishment of alien entrepreneurs. However, due to the decisive intervention of the Tahitian administration, support for the resistance movement began to wane, reaching a low point when the association leaders were deported to Tahiti (Chapter 7).

The fortuitous circumstance of being personally present on Takaroa during the height of a resistance movement allowed an exploration of the ideology of resistance and consent. I show that ideological divisions within the indigenous community correlate with statistics on economic standing and religious affiliation. Radical,
charismatic leadership played an important role in community mobilization. To the resistance movement, land and lagoon resources are the inalienable reserve of those originating from Takaroa. Aliens have only contingent rights. Tahiti's political authority is not rejected; but there are demands for greater attention to local wishes and rights. Similarly, religious authorities, based in Tahiti, were not repudiated, but they were severely criticized because of their failure to take a stand. The strategic actions of the resistance movement were manifested in successive phases of blocking, containment, and rejection (Chapter 8).

I show that few of the islanders were forced or materially induced to accept the presence of alien pearl farmers. Instead, resistance was nullified through ideological domination and persuasion—but this persuasion was only partially effective. Allocation of lagoon space to alien investors is accepted by many because this is government law. It is rationalized in terms of an ethic of individualism, capitalism, and democracy. Traditional attitudes on land and marine tenure were outdated or disputed altogether. Many members of the consent faction were quite unhappy about the progressive alienation of land and lagoon resources, but they blame their own relatives (who sold the land) rather than the
administration and do not feel the aliens should be penalized. The strategy of the consent faction is based on avoidance, caution, discretion, and a struggle for political power (Chapter 8).

I show that historically as well as today, political authority and capital are bound together by mutual interests. Hegemony is propagated primarily through government property legislation, which allows acquisitions, leases, and concessions by alien settlers, but it is supported through the persuasive influences of the religious authorities and the media. In the hegemonic view, land can be freely sold and lagoons are considered public domain. Traditions must be discarded if local populations want to advance. Ethnic bias is unacceptable in a period of democracy and equal opportunity. Rights derive from government law, available capital, and mutuality, not from tradition. The aliens can ensure a more rational use of lagoon space. The strategy of dispossession is based on insinuation, legitimation, expansion, government legislation, persuasion, and obfuscation (Chapter 9).

Finally, I move from an interpretation of dispossession and resistance to policy considerations. A key point is that lagoons, like reefs and nearshore waters, are exploited as joint resources, and that they
thereby become exceptionally vulnerable to overexploitation. Consequently, an open access regime is generally held to be inadmissible. Instead, a choice must be made between privatization, public control, regional control, and community-based "participatory" control. I show, based on theory as well as case studies, that all of the above regimes have strengths and weaknesses. I suggest that in the "real world" situation, the management regime may well be decided by the prevailing ideology of lagoon tenure rights, rather than by considerations based strictly on ecological sustainability and public welfare (Chapter 10).

Methodology

This study draws upon research conducted in Papeete and a number of Tuamotuan atolls, but is based primarily on two periods of fieldwork on Takaroa Atoll (March-May, 1990; February-July, 1991). At the time I began the first phase of my studies, I had already hypothesized resource competition due to the recent pearl rush, but had thought that conflict would develop primarily between oldtimers and newcomers (antagonism towards the size and pace of migration). I conducted a series of interviews focusing on attitudes towards other community members and I carried out a preliminary community census. At the time, however,
I inadequately anticipated that land and lagoon tenure would be pivotal issues of my study. My conceptualization changed when I returned to Tahiti for the second phase of my fieldwork. While still in Papeete, I learned that a resistance movement had openly emerged on Takaroa which stressed the issue of original descent, rather than recent migration status.

The hegemonic role of the Tahitian territorial administration also became evident to me. Competition on Takaroa did not simply occur as the natural consequence of a pearl rush. The alien entrepreneurs were being deliberately encouraged and supported as part of the official administrative development policy, regardless of the objections of local populations. I suspected that parallel situations had probably emerged during the period of direct colonial administration. Aided by recently released government historical records at the Territorial Archives in Papeete, I began an inquiry into the history of colonial modifications of land and lagoon tenure policy. I found that 19th century administrative decisions had indeed set the foundation for current problems in the Tuamotus.

On Takaroa, I began with a community census of all 106 households then resident on the atoll, using an updated version of a trial census conducted during the earlier
period of fieldwork. The results are given in Chapter 3, and reported separately for oldtimers, return migrants, and aliens. Although the oldtimer/return migrant distinction—unlike the islander/alien distinction—was not based on local categorizations, I retained it in my statistical reporting because there were some evident differences between the demographic and economic characteristics of these groups. The existence of significant demographic and economic differences between segments of the indigenous population highlights the observation that they played a minimal role in the emerging conflict, as oldtimers and return migrants were well represented in both factions of the community divide (see Chapter 8).

My studies of land tenure could not have been accomplished without the help of Kanoho Turoa, one of the last of a distinguished line of traditional specialists in the memorization and transmission of land tenure and genealogy. With her help, supplemented by a copy of the complete set of records of the 1956-62 official land surveys and related documents, I was able to trace the ownership and succession pattern for each of the 51 land parcels used as pearl farming bases on Takaroa back to the original title holders. From these studies, it became evident that tenure practices over the past five
generations comprised a mix of Tuamotuan and Western influences, and that land tenure practices themselves were a crucial medium through which the ongoing contest between indigenous resistance and external hegemony would be played out.

As pearl farming concessions were first allocated within the past decade, no similar inquiry could be conducted for lagoon tenure. However, there was a rich historical record of interactions between the Tuamotuans, external entrepreneurs, and the colonial administration during the mother-of-pearl industry. I was also able to obtain a complete documentation of all lagoon concessions awarded on Takaroa between 1980 and 1991. I also benefited from an official survey of pearl farms on Takaroa, conducted by the Department of Sea and Aquaculture (SMA) in the fall, 1991, shortly after I had left the atoll. In Honolulu, the data were analyzed with the ARC/INFO geographic information system, with which I produced computerized maps and spatial analyses of occupied land area, lagoon area, and shoreline length for all pearl farms.

Because of its recent beginnings, the impact of pearl farming on the lagoon ecosystem is thus far largely unknown. However, preliminary scientific reports suggest that oyster mortality is related to current lagoon
overexploitation. These reports are critically evaluated and the implications for pearl farming on Takaroa are assessed. As with lagoon tenure, however, the historical record of the mother-of-pearl industry, obtained from the Territorial Archives in Tahiti, provides a substantial body of information which may be relevant to the pearl farming industry as well. Then, as now, large-scale, potentially hazardous exploitation of Tuamotuan lagoons was encouraged by the political administration in preference to, and against the will of, indigenous populations.

The emergence of Takaroa’s resistance movement is chronicled on the basis of oral history obtained from individuals on both sides of the ideological divide. Like all accounts, these are culturally constituted and thus partial texts. I do not claim that the account is thoroughly "objective", but I have attempted to interview as broad a range of the community as possible, and the resulting account is a synthesis of that information which seemed least exaggerated, divergent, or derivative from personal, idiosyncratic evaluations. I believe it is a fairly accurate description of the relevant events occurring during the past decade.

I am admittedly on dangerous territory when it comes to the ideology and strategy of the resistance movement
and its opponents, as here we are explicitly concerned with highly subjective opinions that were not always readily disclosed to the community at large and often idiosyncratic and even mutually contradictory. However, the organization and persistence of the Takaroa resistance movement shows that despite individual differences, there were common ideas holding the people together. For the resistance movement as well as their opponents, interviews revealed that there was, to a certain extent, mutual agreement on the key ideological issues, as will be evident in the substantiating quotations.

Interviews were conducted in (sometimes a mixture of) French, Tahitian, and Tuamotuan, but quotations have been reported in translated form. Tahitian and Tuamotuan terms have been used primarily where they were indigenous concepts that were key to understanding the ideology and meaning of the struggle. Due to the critical role of the leaders and prominent members of the various parties involved in the conflict, I rely particularly on interviews with the recognized leaders and the most articulate personalities, but I have also attempted to also include more marginal voices. To protect the privacy of informants and other individuals in the community, all personal names of islanders have been deleted or fictionalized.
An Authorial Note

In my discussion of approach, I have discussed the structural sequence of the study chapters, but some additional comments will be made here. Each chapter is introduced by a brief summary of the key points to be made, explaining the connection to the overall study. Following this, where relevant (particularly in Chapters 4-6), an analysis of pertinent historical information (much of which has never been published) is presented, showing how earlier political decisions by colonial and territorial administrations played a critical--though not always easily visible--role in current processes of land alienation, lagoon alienation, and resource degradation, and how current resistance efforts have their roots in struggles which began with resource alienation during the mother-of-pearl industry.

The Takaroa conflict is complex and suggests possible theoretical connections with a number of related topics, such as the consequences of green revolutions and the conservation value of traditional tenure practices. These issues, while important, have not been discussed here since the theoretical focus has been explicitly narrowed to an investigation of indigenous dispossession and resistance. It would be difficult to do justice to the discussion of complex related debates in the course of
this study. However, where pertinent, I have briefly commented on the possible implications of this study for these debates as well. Further investigation of these issues can perhaps be taken up in future studies in the Tuamotus.

The question of lagoon management is also tangential to the study's theoretical focus but it is discussed (Chapter 10) as a way of bridging theory and policy-oriented issues. Over recent years, Pacific scholars have been heavily criticized because of concerns that their research is couched in abstract language which is unintelligible or irrelevant to the communities concerned. With this in mind, I have evaluated a number of locally proposed management scenarios in terms of existing theory and case studies on common-pool resource management in other parts of the world, focussing particularly on lagoon governance and allocation. Considering the interests involved, it would probably be wishful thinking to hope for a more island-oriented policy on the part of the Tahitian administration in the near future, but I would hope that this input helps put the problem in a clearer perspective.
CHAPTER 2
THE RESOURCE AND ITS UTILIZATION

The black pearl industry, centered primarily in the Western Sector of the Tuamotu Archipelago, is one of the exceptional success stories in contemporary mariculture research and development efforts. In contrast to the mother-of-pearl industry of a now bygone era, pearl farming does not harvest the endangered beds of natural oyster stocks. Instead, an artificial substrate is suspended from the lagoon surface, allowing for the adherence of larva which would otherwise have been lost to natural causes. Adapting a sophisticated biotechnology first developed by the Japanese, highly lucrative black pearls are cultivated in pearl farms lying beneath the lagoon surface. The success of the pearl farming industry has resulted in an economic and demographic boom on several atolls, revitalizing communities which had formerly been largely depopulated.

This chapter summarizes the pearl oyster’s biological and ecological characteristics and describes the habitats in which the pearl oyster is found, the exploitation to which it has historically been subject, the remarkable innovations that were subsequently introduced, and the advent of the Tuamotuan pearl boom. This provides the
contextual background for the case study on dispossession and resistance. For it is only through an understanding of the value of the resource, the degree of its vulnerability and historical overexploitation, and the complex mix of actors involved in the development and promotion of the industry that one can fully appreciate why an indigenous population has come to react so strongly to the presence of a handful of aliens and why a post-colonial political administration would try so equally intensely to maintain its control over Tuamotuan lagoons.

**Pinctada margaritifera**

*Pinctada margaritifera* is a bivalve mollusc of the family Pteridae. It is found throughout the Pacific Islands, as well as in the Indian Ocean, the Persian Gulf, and the Red Sea. It usually reaches a diameter of 15 centimeters and can even double that size, weighing up to nine kilograms in aged specimens. The oyster is easily recognized through the iridescent, black-green color of the nacre which covers the internal edges of its shell. The shell itself is composed of several crystalline layers and is secreted by the mantle, a sheath of integument which lies between the shell and the oyster’s body. When stimulated by a foreign body, the mantle begins to cover
the intrusion with layers of nacre, thus creating a pearl (EVAAM, RA, 1983).

The upper valve of the shell is hinged to the lower and is controlled by a pair of powerful adductor muscles, allowing the shell to close. There is also a muscular foot which functions as an organ of locomotion during the early stages of life, but this becomes non-functional following its fixation to a substrate. The mantle, lying immediately underneath the shell, has important biological functions in addition to nacre secretion. The edges of the mantle are modified into siphons and gills, performing vital functions in nutrition and respiration. The rapid movement of the cilia on the gills brings water and minute food particles into the mantle cavity through an inhalant siphon. The water oxygenates the blood while in the gills, passes the food to the mouth, and is then expelled through an exhalant siphon (Figure 2.1).

The visceral mass lies within the mantle and consists of digestive, circulatory, nervous, and reproductive organs. The digestive organs include a mouth, esophogus, stomach, intestine, hepatopancreas, and anus. The circulatory organs are comprised of a dorsal, three-chambered heart and an anterior and posterior aorta. The nervous system consists of three pairs of ganglia, constituting a primitive brain, with a nerve cord
Diagram of the anatomy of the main species of the South Pacific P. margaritifera with right valve in situ. This diagram can also be used for the study of P. maxima, P. fucata, and varieties. The anatomy of Pteria penguin consists of the same anatomical organs but has variations in the visceral mass.


Figure 2.1. Anatomy of the Pearl Oyster

Source George, 1969
and simple sense organs. The sexes are usually separate but sexual dimorphism is poorly indicated, making it difficult to distinguish the sexes externally. The sex organs cover the rest of the visceral mass and include an ovary and the testes (Coeroli, 1983).

The pearl oyster ingests a variety of planktonic food particles, including phytoplankton, small zooplankton and zooplankton eggs, and organic detritus material. It is not yet known how much of this food is truly digested and absorbed. Nasr (1982), working in the red sea, found that diatoms were the most frequently ingested items with juvenile oysters; as they grew older, the variety increased. He states that although some oysters have been showed to demonstrate high food selectivity, *Pinctada margaritifera*—which ingests a variety of materials, including sand particles—is incapable of active selection (although size of oysters and the particular environment clearly influence the availability of particular food particles). The phytoplankton species, *Monochrysis lutheri*, is considered to be the best food for raising oysters.

*Pinctada margaritifera* is a sexual hermaphrodyte. It becomes sexually mature at about the age of two years, at which time most individuals are male, but the sex balance equilibrates afterwards. The rate of maturity and sex
reversal is fastest when current flow is adequate and the hydrographic conditions are favorable; they are slowed in areas which are stagnant or where other stresses are present. The spermatozoa and oocytes are released into the lagoon water and fertilization is external. The spawning of one oyster has a facilitating effect on its neighbors, making fertilization more likely. Although millions of eggs are released, there are extremely high mortality rates of due to the vagaries of current flow (the larva have no significant locomotive capabilities and are frequently swept out to sea) and predation (Ranson, 1952).

It has been observed that a change in temperature is the critical factor in causing oysters to spawn. Although spawning occurs in peaks throughout the year (often corresponding to the lunar cycles), it is most marked during the periods of seasonal change, and particularly at the onset of the Southern warm season (October). This behavior is clearly of adaptive significance to the newly hatched oysters as their early life would coincide with the period of the highest plankton abundances and may compensate for the high mortality due to missed fertilization, loss at sea, random settlement in areas that are nutritionally marginal, and predation. Temperature shock--mimicking the natural change of
seasons—is used deliberately (together with other techniques) in the experimental induction of spawning in pearl oyster hatcheries (EVAAM, RA, 1989).

The principal predators of pearl oysters are Balistidae, Tetrodontidae, and octopuses. There are also a number of important parasites including perforating sponges (Cliona) and drilling bivalves (Lithophaga).

Pearl oysters have also suffered a serious disease problem whose etiology has still not been determined. As early as 1970, when the first spat collection efforts began in Hikueru, there was a noticeable rise in oysters which had deformed and retracted mantles, poorly formed prismatic layers in the shells, and abnormal secretion of nacre; at the same time, annual mortality (normally 20-30 percent) rose to 40-50 percent. Although bacterial infections were discovered (Vibrio and Benechea), it is not been established that these were the causative factors. In fact, the disease symptoms have most often appeared in oysters which have been subjected to stress (grafting or hydrological perturbations) (Cabral, 1990).

The Habitat

Due to their sedentary habits, endemic oyster populations with distinct colorings, biological characteristics, and genetic structures have evolved on
individual atolls of the Tuamotu Archipelago. The abundance of pearl oysters varies significantly between different atolls, being highest on atolls with intermediate sized lagoons (Ranson, 1952). There are relatively few oysters in lagoons which are either very large (such as Rangiroa) or very small (such as Pinaki). The optimal lagoon areas appear to lie between 40-100 square kilometers, such as in the atolls of Hikueru, Takaroa, Takapoto, Takume, and Marutea Sud (see Map 1.1). Other favorable factors include abundant patch reefs, adequate current flow, and narrow passes, all of which appear to create optimal conditions for oyster growth and reproduction (Intes, 1982).

The large differences in the historical and current oyster harvests in atolls with similarly sized lagoons suggests that depth, rather than size, is the critical factor in oyster abundance. Large atolls are deeper statistically, but there is not always a direct correlation (see Wiens, 1962). Unfortunately, very few of the Tuamotuan atolls have had adequate bathymetrical studies over a substantial portion of their lagoons. In the absence of direct measurements, reef/lagoon ratios (low in deep lagoons; proportionately higher in shallow lagoons) may be taken as an indicator of depth. To test the above hypothesis, the production of 27 atolls with
known measurements of lagoon and reef area were compared (Figures 2.2, 2.3). The results clearly show that high levels of production occur almost exclusively on a group of atolls with an extremely narrow range of reef/lagoon ratios (0.2-0.8).

This correlation can be taken as a preliminary indication that pearl oysters do best in lagoons of a fairly narrow range of depth. In a survey of Takapoto, Intes (1988) has found that pearl oysters are naturally most abundant between 20 and 40 meters from the surface. Above this range, the pearl oyster apparently faces formidable competition from Tridacna (the giant clam), which is the most abundant species of mollusc in shallow water (Intes et al, 1990). In addition, there is more exploitation by man. Below this range, sunlight is probably inadequate for optimal production. The implication is that depth is a much better indicator than lagoon or reef area for potential pearl oyster production. Surprisingly, however, the correlation between production and reef/lagoon ratios has hitherto been unreported in the scientific literature on pearl oysters.

The narrow range of depth suitable for pearl oyster substrate would explain why the majority of the oyster production during the mother-of-pearl diving industry was
Figure 2.2. Density of Pearl Farming Concessions on Various Atolls, 1990

Source: SMA
Figure 2.3. Mother-of-Pearl Production on Various Atolls, 1946-1969

Source: EVAAM
harvested from only a handful of atolls (Intes, 1982). It is apparently only on these atolls, whose lagoon floors and patch reefs lie largely within 20-40 meters of depth, which are optimal for pearl oyster production. This has several important implications. On the atolls which are naturally suboptimal for oyster production, overexploitation can occur much more rapidly. If not extinct already, oyster populations should be carefully preserved. On oyster-rich atolls, the oysters probably can be exploited within moderate limits; below which spat collection would probably be affected adversely. It also explains why certain Tuamotuan atolls have historically been repeatedly subject to human competition over lagoon space, as we shall see below.

The Mother-of-Pearl Industry

Pearl diving is an ancient skill that was practiced in a number of regions in the world, especially the Persian Gulf and Sri Lanka, dating back as far as 4,500 B.C. (Salomon and Roudnitska, 1986). The pearl fisheries of the Tuamotus are more recent, due to the relatively late human colonization of these islands (currently thought to be around 1000 A.D. [Chazine, 1990]). The Tuamotuan pearl oysters are typically found singly or in small groups, rather than in large banks, and pearl shell (Figure 2.4)
Figure 2.4. Preparation of Pearl Shell
was the primary object of the fishery, used in European button manufacture, although occasionally, pearls were found as well. The international price of pearl shell has fluctuated dramatically, depending on supplies, demand, and world economic and political conditions (Intes, 1982). Nevertheless, pearl oysters have been a critical resource for populations living in an environment otherwise largely limited in commercial opportunity.

The mother-of-pearl industry was first established in the early 19th century. Merchant ships from Valparaiso, Sydney, and Europe began frequenting atolls where pearl stocks were said to be abundant. A typical early expedition stopped at Anaa (one of the first atolls to be missionized), contracted an interpreter and a diving team of 30 men or more, and headed for one of the outlying atolls. Often by dint of bullying and persuasion, the men completed their agreement, working until 40-50 tons of shell were obtained. If the stock became exhausted, the ship would move to another atoll. The permission of the local residents was not always secured and there were frequent altercations between the natives and the outsiders (Fitzroy, 1839; Lucett, 1851; PIM, April, 1954). By the second half of the 19th century, the French protectorate administration grew increasingly concerned
about the chaotic situation of the Tuamotuan pearl fishery.

Previous attempts at regulation by the Pomares had proven ineffective, and in 1866 (when Tahiti had become a colony in all but name), the French governor initiated a number of regulations to regulate the Tuamotuan diving industry. These regulations were based on recommendations from French oyster biologists who visited Tahiti at the request of the administration. On a yearly basis, certain lagoons would be opened, others would be opened only in specific areas, and still others would be closed until stocks began to regenerate. Minimum size limits were placed on the oysters and diving was restricted to certain seasons. The lagoons were divided into sectors so that no one lagoon would be completely depleted of its natural pearl oyster stocks. Certain sectors of endangered lagoons were set aside as natural reserves which could not be exploited at all (Bouchon-Brandely, 1885; Herve, 1933, 1934).

But management of pearl fishing on remote Tuamotuan atolls proved more illusory than real. Compliance was poor and merchants carrying undersized shells could easily bypass Papeete altogether. Disputes frequently flared between indigenous populations trying to protect their own resources and outsiders (Tahitians as well as Europeans)
intent only on the extraction of as much as possible. Local populations particularly objected to outsiders who used scaphanders (underwater breathing apparatus), as these were capable of overexploiting the lagoon floor. The good diving spots were well known and the oyster stocks could be rapidly depleted (see Chapter 5). There were also objections when the administration--attempting to promote pearl farming and doubtful about the ability of the Tuamotuans to do so--announced a Tuamotuan settlement plan for French oyster farmers (Bouchon-Brandely, 1885; Wilmot, 1888). However, the settlement plan appears to have been unsuccessful.

The opening of a dive season on one of the oyster-rich atolls has been described as a "Rabelaisian" event (Baruch, 1936). Schooners, cutters, and even whaleboats full of native divers and their families, dogs, pigs, chickens, canoes, and "what not" would arrive all day and night, and before long an atoll which had barely held a hundred would receive thousands of people. The tiny village suddenly became a huge agglomeration of Polynesians from all parts of the Tuamotus, as well as from neighboring groups, working the canoes across the lagoon. Wine, rum, and champagne (until the government intervened) flowed in unlimited quantities. There would be travelling theaters and shops that were reportedly
stocked as well as any store in Papeete (Baruch, 1936; Williams, 1962; Bascom, 1970).

After several weeks to several months, pearl oysters would become increasingly rare and the divers would move on to another atoll. Some 35 atolls formed part of this vast archipelagic circuit, about a third of which would be opened (for diving) for a 3–6 month interval. The divers and their families who participated in this circuit were funded by advances from Chinese entrepreneurs, covering the expenses of transport, housing, and subsistence. The Chinese entrepreneurs were also the ones who ran the local shops, often at high markup values. Unless a pearl of exceptional value was found (usually sold to itinerant pearl merchants), the diver would not save very much from his several months of work and would often wind up in debt to the entrepreneurs who financed their diving (Herve, 1933, 1934; Baruch, 1936).

The divers and their canoes were towed by tugboats and left to dive at different sectors of the lagoon. The dive typically went from early morning to late afternoon, with little sustenance besides fresh fish, coconuts, and water. Dive sites were located with a glass box. Equipped with goggles or glass eye-pieces, the divers would take a number of deep breaths, descending quickly on a weighted line up to twenty fathoms. The oysters would
be hauled up in a sennit basket. Staying under water for over a minute at a time, a good diver could bring up over 100 kilograms of shell (about 300 oysters) during a day (Baruch, 1936). Inexperienced divers who endured sustained lack of oxygen were subject to taravana, a disease whose extreme manifestations were motor paralysis and sensory disturbances (Herve, 1933, 1934).

By the 1950s, the signs were clear that the industry was reaching an end, due to numerous decades of overexploitation. One by one, the pearl oyster stocks of the Tuamotuan lagoons had reached the point of near extinction. Only a handful of lagoons still contained stocks that were sizeable enough to be worth exploiting (Hikueru, Takaroa, Gambier, Marutea, Marokao, and Takume) and these too were now producing far less than previously (Intes, 1982). With the help of biologists and technical experts from France, Australia, and Japan, the administration, aided by private investors, launched a major effort to develop a pearl farming industry. It was thereby hoped to relieve the pressure on natural pearl oyster stocks (Reed, 1970). To accomplish this goal, research was oriented in two directions: spat collection (capture of post-larval oysters) and pearl farming (grafting the oysters).
Spat Collection

The successful introduction of spat collection in the Tuamotus can largely be credited to the pioneering efforts of Gilbert Ranson, a French oyster biologist of world renown. Ranson was called to Tahiti by the colonial administration when it became apparent that oyster catches were declining precipitously. In the early 1950s, Ranson conducted surveys in some of the most promising lagoons, recording water temperatures and salinities, collecting plankton, and studying the growth of the pearl oyster at various depths, the nature and conditions of the bottom, and the direction of the currents. Ranson also conducted studies on pearl oyster biology and reproduction (Ranson, 1962).

Ranson found that only a minute fraction of the eggs produced by mature pearl oysters manage to become successfully fertilized, evade being consumed by predators, keep from being swept out into the ocean, and find a suitable lagoon substrate. The atolls in which pearl oysters were most abundant were those that had no deep passes between the ocean and the lagoon (lessening the chances of larval loss at sea), had lagoon floors which contained numerous coral pinnacles (which formed a hard, protected surface for the spat to settle on), and had lagoons which were deep enough to have survived the
decades of human overexploitation of natural stocks
(Ranson, 1962). As it turns out, mid-sized atolls (50-100
square kilometers) are the only ones which generally fit
the above specifications.

Fortuitously, Ranson had learned another important
fact about Tuamotuan pearl oysters. During the occasional
hurricanes, an enormous amount of debris, including coral
rubble, coconut palms, and other potential oyster
substrate, was cast into the lagoon floors. In some of
the atolls where this occurred, divers reported a
tremendous enrichment of the natural pearl oyster stocks
in the years following the hurricane. This indicated that
larva which would have otherwise perished on the sandy
floor were now able to find a suitable substrate. Some
divers reported that there were entire trees on the bottom
of certain lagoons which were covered by as many oysters
as had formerly been leaves (Ranson, 1962). It was
therefore only another step to suggest the creation of
artificial substrate, by tossing tons of shells, wood, and
rocks into the lagoons.

Ranson chose to experiment on Hikueru, an atoll which
has been a mecca for the pearl oyster industry since the
early part of the Century. He suspended thousands of
bundles of mikimiki (Pemphis acidula)—an easily
obtainable local hardwood—below the lagoon surface,
hoping to catch the oyster larva that float along with the plankton. Ranson's efforts were successful and Hikueru became the center of a major experimental project by the administration (Reed, 1970). But the effort put into spat collection could hardly have been compensated by shell export revenues. In the initial phase of pearl farming, relatively few oysters were needed and these could be gathered from the lagoon floor without necessarily endangering the natural stocks. Consequently, spat collection was not received with great enthusiasm by the Tuamotuans.

Ultimately, spat collection did replace diving, due to several factors: 1) As pearl culture expanded--with private farms that were grafting tens of thousands of oysters in a season--natural stocks were not sufficient. 2) A simplified, efficient means of spat collection was devised using inexpensive, lightweight, synthetic materials which were easy to assemble, required less maintenance, and yielded oysters which could be easily harvested at maturity. 3) Diving was permitted for pearl culture up until the 1970s, but as the natural stocks declined, the administration became increasingly reluctant to permit the harvest of natural oysters. 4) The oysters obtained through spat collection suffered less mortality
when exposed to the stresses of grafting during pearl culture (Coeroli and Mizuno, 1985).

As mentioned above, however, not all atolls were equally suitable for spat collection. Hikueru experienced a heavy oyster mortality (due to an algal bloom) shortly after the above initiatives and Takapoto took its place as the center of experimental efforts in spat collection and pearl farming. By the 1970s, practically every household on Takapoto had their own spat collection stations scattered across the lagoon, the majority of which were used to produce oysters for pearl farmers on oyster-poor atolls such as Manihi and Aratika. A mutualistic system soon developed in which small-scale, indigenous farmers did the diving (where still permitted) and the spat collection (where successful), while wealthy investors from Tahiti (French, Chinese, or Tahitians) purchased the oysters and used them in large-scale pearl culture operations.

Because of its easily obtainable oyster supply, Takapoto became the center of a boom community attracting return migrants and aliens from Papeete and neighboring atolls. This lasted for about ten years. But in 1985, spat collection declined on Takapoto as well, due to disease problems whose etiology has not yet been fully determined (current hypotheses included pollution,
infection, and malnutrition, discussed in Chapter 6).
Takaroa, the neighboring atoll, became the new center of spat collection, supplying numerous pearl farms in the Western Tuamotus. Some of the households that had engaged in spat collection in Takapoto moved to Takaroa and even some of the large-scale pearl farmers from Manihi moved to Takaroa in order to have easier access to seed oysters (see Chapter 7).

Transport of the oysters, usually several tons at a time, is hazardous as the oysters will die if they remain more than a half hour out of the water (or even in water which is insufficiently oxygenated). Consequently, the preferred means of transport is by small plane, usually making numerous trips back and forth between Takaroa and one of the neighboring atolls. The less expensive--but more risky--means of transport is by boat, typically 24-36 hours to Manihi or Aratika. The oysters are soaked in water in large drums which are continuously refilled with fresh, oxygenated sea water. Even when cared for scrupulously, as many as 30 percent of the oysters may be dead by the time the destination is reached and additional mortality can be expected during the grafting procedure (see Chapter 7).

Spat collectors are now manufactured primarily from opaque black polyethylene or hyzex film sheets (Coeroli et
The sheets are cut into narrow lengths and pierced repeatedly with a large needle and synthetic twine, producing multiply folded flowerlike strips (Figure 2.5-2.6). These strips are tied to a long cord (the "cable") that is suspended at the lagoon surface with a series of floats (sealed plastic globes) and weights (reef blocks or lead sinkers). Each of these long, suspended spat collectors is called a "station". The stations are set in a deep part of the lagoon at the change of seasons (April or October), when the pearl oyster spatfall is likely to be highest relative to that of competing mollusc species. Within a few days, the stations begin to sink due to the weight of the oysters and adjustments must be made (weights removed, floats added). The stations are left to settle several meters below the lagoon surface, protecting the oysters from wave action.

Within a half year, the young oysters have typically grown to six centimeters, large enough to be removed from the stations, cleaned from coating algae, and transferred for rearing closer to the shore. The live oysters are carefully pierced through the border of their shells with a drill and attached on vertical cords (Coeroli et al., 1984). An alternate (more expensive) method is to place the oysters in mesh pockets or wooden boxes covered with galvanized wire. The oysters which are too small to be
Figure 2.5. Spat Collection Station on Ground
Figure 2.6. Preparation of Collector
attached in this way are suspended from small lantern baskets that are also hung from the cables. Some farmers prefer not to transfer their oysters to the nearshore, leaving them attached to the spat collection stations and sold to pearl farmers. However, these oysters sell for a lower price as the oysters will still need to be sorted, cleaned, and prepared for grafting.

During the first decade of pearl farming, the rearing (as well as the pearl culture which followed) took place on fixed, metallic tubular platforms raised several meters above the lagoon bottom. However, these platforms were later suspected to be deleterious to the oysters due to heavy metal leaching, contaminant detritus buildup on the sand underneath, and malnutrition due to crowding (see Chapter 7). Consequently, the Territorial Institute for the Promotion of Aquaculture and Maritime Activities (EVAAM) has recommended that the farmers switch from fixed, metallic platforms to floating, synthetic cables (Hauti, 1989). These are floating lines which are quite similar to the spat collection stations to which the oysters initially adhere, except that the cables carry larger oysters and must be suspended with drums filled with compressed air, and onto this, feeder lines laden with 10-20 young oysters are attached at regular intervals (Figures 2.7-2.9).
Figure 2.7. Floating Line: Appearance on Surface
FLOATING LINE: PEARL FARM

Figure 2.8.
Floating Line: Underwater Layout
Figure 2.9. Inspecting Oysters
Source: Goebel and Dirlam, 1989
Regulation of spat collection has proved difficult for the administration in Tahiti. To promote spat collection, large areas of lagoon space were conceded by the administration to native spat collectors without fees. But following the disease problems, the administration decided it was time to cut down on the number of spat collectors. To accomplish this, they began charging a fee on every meter occupied, placed a 50 meter maximum length on all stations, and limited the number of allowable stations to three per persons (SMA, 1987). But the local populations did not see it in this way as disease is not very common in spat collection; moreover, oysters are said to have once been previously packed densely along the shore (before they were overexploited) without evident disease problems.

It is also difficult to enforce islanders to keep within specific concession sites. The stations are usually situated in the middle of the lagoons, without any convenient geographic reference points and on occasion, even the farmers themselves have difficulty remembering where they were deployed. Also, farmers frequently decide that their old spot is no good and transfer at will to a new site without waiting for the lengthy process of application to the administration in Tahiti. Some stations are deployed by persons who do not even live on
the atoll but simply come once a year to deploy new stations or sell old ones. Consequently, outside of the sporadic administrative surveys (and these too are not always completely accurate), it is difficult for anyone to keep track of what is going on in the center of the lagoons.

**Pearl Farming**

Pearl farming, or more specifically, pearl culture has also been practiced in Asia for millennia. Small, solid objects were inserted under the shell of living pearl oysters, to be gradually coated with nacre. Similar attempts were made in Tahiti as early as the 1880s, but initial successes were not followed by continued research. The first commercial culture of pearls was developed in Japan in the early 20th century. With the demise of the mother-of-pearl industry (in French Polynesia) in the 1950s, Japanese technicians were contracted by the administration to adapt the technology for grafting Tahitian pearl. The first grafts (also called seedings) took place on Hikueru and Bora Bora and were quite successful, but the effort stalled for several years because there was not yet an international market for these pearls (Salomon and Roudnitska, 1986). After successfully developing a market for the white pearl, the
Japanese were concerned about the possible loss of business if a black pearl market was created.

In the mid-1960s, Domard, an agent of the Tahitian fisheries service, contacted Rosenthal, a prominent Parisian jeweler specializing in pearls. Rosenthal looked at the pearl which Domard had brought and was favorably impressed. He decided to send his two sons to Tahiti; they began an experimental pearl farm on Manihi, an atoll in the Western Tuamotus whose community was willing to accept the strangers. Joined by a Tahitian entrepreneur and skilled grafters from Australia and Japan, they conducted experiments on pearl production with local oysters. As an incentive, the administration agreed to build an airstrip in Manihi and to provide financial aid. In turn, the Rosenthals promised the local population that they would purchase their oysters (spat collection and diving) and also give them shares in the company. With their own pearl wholesale business in Paris, marketing could be arranged easily (Salomon and Roudnitska, 1986).

At the same time, the administration organized a pearl farming cooperative on Takapoto, the atoll which was now the pioneering center of spat collection, but marketing problems were again encountered. By the mid-1970s, other private investors from Tahiti had launched pearl farming enterprises in Manihi, Arutua, Marutea Sud, and the
Gambier Islands, and established links to the American market. Realizing that the industry was now becoming established, the Japanese, who were still the major international pearl wholesalers (but had hitherto been opposed to marketing black pearls, due to competition with their own production of white pearl), reversed their policy. Japanese buyers provided a major stimulus for (black) pearl production in French Polynesia. By the early 1980s, the black pearl auction in Papeete had become an annual event which was well attended internationally (Salomon and Roudnitska, 1986).

The technology of pearl production is still a guarded secret, but enough has been observed, written about, and replicated by locals, that the veil of secrecy has significantly eroded. In essence, the technique is as follows: A live pearl oyster is removed from the lagoon, held with surgical clamps, and forcibly opened about a third to half an inch. An incision is made through the mantle and an inert, spherical nucleus, usually made of a thick mollusc shell, is inserted into the gonad of the live host oyster together with nacre producing tissue from the mantle of a donor oyster (which is sacrificed). The oyster is left to close, returned to the lagoon, and cared for during the next year and a half. Concentric rings of nacre are gradually secreted, walling off the foreign body
(George, 1969; Reed, 1970). Within a year or two, a coating of nacre has sufficient thickness, color, and luster for the pearl to be profitably marketed (Figures 2.10-2.12)

Other nacre-coated products are also produced in addition to round pearls. If the nucleus is placed between the shell and the mantle, a "half-pearl" (also called a chicot or mabe) is produced, becoming flat on the shell side and round on the body side. If a piece of donor mantle tissue is inserted into the gonad of an oyster without a nucleus, a keshi is produced; these are small, irregularly shaped pearls which can be highly ornamental, particularly if used in combination with other gems (Reed, 1970). Compared to the half-pearl or the keshi, round pearls are more lucrative and also more commonly produced, but they require a more careful operative technique and the process takes much longer for completion and profit returns.

The oysters most suitable for grafting are those which have been raised with adequate circulation, at sufficient depths, and away from sandy bottoms. In preparation for grafting, the oysters are usually brought up to shallow, near shore waters. The shock of being subjected to different thermal, altitudinal, and nutritional conditions is thought to give the oysters a chance to adjust to the
Figure 2.10. Grafting Procedure
2.11. Mature Pearl in Oyster

Source Goebel and Dirlam, 1989
Figure 2.12. The Pearl Harvest
subsequent operation. It also induces the oyster to
devoid itself of any eggs or spermatozoa that might have
accumulated in the gonads, which could potentially impede
the nucleus insertion. The size of the nucleus must be
carefully matched to the capacity of the gonad. Care must
also be given to the selection of donor mantle tissue
(which determines the color of the pearl) since a single
strip of tissue may vary in color from one centimeter to
the next (Coeroli and Mizuno, 1985).

The graft is usually performed on a contract basis by
skilled Japanese technicians who have trained for many
years and who have already grafted tens of thousands of
pearls (in Japan, Indonesia, or other areas). The
technicians receive their accommodations for free at the
home of the employing farmers and are the most highly paid
individuals in the industry. The salary is either paid
directly after the graft (as much as 25,000
CFP--approximately $US 250--per day) or as a percentage of
the harvest (usually 50 percent). The graft takes place
in a small hut, usually constructed on pilings in the
nearshore lagoon (Figure 2.13). While the technician
grafts, he is assisted by a number of workers, also
provided by the customer. One worker is continuously busy
selecting and cleaning appropriate donor and host oysters,
while other workers are moving the oysters between the technician and a holding platform.

Large-scale pearl farms (Figures 2.14-2.16) hire their own grafter(s) on a permanent or semi-permanent basis, paying for transport fees and all other necessities. They graft anywhere from 25,000 oysters or more in a year, assisted by hired workers from the resident atoll and from Tahiti. Small-scale pearl farmers generally graft less than 5,000 oysters. The rest of the year is spent taking care of the pre- and post-graft oysters as well as numerous spat collection stations. Small-scale grafter function independently, but they are eligible for support by the Government Pearl Farming Cooperative (GIE) which arranges bank loans for equipment and labor and hires Japanese grafter which circulate back and forth on a seasonal basis between the numerous small pearl farms on various atolls.

Pearl farming concessions are also allocated by the administration in Tahiti. Unlike spat collection, however, pearl farms are situated closer to land, and the concession directions can more conveniently, hence more specifically, specify the approximate geographic coordinates (e.g., "X is awarded two hectares at 200 meters from land parcel Y"). Concession fees are proportionate to the total lagoon surface area occupied
Figure 2.13. Grafting Shed and Platform, Small-Scale Pearl Farm
Figure 2.14. Large-Scale Pearl Farm, Work Buildings to Left, Residence to Right
Figure 2.15. Work Platform, Large-Scale Pearl Farm
and are charged at a sliding scale which is lower for the large-scale farmers. Since increasing the depth or amount of production does not result in a higher fee, relatively high densities of production have been encouraged, as we shall see below (Chapter 7). The large-scale farmers pay considerably less per unit area than the small-scale farmers, but they end up paying more due to the greater amount of surface occupied.

The Advent of the Black Pearl Boom

The administration had experimented with black pearl culture as early as the 1960s, but it was not until the mid-1970s that the techniques of spat collection and pearl culture were perfected and an international market was developed (Coeroli, 1982). A number of factors can be jointly credited in bringing about the Tuamotuan pearl boom. Foremost among these was the success of the administration's pioneering efforts in adapting spat collection and grafting technology to the native black pearl oysters. An additional incentive was provided by generous financial aid programs including the Funds for the Management and Development of the Islands of French Polynesia (FADIP), the Funds for Assisting the Outer Islands (FEI), and low-interest loans through the government development bank in Papeete. Grants and low
interest loans were allocated to help return migrants to their home atolls, assisting with transport, housing, and employment.

Takaroa Atoll, in the northwest part of the Archipelago, would have been an ideal site for government research and development of the new industry. Of all the atolls with surviving stocks, Takaroa was the only one that had an accessible pass, a safe anchorage, and was within a relatively short distance from Tahiti. Its stocks of natural pearl oysters also grew larger and faster than those of its neighbor, Takapoto, probably because of its deeper lagoon and better water circulation. But the community on Takaroa refused to let the Department of Fisheries establish a station on their atoll. The people are said to have been afraid that the administration would use the station as a pretext for taking away land and lagoon space from local control.

Instead, the experimental station was built on Takapoto, where the population had been more amenable to the administration’s proposals. Visiting oyster biologists gave the local inhabitants instruction in the methods of spat collection and Takapoto rapidly became a center for supplying oysters to pearl farms on neighboring atolls. Pearl farming cooperatives were also established, employing the services of Japanese grafting specialists.
An airport was built linking Takapoto and Tahiti. By 1974, the new industry was well on its way. Migrants in Tahiti began to return to Takapoto, encouraged by the new prospects. Between 1971 and 1977, the population of Takapoto had climbed from 108 to 215 (ITSTAT, n.d.). During the same period, the population of Takaroa declined from 149 to 122, a record low figure for the post-1946 period, for which data are available.

With the assistance of the administration and Tahitian banks, pearl farming cooperatives were established on several atolls in the Western Tuamotus by the later 1970s. However, spat collection was still producing meager harvests and the majority of oysters (for pearl culture) had to be obtained through diving. The cooperatives became plagued with problems of financial mismanagement and misappropriation of funds and soon fell apart. Capital was hard to obtain for independent small-scale pearl farmers. Consequently, until the mid-1980s, the pearl industry remained moribund. Tentative initiatives were being made on a few atolls, but the indigenous islanders did not have sufficient capital and external investors—with the exception of a few pioneers—had not yet become sufficiently convinced of the feasibility and profitability of pearl farming in the Tuamotus.
A breakthrough occurred following the series of hurricanes which ravaged the Tuamotus in 1982 and 1983 (Dupon, 1987). Trees, massive reef blocks, and other solid debris were deposited on the lagoon floor, providing a natural substrate for oyster larva, resulting in dramatic spat collection increases. Spat collection was an attractive and inexpensive proposition for beginning farmers with limited savings. In the lagoons where spat collection was most successful, potentially graftable "seed oysters" could be harvested after only six months, yielding a several-fold return on the initial investment. Spat collection provided an immediate source of capital and enabled the islanders to gradually acquire the seed oyster stocks, experience, and contacts necessary for pearl culture operations.

For the numerous Tuamotuan migrants in Papeete, many of whom were left unemployed following the decline of French military construction, the developing pearl industry provided a seemingly God-sent opportunity to return to the atolls. Many of these migrants had, in fact, not seen their home atolls since their childhood and some had even been born in Papeete. Nevertheless, they were all equally eligible for funding by government aid programs and were generally well accepted by their relatives in the atolls. Between 1983 and 1988, annual
population increases of three percent or more were occurring on several atolls in the Western Tuamotus. Growth rates were exceptionally high on several atolls which were important pearl farming centers, as indicated by the numbers of authorized pearl farming concessions (Table 2.1).

Table 2.1. Population Growth on Various Pearl Farming Atolls

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Takapoto</td>
<td>33</td>
<td>465</td>
<td>8.7</td>
</tr>
<tr>
<td>Takaroa</td>
<td>27</td>
<td>396</td>
<td>20.0</td>
</tr>
<tr>
<td>Arutua</td>
<td>22</td>
<td>288</td>
<td>3.0</td>
</tr>
<tr>
<td>Manihi</td>
<td>19</td>
<td>429</td>
<td>6.7</td>
</tr>
<tr>
<td>Hao</td>
<td>14</td>
<td>1,156</td>
<td>-0.2</td>
</tr>
<tr>
<td>Makemo</td>
<td>7</td>
<td>373</td>
<td>0.7</td>
</tr>
<tr>
<td>Ahe</td>
<td>6</td>
<td>162</td>
<td>2.7</td>
</tr>
<tr>
<td>Kauehi</td>
<td>6</td>
<td>240</td>
<td>4.2</td>
</tr>
</tbody>
</table>

Source SMA, ITSTAT

The population change is negative for Hao, the Easternmost pearl farming atoll and site of a French military base, due to the scaling down of military activities, which formerly provided jobs for migrants from other atolls. It is highest for Takaroa, which was rapidly becoming a key atoll in the pearl oyster industry. It is also quite high in Takapoto and Manihi, the original sites of pearl farming experimentation. The most favored atolls for pearl farming were also those that
were ecologically best endowed with natural pearl oyster stocks, such as Takaroa and Takapoto (Table 2.2). As noted above, this occurred in a group of atolls with an extremely narrow range of lagoon sizes and depths. Abundant natural stocks resulted in exceptionally good spat collection, saving pearl farmers the trouble, expense, and mortality risk of importing seed oysters from other atolls.

Table 2.2. Spat Collection and Shell (MOP) Production on Various Pearl Farming Atolls

<table>
<thead>
<tr>
<th>Atoll</th>
<th>Concessions</th>
<th>MOP Production (Tons, 1946-69)</th>
<th>Lagoon Size (Sq. Km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Takapoto</td>
<td>144</td>
<td>827</td>
<td>78</td>
</tr>
<tr>
<td>Takaroa</td>
<td>96</td>
<td>1,290</td>
<td>85</td>
</tr>
<tr>
<td>Arutua</td>
<td>37</td>
<td>32</td>
<td>484</td>
</tr>
<tr>
<td>Manihi</td>
<td>71</td>
<td>98</td>
<td>160</td>
</tr>
<tr>
<td>Hao</td>
<td>23</td>
<td>45</td>
<td>?</td>
</tr>
<tr>
<td>Makemo</td>
<td>49</td>
<td>84</td>
<td>584</td>
</tr>
<tr>
<td>Ahe</td>
<td>28</td>
<td>63</td>
<td>139</td>
</tr>
<tr>
<td>Kauehi</td>
<td>3</td>
<td>&lt; 1</td>
<td>320</td>
</tr>
</tbody>
</table>

Source SMA, ITSTAT, CATG

Revolutions, Green and Blue

Before going on to show the consequences of the black pearl industry for one small community, it would be well to consider how this compares with similar development initiatives elsewhere. The "green revolution" provides a wealth of case studies, but debate continues on the question of social implications. Numerous scholars,
particularly those coming from a Marxist perspective, have argued that peasantry has generally lost through the green revolution (see Farmer, 1986). Studies have found that it is primarily the elite groups that were able to afford the chemicals, fertilizer, irrigation, and other inputs necessary for the new seed varieties. This has made it difficult for the small-time farmers to compete, forcing them to sell their land and go out of business, aggravating, rather than resolving problems of poverty and inequity (Pearce, 1977; Dahlberg, 1990). However, these findings have been heatedly disputed and contradicted by other studies (Hopper, 1976; Lipton, 1987, Lipton and Longhurst, 1989).

A parallel body of literature has recently emerged on the "blue revolution", dealing primarily with fisheries. In San Miguel Bay, in the Philippines, the introduction of highly efficient, mechanized trawlers has been lauded as a success by international development agencies; yet criticized by some scholars as a potential source of displacement and marginalization of the small fishermen and increasing pressure on an already overexploited resource (Bailey, 1985). Other studies have shown that fisheries industrialization has allowed distant water fishing fleets to reap the majority of the benefits, while the costs are born by local communities (Emmerson, 1980;
Kent, 1980). Compared to agriculture, marine resources are much less subject to enforceable property rights and restrictions of access, maximizing competition and personal advantage, and potentially leading to ecological degradation (Bailey, 1985).

Pearl farming differs from the above cases in that (like other types of mariculture) the exploited species is added--rather than taken away from--the marine environment. Nevertheless, overstocking can also have important ecological consequences, including oyster malnutrition and disease (Rosenthal, 1991). Pearl farming also differs in that the resource occurs and is farmed in sheltered lagoons rather than open seas. The territorial rights of local communities are therefore likely to be much more vigorously defended than in nearshore ocean fisheries. Territoriality will also be enhanced since the resource is rare and potentially of much higher value than other kinds of fisheries and mariculture. For the same reasons, however, the resource is likely to attract intense attention by external economic and political interests.

Ecological perturbation may indeed be an important complicating factor in the pearl farming industry. Sheltered lagoons and reefs may seem like extremely productive ecosystems, but studies have shown that aquatic
communities throughout the world are perched on a narrow and fragile trophic ledge. Even small perturbations can have unexpected, escalating, and long run effects on community structure and productivity (Barnes and Mann, 1980; Gray, 1989). This is particularly so with pearl oysters, which are highly intolerant to alterations in biophysical conditions and may play an ecologically critical role through their filter feeding capabilities. Moreover, like all endemic land and marine species, pearl oysters are vulnerable to competition by hardier, opportunistic species and can be pushed quite rapidly to the point of extinction (see Chapter 6).

There are also significant social and political differences between the case of Tuamotuan pearl farming and other kinds of agricultural or maricultural revolution. The Tuamotuans have a long history of isolation and independent ways. They have always been wary of external maneuvering in their territory. However, the communities are minute and relatively powerless when confronting the combined interests of external capital and political authorities. Local protest is highly unlikely to reach the ear and the attention of the outside world. Nonetheless, resistance to external incursion has occurred historically as well as today, as the following chapters will attempt to show.
CHAPTER 3
TAKAROA: A PEARL BOOM COMMUNITY

From the densely crowded village to the pioneer pearl farms on the most distant islets, Takaroa is visibly a boom community. From a population of 33 households in 1983, all of whom were located in the village, the population swelled to 106 households in 1991, about half of whom had settled on the outer islets. The numerous houses, generators, and even automobiles are evidence of the wealth flowing into the community from the new industry. Copra production is now on the decline, replaced by the more lucrative pearl farming industry. Most households are engaged in spat collection, which is a relatively rapid source of income. However, only half of all households actually farm pearls, the most profitable phase of the industry. Production is dominated by a few large-scale entrepreneurs who purchase the necessary seed oysters from the indigenous community.

This chapter will show that there are significant distinctions in the demographic and economic characteristics of oldtimer, return migrant, and alien households on Takaroa. On average, the oldtimers have larger households, are less educated, and are more fluent in the Tuamotuan language; the reverse holds true for the
alien households; and the return migrants fall in middle. The oldtimers are settled primarily in the village; the return migrants and aliens on the outer islets, in closer proximity to their pearl farms. Only the oldtimers are substantially involved in copra, a labor-intensive means of production. A few aliens, predominantly Tahitians of Chinese descent, run the large-scale pearl farms while return migrants predominate in spat collection.

While the data suggest that the population of Takaroa is differentiated by migration (oldtimer/newcomer) and production (large/small scale pearl farmers), it is the criterion of descent (indigenous/alien) that is the critical social divide. Some tension is occasionally present between oldtimers and recent migrants, and pronounced animosity has developed toward large-scale alien entrepreneurs, but relatives are never categorically rejected, regardless of the size of their pearl farms or occupation of family land. In the following chapters, I will show that this is not due to any inherent xenophobia, as the islanders have worked abroad, intermarried, and worked in cooperation with outsiders for numerous decades. It is rather due to apprehension over the sudden acquisition and exploitation of large tracts of lagoon space by a few alien pearl farmers.
Map 3.1. **TOPOGRAPHIC FEATURES**

- **PACIFIC OCEAN**
- **Outflow Channel**
- **Lagoon**
- **PASS**

**Coordinates:**
- 14° 30' 36" S
- 144° 59' 44" W
FEATURES

TAKAROA ATOLL

36° S
44° W

SCALE

1 2 3 KMS.

- CHANNEL
- LAGOON
- INFLOW CHANNELS
- ISLETS
- REEF
Physical Features

Takaroa is a mid-sized atoll which lies 507 kilometers Northeast of Tahiti and 11 kilometers Northeast of Takapoto, the neighboring atoll. Oriented in a Northeast-Southwest direction, Takaroa has an oval form (Map 3.1). At its largest extents, the atoll is 26 kilometers long and seven kilometers wide. The pass, Teavanae, is deep enough to permit entry to ships. Situated four kilometers northeast of the atoll’s Southern extremity, the pass is bordered by sheer reef walls for almost a kilometer to the lagoon entrance. Currents can reach up to nine knots on the ebb or rising phase (Hauti, 1987). Further access is difficult, as the lagoon junction is shallow and usually contains very turbulent waters.

The village (Figure 3.1, Map 3.2) is situated on a small islet abutting the pass. A quai five meters deep can receive cargo boats. Past the quai is a government meteorological station, one of four currently operating in the Tuamotus. After the meteorological station, the road passes a municipal building, which includes the offices of the mayor, the secretary, and the police. Shortly after this, the road bifurcates. The right branch runs parallel to the lagoon and the left runs parallel to the ocean. Just to the left of the junction lies a large, majestic
Figure 3.1. Village Islet

Figure 3.2. Main Road, Mormon Church
Map 3.2. **SETTLEMENT PATTERN**

**TEAVAROA VILLAGE**

- **LAGOON**
- **CHURCH**
- **MAYOR**
- **SCHOOL**
- **OLDTIMER**
- **RETURN MIGRANT**
- **ALIEN**
Mormon church building of gleaming white coral stones. It is said to be a hundred years old, and though reconstructed numerous times, it has been faithfully rendered in its original form each time (Perrin, n.d.), and has survived powerful hurricanes (Figure 3.2).

On the lagoon branch, the road successively passes a shop, the Catholic church, and a "snack". The shop is just like any in the Tuamotus, containing primarily tinned and packaged food and some items of clothing and other basic necessities; frozen chicken and beef are also occasionally available. The Catholic church had been built of wood, but was torn down in 1990 after the walls had badly deteriorated; reconstruction has been planned but not yet begun. The snack prepares local dishes in the evenings for local customers and the government visitors and occasional yachts that visit the atoll. At the snack, the road leaves the lagoon and turns oceanward, passing the clinic and the post office, eventually reaching the school and an inter-islet bridge.

The school has three classes, but education is provided for children all the way to age 14, as multiple levels of instruction are provided within each class; the compound also houses the the two off-island teachers. Across from the school, a low-lying one-lane bridge allows the movement of people and motorized vehicles between the
village and the neighboring islets. Returning to the quai along the ocean side of the islet, the road passes the Sanito church (a schismatic branch of the Mormon church centered in Independence, Missouri), the smallest on the atoll, with only a handful of congregants (the Protestant church has no building). Near the ocean, the islet is planted with coconut palms and is less densely populated. The village generator is located in this area, along with a small guest house for Japanese grafters and other visitors.

Most houses are built along the road rather than along either shoreline, apparently due to the dangers of water-rises during hurricanes. Access to the ocean, as well as to the lagoon, is easier from the quai (via road) than from either shore, as reefs make it difficult for even small boat passage except at the quai. The houses are all quite similar in both construction and size. They are built of wood, with plywood frames, cement floors, iron roofs, and windows of wooden shutters or louvered glass. All houses in the village contain a sitting room, one or two bedrooms, a kitchen, and (less frequently) an indoor bathroom. Electricity is supplied to all houses by a village generator, but few houses have a running water supply. Most draw their water from outdoor (usually open) cisterns; the older houses also have wells.
Except for a small area along the ocean side, the village is mercilessly exposed to the tropical sun and the powerful winds. There are few trees, perhaps because of potential damage to houses during the occasional hurricanes. The parcels of land in the village are miniscule compared to those in the outer islets, the result of a long history of concentrated habitation on the village islet. Yards contain varying combinations of coral sand, grass, and sometimes a fruit tree (papaya or breadfruit) and ornamental shrubbery. The older yards are bordered by three-foot high coral stone wall on their roadward side; the newer ones are bordered by galvanized wire, shrubbery, or left open. Adjoining the houses may be cisterns, small outhouses, outdoor kitchens, chicken coops, and pig pens.

Just to the north of the village islet is the first of over 90 islets which emerge from the coral ring surrounding Takaroa’s lagoon. The islets are all connected by the underlying coral ring, separated by hōā (interislet channels) unvegetated portions of the reef which are slightly lower than the islets. The channels are only innudated during high spring tides and the periodic hurricanes. During most of the year water enters the lagoon only via rainfall and a few submerged channels on the windward side of the atoll; leaving through
evaporation, through two channels on the leeward side, and and through the pass. The seven islets immediately east of the village are connected to the village islet by low bridges, allowing vehicles to pass (important for transport, particularly during stormy weather). Consequently, this group of outer islets is a favored section for settlement.

None of the islets rise for more than a few meters above sea level. Most have ocean-lagoon widths of less than 500 meters. The length of the islets varies considerably, from scarcely 100 meters to several kilometers. On the windward side of the atoll (southeast), the islets are bordered by raised mounds of coral rubble descending steeply into the ocean and shallow, sandy beaches on the lagoon shore. On the leeward side (northwest), the lagoon shore is composed of coral rubble, descending quickly into the deep lagoon; the ocean shore is bordered by reef flats, extending several hundred meters to the offshore reef crests.

The landscape of the outer islets is strikingly different than that of the village. The islets are covered by a lush green vegetation, predominantly composed of coconut plantations and remnants of the original vegetational cover. Tall, fragrant, kahāia (Guettarda (speciosa) and low-lying thickets of geogeo (Tournefortia)
are interspersed amidst the coconut palms, while gnarled mikimiki (*Pemphis acidula*) and creeping gāpata (*Scaevola*) line the shore. Occasional specimens of the majestic gatae (*Pisonia grandis*) have been preserved (often surrounded by barely perceptible quadrangles of coral flagstone), marking the former sites of the ancient marae (temple sites). Large, blue kaveu (coconut crabs, a prized food delicacy) and uga (small hermit crabs, commonly used for bait) scurry below the coral stones and the underbrush.

The outer islets swarm with mosquitoes, flies, and other insects to a much greater extent than the village (which has little vegetation). During much of the time, the powerful trade winds keep the insects confined to the bush, but during the occasional quiet periods (which can last as long as two weeks continuously), fires must be lit continuously in order to keep free from bites. The abundance of mosquitoes is promoted by the abundant debris of old coconuts and coconut shells (which harbor standing water), open wells, and pig farms. However, in the absence of malaria, filirasis, and other tropical diseases, the mosquitoes pose more of a nuisance than a health risk. Adults are generally quite habituated to the insects; but they can be troublesome for small children, who scratch themselves and develop infections.
Most of the outer islets have one or more houses built along the lagoon shore (Figure 3.3). Some are constructed on land, but the majority are built offshore on pilings of kāhaia hardwood or (less commonly) metal posts driven deeply into the adjacent reefs. Offshore construction makes the lagoon more accessible and life more tolerable (less insects). The houses are built with wood frames and plywood, as in the village, but the construction tends to be simpler, smaller, and more utilitarian. These houses are occupied for the entire work week, but most of the islanders return to the village on Sundays for church services and socialization. In addition to the main houses, there is often a paepae ("platform") built on pilings just abutting the deep water, used for work in pearl farming.

On the last islet connected to the village road, there is a huge wreck (the County of Roxburgh) dating from the devastating hurricane of 1906. The wreck was appropriated by the island chief shortly after the disaster (a small compensation was made to the insurance company), providing the islanders with construction materials, mirrors, and other prized objects for many decades afterwards. But the people on Takaroa feel uneasy about this episode. Spirits of the drowned sailors are said to still linger in the bush, dancing uproariously under the night moon, and are
Figure 3.3. New House

Outer Islets

Figure 3.4. Grafting Shed on Reef Pilings
occasionally encountered by villagers. The wreck is said to have introduced ciguatera to the atoll, which occurs almost exclusively after eating reef fish from the ocean side, between the wreck and the village.

Along the lagoon shore of the near islets, the sites of underwater pearl farms are marked by grafting huts or shacks above the paepae (Figure 3.4) and by long lines of multicolored bouys bobbing in the waves parallel or perpendicular to the shoreline. Beyond the margins of the pearl farms and extending all the way to the opposite side of the atoll, the lines of buoys--occasionally broken by patch reefs--continue in a bewildering helter skelter of seemingly haphazard geometric patterns, marking the several hundred spat collection stations currently in the lagoon. The islets on the opposite sides, five or six kilometers distant, appear as a low dark green line parallel to the horizon, interrupted only by barely perceptible surge channels and a few buildings that reflect the sunlight.

At the Northeast and Southwest tips of the atoll, the islets are long and wide, and partly marshy, looping around sharply as they follow the reef line. It is in these islets that taro was once grown in pits dug to the extensive water lens, which is never far from the surface. Today, however, taro is no longer planted,
replaced by imported flour, bread, and rice, and the pits have been abandoned. Extensive coconut plantations still remain, and are sometimes harvested for copra, but they, too, are increasingly neglected, foregone for the more lucrative operations of spat collection and pearl farming. In some areas, the natural vegetation is already reasserting itself, becoming a dense and almost impenetrable thicket of shrub.

From anywhere on the islets, the sound of the crashing surf on the ocean side is usually audible. Except for the islets divided by the airstrip, the ocean shore is easily accessible on foot by a short walk from the lagoon side. Bait is easily available and fish abound in the spur and groove crevices of the reef on the ocean shore, but one seldom sees pole and line fishermen due to the dangers of ciguatera. One does, however, see fishermen out on the open sea just beyond the wave breaks, speeding along on their motorboats as they follow the flocks of birds that trail the tuna and their prey. Occasionally, a motorboat is seen on its way to another island. Most of the islanders are skilled travellers, voyaging to the neighboring atolls with the help of a compass and outboard engine.
The Demographic Influx

Like many outer islands in French Polynesia, Takaroa experienced a sharp population decline in the 1960s, due to the CEP-related job opportunities in Papeete. As the construction work was completed, work in Papeete declined. However, after having a taste of city life and society, many preferred to stay in Papeete rather than return to their home communities. In the meantime, they subsisted on part-time work and government handouts, creating problems of unemployment, youth gangs, and even civil unrest in Papeete (Connell, 1985). Consequently, an intensive effort was launched in the 1970s, funded by the state and territorial administrations, intended to stimulate return migration to the outer islands. This included subsidies for copra, pearl farming, house construction, and transport to home islands.

On Takaroa, development funding peaked in 1987, but by this time the pearl farming industry had been well established and the attraction of work far surpassed the government incentives. In 1983, the official census listed only 33 households on Takaroa and a total population of 162. By 1991, there were 106 households and the population had risen to 527 (a 325 percent increase in eight years). These included 30 oldtimer households (resident on Takaroa prior to 1980), 60 return migrant
households (arrived after 1980), and 16 alien households (not related to the indigenous community), as shown in Table 3.1. Even islanders who had been born and raised on neighboring islands are considered return migrants, since they had returned to their ancestral place of origin (see also Table 3.2).

Table 3.1. Households (HH) by Descent and Migration

<table>
<thead>
<tr>
<th>Islanders</th>
<th>#HH, 1991</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oldtimers</td>
<td>30(28.3%)</td>
</tr>
<tr>
<td>Returnees</td>
<td>60(56.6)</td>
</tr>
<tr>
<td>Aliens</td>
<td></td>
</tr>
<tr>
<td>Tahitians</td>
<td>13(12.3)</td>
</tr>
<tr>
<td>Chinese</td>
<td>3(2.8)</td>
</tr>
<tr>
<td>Total</td>
<td>106</td>
</tr>
</tbody>
</table>

Only seven of the 60 returning households had resided on Takaroa within the past decade (Table 3.2); the remainder had been born overseas (26 households) or had been away for lengthy periods of education or work (27 households). Of the return migrants, 34 had formerly resided in Papeete, Tahiti, where most jobs were concentrated; 16 had returned from other Tuamotuan atolls, including Takapoto, Arutua, Makemo, and Hikueru; six households had returned from Noumea, New Caledonia, having been gone there for jobs related to the nickel industry;
and four households had previously resided as distantly as the United States and France.

Table 3.2. Return Migrants by Duration Abroad

<table>
<thead>
<tr>
<th># Households</th>
<th>Senior HH Member</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;10 Years Abroad</td>
</tr>
<tr>
<td></td>
<td>10+ Years Abroad</td>
</tr>
<tr>
<td></td>
<td>Ascendents Only</td>
</tr>
<tr>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
</tr>
</tbody>
</table>

The majority of the household heads—and almost all of the alien migrants—said quite frankly that they moved to Takaroa because of pearl farming opportunities. Other reasons were also given, particularly by the return migrants. Nine respondents said that they moved to Takaroa to be with their relatives; eight said that they wanted to return to their land; and five said that they had moved because they were *fiu* ("fed up") of living in the city. Specifically, the migrants were discouraged by the crowding, the high costs of living, and bad social influences on their children. New Caledonia migrants also cited the political instability that had recently erupted between Melanesians and the French, with the French Polynesians caught in middle.
Table 3.3. Reason for Arrival

<table>
<thead>
<tr>
<th>Reason for Arrival</th>
<th>Returnees</th>
<th>Aliens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearl Farming</td>
<td>38 (#HH Heads)</td>
<td>14</td>
</tr>
<tr>
<td>Join Family</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>Tired of City</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Return to Land</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Health Problems</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>16</td>
</tr>
</tbody>
</table>

The age/sex pyramid for 1991 (Figure 3.5) reveals a marked 15-30 year old age "bulge". This is not particularly indicative—as one might think—of work-oriented migration, as a similar bulge is found elsewhere in the Tuamotus (even in Takaroa’s 1983 census). The phenomenon is due to the fact that children often move to Papeete for their schooling and return afterwards. The demographic structure also shows a pronounced masculine bias (while there was an equal sex ratio in the previous census). A slight male bias is common throughout the Tuamotus, but it is not generally as marked as in Takaroa. This finding is due partially to the disproportionate number of male workers on two of the alien pearl farms, and to the general importance of male work in diving (practiced only exceptionally by females) and other physically demanding aspects of the pearl industry.
AGE AND SEX DISTRIBUTION, TAKAROA, 1991

NUMBER OF FEMALES

NUMBER OF MALES

85–89
80–84
75–79
70–74
65–69
60–64
55–59
50–54
45–49
40–44
35–39
30–34
25–29
20–24
15–19
10–14
5–9
0–4

Figure 3.5. Age/Sex Pyramid, 1991
The typical household was composed of a young to middle-aged couple (21-59) and their children, but frequently including a grandparent, a grandchild, or a more distantly related family member. The oldtimers have the largest average household size (7.0) and have the largest percentage of extended families. Return migrants and aliens had smaller households sizes but also frequently included members who were not part of the nuclear family, attracted by the abundant work opportunities. Even the alien households included eight extended families, three single government servants and two large-scale pearl farms (Table 3.4), considered as "households" since the members reside, eat, and work together. However, as the proprietors were frequently absent and the labor force fluctuated, these households are obviously qualitatively distinct from the other households on Takaroa.
Table 3.4. Selected Household Characteristics

<table>
<thead>
<tr>
<th>Household Size</th>
<th>Oldtimers</th>
<th>Returnees</th>
<th>Aliens</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>#Households</td>
<td>30</td>
<td>60</td>
<td>16</td>
<td>106</td>
</tr>
<tr>
<td>Total Individuals</td>
<td>209</td>
<td>246</td>
<td>68</td>
<td>523</td>
</tr>
<tr>
<td>Average HH Size</td>
<td>7.0</td>
<td>4.1</td>
<td>4.3</td>
<td>4.9</td>
</tr>
</tbody>
</table>

Age of Household Head

<table>
<thead>
<tr>
<th></th>
<th>Oldtimers</th>
<th>Returnees</th>
<th>Aliens</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-59</td>
<td>24(80%)</td>
<td>57(95%)</td>
<td>14(93.4)</td>
<td>95(89.6)</td>
</tr>
<tr>
<td>59+</td>
<td>6(20%)</td>
<td>3(5)</td>
<td>2(6.6)</td>
<td>11(9.4)</td>
</tr>
</tbody>
</table>

Family Structure

<table>
<thead>
<tr>
<th></th>
<th>Oldtimers</th>
<th>Returnees</th>
<th>Aliens</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>1(3.3)</td>
<td>2(3.3)</td>
<td>3(18.8)</td>
<td>6(5.7)</td>
</tr>
<tr>
<td>Multiple, Unrelated</td>
<td>0</td>
<td>1(1.7)</td>
<td>2(12.5)</td>
<td>3(2.8)</td>
</tr>
<tr>
<td>Nuclear</td>
<td>11(36.7)</td>
<td>31(51.7)</td>
<td>3(18.8)</td>
<td>45(42.4)</td>
</tr>
<tr>
<td>Extended</td>
<td>18(60.0)</td>
<td>26(43.3)</td>
<td>8(50.0)</td>
<td>52(49.1)</td>
</tr>
</tbody>
</table>

One of the peculiarities about the community on Takaroa, and about the Western Tuamotus in general, is that the Mormon faith is well represented. The Mormon missionaries came to the Tuamotus in the 1840s. The missionaries converted many entire communities in the Western Tuamotus. This funnelled quite a bit of cash to the church, as even in those days, this was the heyday of the mother-of-pearl industry. By the end of the decade, however, the missionaries ran into problems with the French due to suspected pro-American sentiments and were banished from the region, not to return until 1890. Catholics were always in the minority on Takaroa, but they are gaining in strength due to the demographic influx.
The Protestant faith (Congregationalist) was not present on Takaroa during past decades, and derives exclusively from return migrants which had intermarried with Tahitians (Table 3.5):

<table>
<thead>
<tr>
<th>Religion</th>
<th>Oldtimers</th>
<th>Returnees</th>
<th>Aliens</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mormon</td>
<td>24(80.0%)</td>
<td>38(63.3)</td>
<td>2(12.5)</td>
<td>64(60.4)</td>
</tr>
<tr>
<td>Sanito</td>
<td>2(6.7)</td>
<td>4(6.7)</td>
<td>2(12.5)</td>
<td>8(7.5)</td>
</tr>
<tr>
<td>Catholic</td>
<td>4(13.3)</td>
<td>12(20.0)</td>
<td>8(50.0)</td>
<td>24(22.6)</td>
</tr>
<tr>
<td>Protestant</td>
<td>0</td>
<td>6(10.0)</td>
<td>4(25.0)</td>
<td>10(9.4)</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>60</td>
<td>16</td>
<td>106</td>
</tr>
</tbody>
</table>

There were also some important differences between migrant groups with respect to education and language: The majority of the aliens—which included government teachers and meteorologists and pearl farmers from Tahiti—had completed secondary education, as compared to less than half of the return migrant households, and even fewer of the oldtimer households. Takaroa still does not have any secondary education on the island, a factor which is important in outmigration of the youth. The reverse situation applies with respect to fluency in the Tuamotuan language: Almost all the oldtimers were fluent in Tuamotuan, over half of the return migrants (mainly the ones raised in Takaroa), and only two of the aliens (Table 3.6).
Table 3.6. Household Heads by Education and Language

<table>
<thead>
<tr>
<th></th>
<th>Oldtimers</th>
<th>Returnees</th>
<th>Aliens</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>21(70%)</td>
<td>28(56.7)</td>
<td>6(37.5)</td>
<td>55(51.9)</td>
</tr>
<tr>
<td>Secondary</td>
<td>9(30)</td>
<td>32(43.3)</td>
<td>10(62.5)</td>
<td>51(48.1)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>30</td>
<td>60</td>
<td>16</td>
<td>106</td>
</tr>
</tbody>
</table>

|            |           |           |        |       |
| **Tuamotuan Language** |           |           |        |       |
| Fluent      | 28(93.3)  | 33(55)    | 2(12.5)| 63(59.4)|
| Not Fluent  | 2(6.7)    | 27(45)    | 14(87.5)| 43(40.6)|
| **Total**   | 30        | 60        | 16     | 106   |

**Settlement Pattern**

In 1983, all the permanent houses on Takaroa were situated on the village islet. On a seasonal basis, the entire village would uproot itself for a few weeks or a few months and settle in temporary housing on one of the far islets (frequently the northeastern tip of the atoll) in order to harvest copra that is distant from the village. On other occasions, the population would travel to Tikei, a small islet several kilometers away that is lacking a lagoon and whose land is traditionally claimed by the inhabitants of Takaroa. Today, however, these community wide migrations have effectively ended (the last is said to have been in 1986, when the population voyaged to Tikei). On an individual basis, however, households do
occasionally travel to the far islets to harvest their copra.

Previously, a rāhui ("taboo") had been in effect, putatively since the "days of the ancestors", prohibiting permanent settlement of the outer islets. The rāhui is said to be related to the need to coordinate and facilitate the copra harvest and ensure that the correct land was utilized by each household. But the copra industry only began in the 19th century; it is likely that the rahui also served other functions (defense and possibly conservation). However, with the declining importance of copra harvests, the rāhuis were no longer felt to be necessary, as there was more than enough copra land to go around. On the other hand, permanent settlement on the outer islets was essential in the new industry of pearl farming, which was more valuable and needed to be attended in a much more rigorous fashion than the copra plantations.

Some of the early pearl farms developed by oldtimers had been built on patch reefs (see Figure 2.13) in the lagoon within view and easy accessibility from the village. But there were few suitable patch reefs within this range of the village, while space in the village was limited and highly contested, so many of the new migrants preferred to settle and work in the outer islets.

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Outer islet pearl farming allowed independence and less difficulties with neighbors or damage and theft by passing motorboats. Consequently, starting in the early 1980s, settlement began to spread out into the outer islets, reaching as far as ten kilometers from the village islet by the decade’s end.

Table 3.7. House Location

<table>
<thead>
<tr>
<th></th>
<th>Oldtimers</th>
<th>Return Mig.</th>
<th>Aliens</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Village Only</td>
<td>17(56.7%)</td>
<td>14(23.3%)</td>
<td>5(31.3)</td>
<td>36(34.0)</td>
</tr>
<tr>
<td>Outer Islets Only</td>
<td>3(10.0)</td>
<td>31(51.7)</td>
<td>10(62.5)</td>
<td>44(41.5)</td>
</tr>
<tr>
<td>Village and O.I.</td>
<td>10(33.3)</td>
<td>15(25.0)</td>
<td>1(6.2)</td>
<td>26(24.5)</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>60</td>
<td>16</td>
<td>106</td>
</tr>
</tbody>
</table>

By 1991, three quarters of the atoll households had constructed a house on one of the outer islets, but well over half of these had a house in the village (Table 3.7; Maps 3.2, 3.3). For those with houses in both locations, the working days of the week would be spent on their pearl farms on the outer islets and they would return to the village islet on weekends for conviviality and church services. Even return migrants without a house in the village would usually return on Sunday and spend the day with relatives. The only aliens to live in the village were those present on the atoll as schoolteachers or meteorological employees, and in one case, a man who had previously worked for an alien pearl farming entrepreneur,
Map 3.3  SETTLEMENT PATTERN

OUTER ISLETS

VILLAGE ISLET

14 30' 36" S
144 59' 44" W
but had then quit, rented a house in the village, and opened up a small store.

**Economy**

Government investment in rural development efforts over the past decade and a half has certainly been critical in the revitalization and repopulation of Takaroa as well as a number of its neighbor atolls. Copra subsidies; transport subsidies; development and promotion of the spat collection and pearl culture industries; the construction of quais, airstrips, electrical generators, cisterns, schools, and clinics; and the introduction of telephone and even satellite television, have all made life on the atolls far more attractive than in prior decades. Schools and clinics are still rudimentary, but the government provides subsidies for travel, tuition, and medical care in Papeete, if warranted by need or scholastic aptitude.

In addition to this, the government directly provided a number of funding programs for individuals. Of the migrants settling on Takaroa, 44 received grants from the government to assist in their transportation costs and establishment on the atoll. Between 1985 and 1990, over 30 million CFP (approximately $US 300,000) were disbursed, primarily to households that were newly returning to the
atoll (Table 3.8). The data show the change in emphasis of the allocations changed as the decade progressed. At first, transportation costs were an important part of the funding. By 1989, transportation funding was being phased out, replaced by aid for pearl farming and housing. Funding for agriculture is minimal, reflecting the shift from the production of copra to the more lucrative pearl farming industry.

Table 3.8. Government Aid to Individuals, Takaroa

<table>
<thead>
<tr>
<th>Year</th>
<th>Transport</th>
<th>Housing</th>
<th>Pearl</th>
<th>Agriculture</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>1.8</td>
<td>0</td>
<td>0.3</td>
<td>0</td>
<td>2.1</td>
</tr>
<tr>
<td>1986</td>
<td>1.2</td>
<td>1.7</td>
<td>2.0</td>
<td>0</td>
<td>4.9</td>
</tr>
<tr>
<td>1987</td>
<td>2.1</td>
<td>6.4</td>
<td>0.3</td>
<td>0.3</td>
<td>9.1</td>
</tr>
<tr>
<td>1988</td>
<td>1.4</td>
<td>2.2</td>
<td>2.9</td>
<td>0.5</td>
<td>7.0</td>
</tr>
<tr>
<td>1989</td>
<td>0</td>
<td>1.6</td>
<td>1.1</td>
<td>0.1</td>
<td>2.9</td>
</tr>
<tr>
<td>1990</td>
<td>0.4</td>
<td>0</td>
<td>0.5</td>
<td>0</td>
<td>0.9</td>
</tr>
<tr>
<td>1991</td>
<td>0</td>
<td>2.1</td>
<td>1.0</td>
<td>0</td>
<td>3.2</td>
</tr>
<tr>
<td>Total</td>
<td>6.9</td>
<td>14.0</td>
<td>8.2</td>
<td>1.0</td>
<td>30.1</td>
</tr>
</tbody>
</table>

Note aMillions of CFP

Source FEI, FADIP

The growing importance of the pearl industry vis-a-vis copra can be seen from the aggregate longitudinal statistics over the past decade: Copra production in the late 1980s was the same as in the beginning of the decade, even though the population increased substantially (the decline in 1984-85 is related to the 1983 hurricanes). Spat collection increased exponentially in the second half
of the decade, apparently due to an invigoration of natural spawning stocks after the hurricanes. Pearl culture also began to boom after 1985. Initially, pearl culture was organized as local cooperatives, with government assistance, but these ran into severe financial problems. By the end of the decade, almost all the pearls were produced by private farmers (Table 3.9):

Table 3.9. Copra and Pearl Production, Takaroa

<table>
<thead>
<tr>
<th>Year</th>
<th>Copra (^a)</th>
<th>Oysters (^b)</th>
<th>Pearl/Coops. (^c)</th>
<th>Pearl/Pvts.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>0.2</td>
<td>Minimal</td>
<td>n.d.</td>
<td>0</td>
</tr>
<tr>
<td>1981</td>
<td>0.2</td>
<td>&quot;</td>
<td>1.0</td>
<td>0</td>
</tr>
<tr>
<td>1982</td>
<td>0.3</td>
<td>&quot;</td>
<td>0.3</td>
<td>0</td>
</tr>
<tr>
<td>1983</td>
<td>0.1</td>
<td>&quot;</td>
<td>2.4</td>
<td>0</td>
</tr>
<tr>
<td>1984</td>
<td>0.1</td>
<td>&quot;</td>
<td>0.9</td>
<td>0</td>
</tr>
<tr>
<td>1985</td>
<td>0.2</td>
<td>n.d.</td>
<td>1.7</td>
<td>0</td>
</tr>
<tr>
<td>1986</td>
<td>0.1</td>
<td>n.d.</td>
<td>1.8</td>
<td>1</td>
</tr>
<tr>
<td>1987</td>
<td>0.2</td>
<td>1</td>
<td>4.3</td>
<td>5</td>
</tr>
<tr>
<td>1988</td>
<td>0.2</td>
<td>5</td>
<td>6.5</td>
<td>10</td>
</tr>
<tr>
<td>1989</td>
<td>n.d.</td>
<td>8</td>
<td>0.4</td>
<td>20</td>
</tr>
<tr>
<td>1990</td>
<td>n.d.</td>
<td>10</td>
<td>0.8</td>
<td>30</td>
</tr>
</tbody>
</table>

Note
\(^a\)Thousands of Tons; \(^b\)Millions of Oysters; \(^c\)Thousands of Pearls

Source Based (in part) on data from SER, SOCREDO, EVAAM, GIE

In 1991, over half of the oldtimer households were still active in copra (but not too often; see below), slightly fewer of the return migrants, and very few of the aliens (Table 3.10). Pearl farming is a major source of income for households of all categories, except for those
whose members are inactive or involved full time in government service. The return migrants also show initiative in other areas, running the village general stores and occasionally undertaking construction contracts (however, most households do their own construction). A third of the oldtimer households receive salaries, primarily public service jobs funded by the municipality. The aliens receiving salaries include school teachers, meteorologists, and public works employees. Except for the aliens, most households have been past recipients of government aid.

Table 3.10. Major Sources of Income

<table>
<thead>
<tr>
<th>Source</th>
<th>Oldtimers</th>
<th>Returnees</th>
<th>Aliens</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>30</td>
<td>60</td>
<td>16</td>
<td>106</td>
</tr>
<tr>
<td>Copra</td>
<td>17(56.7%)</td>
<td>24(40)</td>
<td>3(18.8)</td>
<td>44(41.5)</td>
</tr>
<tr>
<td>Pearl</td>
<td>28(93.3%)</td>
<td>58(96.7)</td>
<td>12(75.0)</td>
<td>98(92.5)</td>
</tr>
<tr>
<td>Construction</td>
<td>0</td>
<td>5(8.3)</td>
<td>1(6.3)</td>
<td>6(5.7)</td>
</tr>
<tr>
<td>Store</td>
<td>0</td>
<td>4(6.7)</td>
<td>1(6.3)</td>
<td>5(4.7)</td>
</tr>
<tr>
<td>Salary</td>
<td>10(33.3%)</td>
<td>11(18.3)</td>
<td>7(43.8)</td>
<td>28(26.4)</td>
</tr>
<tr>
<td>Aid</td>
<td>20(66.7%)</td>
<td>24(40.0)</td>
<td>1(6.3)</td>
<td>45(42.5)</td>
</tr>
</tbody>
</table>

**Copra Production**

Until it was overtaken by revenues from French nuclear testing and the pearl farming industry, copra had been the mainstay of the economy of French Polynesia. Over half of the territory's coconut groves are found in the Tuamotu Archipelago. However, yields vary from island to island.
There are a number of important handicaps to copra production including damage by rats, obsolescence of the trees, soil nutrient deficiencies, lack of care, and inadequate scientific research. Declines in global copra prices have also been problematic, forcing the administration to provide substantial subsidization. Another problem is said to be related to collective tenure of the land, which creates conflicts and provides insufficient motivation for individual farmers (Thompson and Adloff, 1971; Ravault, 1978). However, local tenure regimes also provide an important safeguard against dispossession (see Chapter 4).

Data on the precise area planted in copra was not available to me, but a rough estimate can be obtained by including all privately claimed parcels which were outside the village (Map 3.4; Table 3.11). An approximate estimate of the uncultivated area can also be obtained based on the parcels claimed by the government. The smallest parcels occur in the village islet, where the highest population pressure exists. The largest uncultivated strips are the marshy northeastern tip of the atoll and the area currently used for the airport (Map 3.4). In the past, the population would periodically move to one of the two tips of the atoll several times a year.
Map 3.4. LAND USE

Airport

Village

SCALE

14 30' 36" S
144 59' 44" W

TAKAROA
TAKAROA ATOLL

~

COPRA
PEARL, COPRA
UNCULTIVATED
REEF

SCALE

1 2 3 KMS.

36° S
44° W

N
while gathering copra, but this has declined, as discussed above.

Table 3.11. Land Use on Takaroa

<table>
<thead>
<tr>
<th></th>
<th># Parcels</th>
<th>Area (Ha.)</th>
<th>%a</th>
<th>Ha./Parcel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copra</td>
<td>637</td>
<td>1295</td>
<td>83.9</td>
<td>2.0</td>
</tr>
<tr>
<td>Pearl Farms</td>
<td>69</td>
<td>202</td>
<td>13.1</td>
<td>2.9</td>
</tr>
<tr>
<td>Village</td>
<td>103</td>
<td>10</td>
<td>0.6</td>
<td>0.1</td>
</tr>
<tr>
<td>Uncultivated</td>
<td>187</td>
<td>238</td>
<td>15.4</td>
<td>1.3</td>
</tr>
<tr>
<td>Total</td>
<td>927</td>
<td>1543</td>
<td></td>
<td>1.7</td>
</tr>
</tbody>
</table>

Note a Adds to more than 100% since pearl farming land is also used for copra

Source Based (in part) on maps by SC

Only a third of all households were involved in copra production (Table 3.12); primarily the oldtimers and the return migrants, for whom copra served as a supplementary source of income while waiting for the harvests of spat collection and pearl culture. A third of the producers accounted for a little over half of all production, but the differentials are much smaller than in pearl production (compare Tables 3.14 and 3.16). The intensity of production, whether calculated in terms of production per hectare or per capita, is considerably less than elsewhere in the archipelago. For most households, copra accounts for a minor—and declining—portion of the total yearly labor and revenues, being eclipsed by more attractive opportunities in pearl farming.
Table 3.12. Annual Copra Production

<table>
<thead>
<tr>
<th>Prod/HH</th>
<th>#HH</th>
<th>#Producers</th>
<th>%HH</th>
<th>Production(^a)</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oldtimers</td>
<td>30</td>
<td>12</td>
<td>43.3</td>
<td>61</td>
<td>3.1</td>
</tr>
<tr>
<td>Return Migrants</td>
<td>60</td>
<td>19</td>
<td>31.7</td>
<td>70</td>
<td>1.2</td>
</tr>
<tr>
<td>Aliens</td>
<td>16</td>
<td>3</td>
<td>18.8</td>
<td>10</td>
<td>0.6</td>
</tr>
<tr>
<td>Total</td>
<td>106</td>
<td>34</td>
<td>32.1</td>
<td>141</td>
<td>1.3</td>
</tr>
</tbody>
</table>

b. Top Ten Producers
(9.4% of HH; 29.4% of Producers)

<table>
<thead>
<tr>
<th>Production(^a)</th>
<th>% All Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oldtimer</td>
<td>8.5</td>
</tr>
<tr>
<td>Oldtimer</td>
<td>7.4</td>
</tr>
<tr>
<td>Oldtimer</td>
<td>7.1</td>
</tr>
<tr>
<td>Oldtimer</td>
<td>7.1</td>
</tr>
<tr>
<td>Return Migrant</td>
<td>7.1</td>
</tr>
<tr>
<td>Return Migrant</td>
<td>5.0</td>
</tr>
<tr>
<td>Return Migrant</td>
<td>5.0</td>
</tr>
<tr>
<td>Oldtimer</td>
<td>3.5</td>
</tr>
<tr>
<td>Return Migrant</td>
<td>3.5</td>
</tr>
<tr>
<td>Total</td>
<td>81.7</td>
</tr>
</tbody>
</table>

57.9

c. Intensity of Production

<table>
<thead>
<tr>
<th>Copra(^a)/Hectare/Yr.</th>
<th>0.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copra(^a)/Capita/Yr.</td>
<td>0.3</td>
</tr>
<tr>
<td>Earnings(CFP)/capita/Yr.</td>
<td>19,500 ($US 195)</td>
</tr>
</tbody>
</table>

Note \(^a\)Tons; \(^b\)at Subsidized Rate of 65,000 CFP/Ton

Source Based (in part) on maps by SC

Pearl Farming

Due to past geomorphological processes and the resulting physiography of the atoll, Takaroa’s lagoon is long, narrow, and has a deep pass at its Northwest border, alongside the village. The area that has been most
favored for both spat collection and pearl farming is the intermediate section of the lagoon, up to a distance of about ten kilometers from the village, due to the width of the lagoon, good current flow, and proximity to the village. The two tips of the lagoon beyond the above ten kilometer strip are shallow, sometimes stagnant, and marginal areas for pearl farming. During rough weather conditions, the trip from the village may be a formidable task, endangering the oysters.

Spat collectors are generally placed in central parts of the lagoon which have a high current flow and abundant plankton (Map 3.5). Spat collection is especially favored in the lagoon waters adjacent to PF16 (i.e., pearl farm '16' on Map 5.1), an area of the lagoon which receives good circulation (due to the large nearby channel) and is leeward of an abundant stock of natural pearl oysters. It is evident that the spat collection takes up a large sector of lagoon space. The government is worried about this because it suspects that it spat collection is draining the lagoon's nutrients (see Chapter 5). But it is very difficult for the government or the local administration to know who owns individual spat collection stations due to their distance from land, their scatter, and the lack of geographic reference points.
Map 3.5. LAGOON USE
Pearl culture (pre- and post-graft stages) occurs mainly at the lagoon rim, where activities can be easily observed from the land. A long, narrow plank bridge usually connects the paepae to the adjacent land. Compared with seed oysters, grafted oysters (because of their weakened physiological state) are more vulnerable to sudden currents, strong winds, disease, and (because of their lucrative value) to theft, and need to be placed somewhere that can be easily checked, treated, and protected. The most favored locations along the lagoon rim are those which are easily accessible from the village, preferably by road as well as by boat, and those which have adequate circulation and not too much wave action (PFl-16). Given the above priorities, one's specific location usually depends on rights to land on adjacent islets.

Calculating areas of lagoon use is particularly difficult in the case of spat collection because there are usually no easily discernable reference points in the water adjacent to pearl farms. The oysters are farmed on scattered lines, or sets of lines, which (technically) occupy very little area, one meter in width at most. A farmer may place each of his lines in a completely different part of the lagoon to test his luck; and may change place frequently. However, each line can be
considered to occupy 50 meters width, the minimal interval generally kept between adjacent lines. Pearl farms do occur in contiguous clusters of lines and the lagoon area occupied can be estimated by extending a polygon around the outer perimeter of each pearl farm (compare Maps 3.5 and 3.6).

Table 3.13. Lagoon Use, Takaroa

<table>
<thead>
<tr>
<th></th>
<th>#Lines</th>
<th>#Platforms</th>
<th>Area(Ha.)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spat Collection</td>
<td>762</td>
<td></td>
<td>790</td>
<td>9.4</td>
</tr>
<tr>
<td>Pearl Farming</td>
<td>461</td>
<td>77</td>
<td>356</td>
<td>4.2</td>
</tr>
<tr>
<td>Unexploited</td>
<td></td>
<td></td>
<td>7254</td>
<td>86.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1223</td>
<td>77</td>
<td>8400</td>
<td></td>
</tr>
</tbody>
</table>

**Source** Based (in part) on maps by SMA

Based on these estimates, the area occupied by spat collection is twice that of pearl farming and together they occupy only 15 percent of the lagoon surface, which is 8,400 hectares (Table 3.13). This is actually a large part of the exploitable surface since much of the Northeast and Southwest lagoon has very poor current flow due to the lack of inter-islet channels and because the lagoon floor is shallower (bathymetry data were unavailable to me). Approximately 25 percent of the suitable lagoon surface has already been occupied by spat collection and pearl farms, and the farming density is greater than on most other atolls (see Hauti, 1987). Even the unutilized space
may not be exploitable as overcrowding can lead to nutrition and disease problems (Intes, 1988; see Chapter 6).

Less than half of the indigenous community farms pearls. In contrast, the majority of the aliens are engaged in pearl farming. The only aliens not involved are the government teachers and meteorological workers and they, too, have now begun to enter the industry. Pearl production is highly concentrated. Ten pearl farmers account for over 80 percent of all production, including three large-scale Chinese-Tahitian entrepreneurs (Map 3.6; Table 3.14). The remaining 43 pearl farmers account for only 19 percent of all production. The earnings per capita from pearl farming are 30 times higher than those of copra production, but as the pearl culture operations require costly capital investments (notably skilled grafters), a few large-scale farmers reap the majority of the benefits.
Map 3.6. PEARL FARMING PRODUCTION
ANNUAL GRAFT
- 5,000 OYSTERS
- 10,000 OYSTERS
- 20,000 OYSTERS
- 40,000 OYSTERS

PEARL FARMS
- OLDTIMERS
- RETURN MIGRANTS
- ALIENS
Table 3.14. Annual Pearl Farming Production, 1990-91

<table>
<thead>
<tr>
<th></th>
<th>#HH</th>
<th>#Farmers</th>
<th>%HH</th>
<th>%HH</th>
<th>#Grafted</th>
<th>Gra/Farmer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oldtimers</td>
<td>30</td>
<td>12</td>
<td>40.0</td>
<td>36100(11.8)</td>
<td>3075</td>
<td></td>
</tr>
<tr>
<td>Returnees</td>
<td>60</td>
<td>31</td>
<td>51.7</td>
<td>121280(38.8)</td>
<td>3912</td>
<td></td>
</tr>
<tr>
<td>Aliens</td>
<td>16</td>
<td>10</td>
<td>62.5</td>
<td>154000(49.3)</td>
<td>15400</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>106</td>
<td>53</td>
<td>48.1</td>
<td>312180</td>
<td>5890</td>
</tr>
</tbody>
</table>

b. Top Ten Pearl Farmers
(9.4% of HH; 18.9% of Producers)

<table>
<thead>
<tr>
<th></th>
<th>Oysters</th>
<th>% of All</th>
<th>Grafted Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alien</td>
<td>60,000</td>
<td>19.2</td>
<td></td>
</tr>
<tr>
<td>Alien</td>
<td>40,000</td>
<td>12.8</td>
<td></td>
</tr>
<tr>
<td>Alien</td>
<td>30,000</td>
<td>9.6</td>
<td></td>
</tr>
<tr>
<td>Return Migrant</td>
<td>30,000</td>
<td>9.6</td>
<td></td>
</tr>
<tr>
<td>Oldtimer</td>
<td>25,000</td>
<td>8.0</td>
<td></td>
</tr>
<tr>
<td>Return Migrant</td>
<td>15,000</td>
<td>4.8</td>
<td></td>
</tr>
<tr>
<td>Return Migrant</td>
<td>15,000</td>
<td>4.8</td>
<td></td>
</tr>
<tr>
<td>Return Migrant</td>
<td>12,000</td>
<td>3.8</td>
<td></td>
</tr>
<tr>
<td>Return Migrant</td>
<td>11,000</td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td>Alien</td>
<td>8,000</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>246,000</td>
<td>78.8</td>
</tr>
</tbody>
</table>

c. Intensity of Production

<table>
<thead>
<tr>
<th></th>
<th>Production&lt;sup&gt;b&lt;/sup&gt;/Ha./Yr.</th>
<th>3.7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Production&lt;sup&gt;b&lt;/sup&gt;/Capita/Yr.</td>
<td>61.1</td>
</tr>
<tr>
<td></td>
<td>Earnings(CFP)/Capita/Yr.&lt;sup&gt;c&lt;/sup&gt;</td>
<td>610,000 ($US 6,100)</td>
</tr>
</tbody>
</table>

Note
<sup>a</sup> # oysters grafted
<sup>b</sup> # pearls produced; 10% of the oysters grafted produce a pearl (a conservative estimate);
<sup>c</sup> Average wholesale value: 10,000 CFP/pearl

Employees of the alien pearl farmers were young Tahitians brought from Papeete (grafters, divers, sorters, cleaners, and cooks), although a few were also recruited from among the community on Takaroa. On the other hand,
the indigenous pearl farms hired their relatives and neighbors. The majority of the pearl farms, particularly the small-scale farms, are run with the help of family members, except for the seasonal hire of a Japanese grafted and casual help during the grafting season. Family members were generally not paid for their labor although persons who helped might receive some recognition later (a paid trip to Papeete, a bicycle, clothing, and even pearls or cash). The large and mid-scale pearl farms, however, had to rely on hired employees (Table 3.15).

Table 3.15. Workers on Takaroa Pearl Farms

<table>
<thead>
<tr>
<th></th>
<th>Farmers</th>
<th>#Fam. Wkrs</th>
<th>Meanᵃ Wage Wkrs.</th>
<th>Meanᵇ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oldtimers</td>
<td>12</td>
<td>80</td>
<td>6.7</td>
<td>2</td>
</tr>
<tr>
<td>Returnees</td>
<td>31</td>
<td>151</td>
<td>4.9</td>
<td>15</td>
</tr>
<tr>
<td>Aliens</td>
<td>10</td>
<td>25</td>
<td>2.5</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>53</td>
<td>256</td>
<td>4.8</td>
<td>44</td>
</tr>
</tbody>
</table>

Note
ᵃ#Family Workers/Farmer; ᵇ#Wage Employees/Farmer

Pearl culture is lucrative but costly due to the expense of hiring grafted (25,000 CFP/day) and the long wait period before the pearls are ready (three or four years). On the other hand, spat collection, needed by the pearl farmers for their seed stock (the basic requirement of grafting operations) is a low-cost investment (less
than 100,000 CFP/station; considerably less if natural materials are used) and is predominantly the domain of the indigenous farmers. Return migrants are the primary producers in spat collection. The largest of the alien pearl farmers are prohibited by law from engaging in spat collection, so not to compete with the small-scale farmers. Spat collection is much less concentrated compared with pearl farming. The top ten producers account for less than half of all production (Table 3.16):
Table 3.16. Annual Spat Collection Production, 1990-91

a. Cumulative Production

<table>
<thead>
<tr>
<th></th>
<th>#HH</th>
<th>#Farmers</th>
<th>%HH</th>
<th>#Stations</th>
<th>Sta/Farmer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oldtimers</td>
<td>30</td>
<td>26</td>
<td>86.7</td>
<td>208 (19.9)</td>
<td>8.0</td>
</tr>
<tr>
<td>Returnees</td>
<td>60</td>
<td>58</td>
<td>96.7</td>
<td>722 (69.0)</td>
<td>12.4</td>
</tr>
<tr>
<td>Aliens</td>
<td>16</td>
<td>10</td>
<td>62.5</td>
<td>116 (11.1)</td>
<td>11.6</td>
</tr>
<tr>
<td>Total</td>
<td>106</td>
<td>84</td>
<td>68.1</td>
<td>1046</td>
<td>12.5</td>
</tr>
</tbody>
</table>

b. Top Ten Producers
(9.4% of HH; 11.9% of Producers)

<table>
<thead>
<tr>
<th></th>
<th>#Stations</th>
<th>%All Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return Migrant</td>
<td>86</td>
<td>8.2</td>
</tr>
<tr>
<td>Return Migrant</td>
<td>60</td>
<td>5.7</td>
</tr>
<tr>
<td>Return Migrant</td>
<td>60</td>
<td>5.7</td>
</tr>
<tr>
<td>Oldtimer</td>
<td>43</td>
<td>4.1</td>
</tr>
<tr>
<td>Return Migrant</td>
<td>40</td>
<td>3.8</td>
</tr>
<tr>
<td>Return Migrant</td>
<td>38</td>
<td>3.6</td>
</tr>
<tr>
<td>Return Migrant</td>
<td>30</td>
<td>2.9</td>
</tr>
<tr>
<td>Return Migrant</td>
<td>24</td>
<td>2.3</td>
</tr>
<tr>
<td>Return Migrant</td>
<td>23</td>
<td>2.2</td>
</tr>
<tr>
<td>Alien</td>
<td>22</td>
<td>2.1</td>
</tr>
<tr>
<td>Total Top Ten</td>
<td>426</td>
<td>40.7</td>
</tr>
</tbody>
</table>

c. Intensity of Production

<table>
<thead>
<tr>
<th></th>
<th>Production$^b$/Ha./Yr.</th>
<th>622 (0.2 Tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Production$^b$/Capita/Yr.</td>
<td>9,867 (3.3 Tons)</td>
</tr>
<tr>
<td></td>
<td>Earnings (CFP)/Capita/Yr.$^c$</td>
<td>493,358 ($US 4,900)</td>
</tr>
</tbody>
</table>

Note
$^a$200 meter floating line
$^b$Based on 5,000 oysters/station/yr. (a conservative estimate)
$^c$Based on 50 CFP/Oyster

Clearly, spat collection is a major source of revenue for most households on Takaroa (25 times more than copra revenues); these earnings are, moreover, well spread across the community. The time spent in spat collection is 1.5 times that spent in copra production and 2.5 times...
that spent in pearl culture (compare Tables 3.12, 3.14, 3.16). Since demand for seed oysters is strictly determined by the amount that can be grafted, the estimated five million oysters produced is in excess of the demand of the Takaroa market. Consequently, the majority of the seed oysters produced on Takaroa are sent to pearl farmers on other atolls. The official export figure for 1989 was one million oysters exported from Takaroa, but much of the export never gets reported to the administration in Tahiti.

For industrious households with available adult labor, ten or more stations can be deployed within the year, resulting in earnings of well over two million CFP (about $US 20,000); if the stations do well, earnings can be much higher. It is thus no surprise that many households now have private cisterns, boats, electrical generators, and even automobiles (Table 3.17). In some respects, however, the standard of living remains low. The monetary revenues from the pearl industry are appropriated by individual farmers and not by the community as a whole and the school and clinic are no better than those of neighboring atolls. The government also receives only indirect economic benefits from the pearl farming industry as there are no income taxes in French Polynesia and export taxes...
are easily evaded by both small and large-scale pearl farmers.

Table 3.17. Utilities and Transport

<table>
<thead>
<tr>
<th></th>
<th>#HH</th>
<th>#Cisterns</th>
<th>#Generators</th>
<th>#Cars</th>
<th>#Boats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oldtimers</td>
<td>30</td>
<td>18(60.0)a</td>
<td>8(26.7)</td>
<td>12(40.0)</td>
<td>22(73.3)</td>
</tr>
<tr>
<td>Returnees</td>
<td>60</td>
<td>30(50.0)</td>
<td>31(51.7)</td>
<td>18(30.0)</td>
<td>49(81.7)</td>
</tr>
<tr>
<td>Aliens</td>
<td>16</td>
<td>9(56.3)</td>
<td>8(50.0)</td>
<td>3(18.8)</td>
<td>11(68.8)</td>
</tr>
<tr>
<td>Total</td>
<td>106</td>
<td>57(53.8)</td>
<td>47(44.3)</td>
<td>33(31.1)</td>
<td>82(77.4)</td>
</tr>
</tbody>
</table>

Note a% of Households

Acceptance of Migrants

Provided that an ancestral link could be established, the new arrivals were recognized as returning migrants, and more importantly, as feia tumu ("native islanders"), fully and automatically eligible to be part of the resident community. Typically, a migrant would arrive alone, stay with relatives, inquire about available land and lagoon space. The migrant would then deploy a few spat collection stations, apply for lagoon concessions at the SMA, order construction materials, and begin building a house on an unoccupied site. After one or two years of satisfactory progress, the migrant would generally be joined by the remainder of the family, except for those schooling, working, or otherwise interested in remaining in Papeete.
Generally, the migrants were well accepted by their relatives and neighbors. In some cases, however, the welcome was grudgingly extended:

There are people who have left the island and have been living away for a long time and when they hear about the pearl industry, they want to return. But when we were left here, they were not interested in us; we were a poor island. If not for these riches, they never would have come. Now they say, 'This land is mine!' But it is alright for them to come because the land did belong to their parents. It is also good that our church is well attended.

Many migrants had not kept in touch with relatives on the home island. Some migrants, assumed to be well off, had previously demanded—even initiating lawsuits—that they be sent a share of the copra revenues earned from family land. These shares were seldom sent, as only family members who were resident and working on the island could claim use rights by tradition. Nevertheless, relatives had to be accommodated upon their return and arrangements were generally made to allocate a share of the family land in the village and/or the outer islets.

Some returning migrants complained that they had not been accepted with the appropriate welcome:
When I returned, people asked, "Why is that man returning to the island? He used to be in Papeete." They wanted to keep the island to themselves.

We constructed a building near the quai, but...it was broken. There was one coconut trunk that had rotted, but the rest were fine. People were jealous.

On one occasion, animosity towards returning migrants resulted in serious inter-household problems. The following brief summary is one version of the case: A man called Toau (the name is fictitious, as are all names of islanders in this study) returned to Takaroa from Tahiti in 1989, initially staying with his cousin Ruta on family land in the village islet. But tensions arose because Ruta felt that Toau’s family was not respectful to them. Several months later, when his oyster stations started to produce, Toau began to gasp for breath and suddenly died. That evening, the widow, Pua, had a dream, in which it was revealed to her that Ruta had killed her husband by putting a curse on him. When Ruta was confronted, she grew angry. In the aftermath, Pua and her family were forced to leave the family land in the village and move to the outer islets.

Rejection was more likely if many generations had lapsed. In several cases, migrants were initially
rejected because the islanders did not know how they were related:

One time merchandise arrived on the cargo boat addressed to a name we did not recognize. We thought it was an alien, so we confiscated the shipment. Then we found out... .

Problems also arose when the validity of the ancestral claims was questioned:

Hotu disputed many land parcels on Takaroa. Now the Patira family comes, based on their grandfather’s claims, and say they have a share in these land parcels. I said, ‘If you think you have rights to the land, go, but if not, you’re going to get kicked out.’

People talk about islanders and tourists. No! We are also islanders, through our ancestor. We have lived in another island and now we have come back... . So we have asked our relatives to share the land with us.

A similar problem arose when one family, returning from Tahiti, claimed that their grandfather had been adopted by a Takaroa native, and had subsequently been given rights to the family land. They produced a will to support their case, but this was taken with great skepticism by many islanders since the claimants had been silent for so many generations. The above cases, however, are exceptional. Few return migrants had been away for more than two or three generations and there were always a few old people
who could testify to the genealogical linkages and the validity of the ancestral claims.

Despite their acceptance by the local population, returning migrants did sometimes encounter difficulties over access to land and lagoon:

We had problems with our relatives who didn't want us to build our houses. . . My son is surrounded on both sides by others who already have lagoon concessions. They were supposed to have built their farms straight out into the lagoon. Instead, they expanded out towards the sides. So now there is no room for my son.

Competition over space has certainly increased due to the influx of migrants. Territorial disputes are almost a characteristic feature of contemporary Tuamotuan communities. Nevertheless, while tensions continue and often flare up, a workable solution is negotiated within the extended family; and only occasionally does this trouble the community as a whole. In cases of protracted conflict, the problem is settled in court (land cases) or through other administrative procedures (lagoon cases), but this is a tedious and expensive process and is seldom the option preferred by the islanders.

But the greatest difficulties were encountered by the alien migrants:
We had no trouble when we returned because the people knew I was originally from here. They said, 'It's good you come here. Go and work.' But if aliens want to come here, I do not agree. If you have a plate and an alien wants to eat, you would not be happy.

Migrants that were not related by descent or kinship were not considered feiā tumu; they were often (rather pejoratively) labelled tona ("entrepreneurs") or rātere ("tourists"). There was no generalized animosity towards aliens; but they were not perceived to have the same fundamental right to land and lagoon space as the feiā tumu. Conflict with alien migrants, relating primarily to competition over lagoon space, became exacerbated during the late 1980s, as we shall see below (Chapter 7). The roots of these "insider/outsider" conflicts over territory involve complex historico-legal issues and will require a preliminary analysis of land and lagoon tenure on Takaroa (Chapters 4-5).

Attitudes on Economic and Cultural Change

The islanders were generally quite happy with the material improvements the new pearl industry has facilitated:
Takaroa has changed for the better since I was young. (Formerly) there was no electricity, no refrigerators, inadequate water, no toilets. People cook with gas. Telephones in the house. Airplanes. Once we have money, we can travel.

For over a century, the Takaroa men were among the foremost divers in the mother-of-pearl industry. Travelling every year across the various atolls, they gained an appreciation for money and trade. However, the divers frequently wound up in debt to the traders and the seasonal earnings might be quickly used up in an entertainment spree in Papeete. When the pearl oyster stocks declined, the majority of the population preferred to migrate rather than subsist on the meager earnings of copra. The introduction of the new industry enabled the islanders to return to their homes while earning a substantial income. Boat engines, expensive appliances, and even automobiles were happily purchased by the islanders.

But the islanders were not all so happy about some of the other changes in lifestyle:

There was oneness within the community. Nobody spoke of Mormons and Catholics and Sanitos. During a marriage, everybody would come. Now people have drifted apart. The words of the elders are no longer respected.
Along with wealth has come an increase in individualism. The unity of the community, for which Takaroa was once celebrated, has been severely eroded. Up until the late 1980s, the community was frequently brought together for community work events, such as constructing churches, fish drives, and other activities. The community lived in close proximity and moved as a unit to work the copra on different sectors of the atoll or dive in neighboring atolls. Today, however, the settlement is scattered, the community is seldom mobilized as a unit, and each individual household works essentially on its own. The decline in community cohesiveness left the islanders vulnerable to natural disasters and adverse socioeconomic pressures.

The changes were particularly problematic for the adherents of the Mormon church:

It was always the Mormons who were the builders, who ran the village. Now the Catholics are trying to do their own thing.

Since as early as the 1850s, Takaroa has been one of the most prominent Mormon communities in French Polynesia. It is still the only island with majority of Mormon households. Mormon influences had an important effect on everyday life: Alcohol and tobacco were not sold in
stores and were taboo in public places. A strict, almost Puritanical theocracy was imposed on the islanders for over a century. Prior to the black pearl boom, there were only a handful of non-Mormon households on Takaroa, and even these households were closely related by kinship and marriage to the Mormon community. However, the church is losing its dominance with the demographic influx and previous restrictions are being violated.

Marijuana cultivation on Takaroa is being blamed on the influence of recent migrants:

We found a hundred and fifty marijuana plants in the bush in the near islets. We think it was introduced by some new youths from Tahiti. Other problems have also followed.

In 1987, an event occurred which had no parallel in the current historical memory of the community. Tyrone, a young Catholic youth, recently returned from Tahiti, proclaimed himself to be Satan, and was said to have experimented with drugs. One day, Tyrone was found dead on one of the far islets, with a hand and a foot severed. The police arrived from Tahiti and conducted an autopsy and an extensive investigation, cross-examining the islanders for several weeks. They announced that the missing body parts had been severed while still living,
and suspected foul play by one of the islanders. Tyrone’s parents, however, insisted that he killed himself, blaming it on drug consumption and (possibly related) psychiatric problems.

The true causes of Tyrone’s death may never be known, but the event itself, and the intense investigation which followed, may have contributed to the reevaluation of the recent changes and to a critical attitude toward the outside world. When an SMA delegation arrived for a lagoon survey in the same year, they complained of hostility by the local inhabitants. In 1990 and 1991, the population was subject to numerous investigations and cross-examinations by visiting gendarmes, including one visit by an entire platoon of gendarmes. In 1991, there was yet another survey by the SMA team. It is difficult to say, however, if the confrontation with alien pearl farmers and the Tahitian administration, which would develop over the following years (see Chapter 7), were influenced by the above events.

Rapid Growth/Narrowing Distinctions

The rapid, but uneven distribution of economic growth on Takaroa, shown by differences in the kind and scale of production and by the possession of expensive material goods, parallels many of the green and blue revolution
studies cited earlier. In some of these studies, inequity is seen as an objective criterion; and the way things are seen by the local populations themselves is neglected. But where demographically distinct subpopulations are involved, local evaluative ("emic") criteria assume primary importance. Antipathy between "insiders" and "outsiders", based on distinctions of nationality, descent, migration, religion, language, and other factors can potentially be more socially divisive than economic disparity in itself (Lowenthal, 1990).

Insider/outsider distinctions are particularly significant in small island communities, due to geographic constraints as well as common descent, history, language, and culture. Islanders may become locked into internal quarrels, sometimes lasting for generations, but there is a strongly felt sense of identity which joins individuals into a single community, particularly when facing a challenge by external forces, whether this be natural disasters, threat of war, or intrusion by powerful political and economic interests. Resistance to the incursion of "outsiders" is a prominent and recurring feature in the history of island peoples (Lowenthal, 1990). But the ability to resist incursion can be severely weakened when a small island population is
subject to a massive demographic inundation, as this study will demonstrate.
The acquisition of rights to the highly valued lagoon-front land is one of the pivotal issues in the emerging conflict on Takaroa; it is in this area that the subtle interactions between an external hegemony and local resistance can be fully appreciated. At the time of European contact, rights to Tuamotuan land were normally acquired through descent and continued occupation or use. Aliens could only gain access to land after being socially integrated into the host community, usually through affiliation or adoption. But radical modifications were introduced by the French colonial authorities in a legislative attempt to wrest control of the land for European settlers and intensive agriculture. Land tenure was henceforth to be individualized, easily marketable, and appropriated for the most economically efficient use. Unclaimed land reverted to the administration or the "public" good.

As this chapter will show, these initiatives met with only partial success in the Tuamotus and much of the land remains in the hands of the indigenous population. The system of succession and land transfers existing on Takaroa today is a hybrid between traditional tenure
practices and the legislation introduced by the French. Most of the land awarded to individuals in 1888 (the date of the first official land survey) has now reverted to collective ownership. The potential rights of returning individuals or households are recognized by the resident landholding group even after generations of departure. Rights to land are passed on through descent, adoption, and even conjugal linkages—whether or not these mechanisms of succession were formally validated and officially recognized by the courts. Land alienation has taken place, due primarily to incurred debt of a member of the landholding group, but alienated land was frequently redeemed by relatives.

The role this neo-traditional tenure system has had in effectively protecting the land from alienation is demonstrated by a study of the lagoon-front parcels connected with Takaroa's pearl farms. Eighteen land parcels are occupied by aliens, but only four of these are actually owned by aliens. Only two of these were sold by the current inhabitants on Takaroa; both are too small to be of any direct, substantive use (1000 square meters) and were only acquired in order to strengthen the case of applications for lagoon concessions. Two parcels had been sold decades ago, prior to the introduction of the black pearl industry. The remaining parcels connected with
alien pearl farms are held on a rent, allowance, or prescription basis. Despite a century of external incursions and indigenous debt, most of the land remains under the ownership and control of the original titleholders and their descendents.

**Traditional Land Tenure and its Modification**

At the time of European contact, Tuamotuan land was claimed by gāti ("lineages") who meticulously traced their genealogies to the "original" inhabitants of the atoll. In some cases, the ancestors are said to have arisen autochthonously from the atoll itself; in others, the ancestors are said to have migrated from neighboring atolls or high islands (Emory, n.d.). Both kinship and residence were preconditions for access to ancestral land. By moving away from the land, a person could sever one's connections with the resident group, eventually forfeiting the rights to the land. Except for the rare situation of conquest by warfare, aliens only had access to land after being incorporated into one of the resident groups, normally through marriage or adoption (Ottino, 1972; Ravault, 1978).

The joint requirements of descent and residence gave the system a powerful resilience. If group members moved elsewhere, the land was not left unoccupied but was
allocated instead to the collateral kin; if the migrants returned, their rights could be reactivated. If a person had few or no children, the land would be transferred to the next of kin. In the course of time, due to migration and reproductive differentials, landholdings fluctuate and certain lineages might be eliminated altogether from the resident community. But the supply of land was equilibrated with local demand. As long as residents were affiliated with one of the local groups, there was little likelihood of being truly land poor. Nor was it possible for people to manage ancestral land while residing elsewhere (Ottino, 1972; Ravault, 1978).

The chiefs were unlikely to appropriate the land of their subjects as the transmission and maintenance of chiefly titles was itself dependent on the good will of the subordinates and chiefly will was frequently obstructed when it clashed with the interests of the people. But important changes occurred following European contact. In Tahiti, alliances between the Pomares and the Europeans helped found a dynasty of paramount political power which would last until the mid-19th century. During the missionary wars waged against pagan districts, numerous people were killed. In the Tuamotus, wars even occurred between religious factions (Danielsson, 1955). Many people were also persuaded by missionaries to gather
in new villages. Consequently, land was left vacant, causing the rights of occupation and use to wane. With the militarily strengthened and missionary sanctioned position of the Pomares, they were able to expropriate much of the unoccupied land for their own use (Panoff, 1971).

Under continued European influence, the power of the gāti eroded and the traditional tenure systems were correspondingly weakened. At the same time, the shift to cash cropping, due partly to the need to pay government taxes and missionary contributions, led to increased contacts with European traders. In Tahiti as well the Tuamotus, chiefs were persuaded to sell land that had been formerly claimed by the people. To prevent land alienation (and also to discourage competition to their own power) the missionaries promoted the establishment of a series of codes (1819-22) forbidding Polynesians to sell or lease their land. An indigenous court, the Toohitu ("The Seven"), was delegated to arbitrate local land disputes in each archipelago of French Polynesia (Newbury, 1956).

In 1844, however, the French began a series of measures intended to loosen the restrictions on land transactions. In 1845, laws were enacted allowing the free transfer of land by any native rightholder, subject
to administrative approval. In 1847, registration of land was made compulsory, while "unclaimed land" was appropriated by the administration. Unfortunately, many islanders lost their rights because they applied too late for the specified registration deadline. Heads of families often registered family lands in their own name, a fact which collateral family members discovered only too late. By the time the administration began a survey of land ownership, conflicting claims had multiplied. The situation was exacerbated because the French court and the local Toohitus frequently had different opinions on land law (Newbury, 1956).

By 1870, the power of the Toohitus had been significantly curtailed, being only able to rule on cases involving succession and prescriptive acquisition ("squatting"). Local institutions weakened even more substantially following the annexation of Tahiti in 1880. In the course of succeeding decades, much of the land around Papeete and the nearby areas in Tahiti would become alienated from the original rightholders. In the Tuamotus, however, fresh water was scarce, rainfall variable, and the soil meager and impoverished. The land which did exist was in short supply and jealously guarded by local populations themselves. Consequently, traditional collective tenure continued to survive in
the Tuamotus, particularly in some of the more isolated atolls (Ravault, 1978).

With the devolution of autonomy to the Tahitian territorial government (late 1950s), one might have expected some modification of colonial tenure policies, but this did not occur. Explaining this requires a brief review of political events at the time. The internal autonomy movement in Tahiti is credited to Pouvenaa, a Tahitian of part Danish origin, who was a decorated veteran of the First World War. Pouvenaa had developed a "xenophobic view" of the resident foreign community (Thompson and Adloff, 1971). He founded a number of organizations to defend indigenous economic interests against encroachment by Europeans and Chinese. Pouvenaa became involved in politics and in 1949, he was elected to be the first Tahitian deputy to France; in 1951, his party won a majority in the Territorial Assembly (Danielsson, 1983).

In 1957, Pouvenaa’s party proposed a radical restructuring of the colonial tenure program. All land transactions were halted pending a thorough investigation of existing deeds. An income tax was also proposed. Incensed, French settlers and wealthy demi (half-French) besieged the Territorial Assembly and threatened to demolish the building, forcing Pouvenaa to retract the
bill. In 1958, when de Gaulle held a referendum on continued dependence on France, Pouvenaa voted no, but lost the popular vote. On the grounds that Pouvenaa had "forfeited the confidence of the electorate" (but actually to prevent him from blocking the nuclear testing program), the governor dissolved the government, effectively removing Pouvenaa from power. Two days later, Pouvenaa was jailed on trumped up charges and sent to France, where he would spend 15 years of imprisonment and exile (Danielsson, 1983).

One week after Pouvenaa's arrest, the Territorial Assembly, now controlled by politicians with little desire for radical redistributions of wealth and power, began a series of deliberations which confirmed the land tenure policies of the colonial administration, arguing that a full acceptance of these policies were necessary for agricultural and industrial enterprise. The new administration also made sure to transfer to itself the rights to large tracts of "public domain" that had been formerly claimed by the French administration. This included all "unclaimed" land parcels, all beaches and navigable lagoon space, and underground mining rights (JOEFO, 3 Nov. 1958). This had direct implications for land and lagoon alienation, as we shall see below and in Chapter 5.
Land Alienation

Some Tuamotuan land was alienated in the early 20th century, but not in very extensive amounts. It occurred primarily because of debt, and was usually involuntary (for the buyer as well as the seller). The debts were incurred to Chinese and European trading entrepreneurs from Tahiti who chartered cargo boats and transported the mother-of-pearl divers to the atolls which were opened each season. On the atolls, divers needed boats and daily transport to the pearling sites, huts needed to be rented or built, and food and living supplies needed to be procured. All of this was freely advanced by the traders—who also ran all the shops, sometimes charging exorbitant prices. Tuamotuans who were deprived all year were seldom able to resist the temptation of luxuries offered in the stores. Much money was also lost through gambling (Herve, 1933, 1934).

At the end of the season, the divers may have come away with an iron bed or some other imported item, but they were typically in debt once again for the next diving season. The debt would usually be paid by working for the same entrepreneur, who often paid lower than the normal price for the shells. Land titles were usually signed over as security for the advances. If a diver and his family failed to meet their obligations, the family land
(or portions thereof) could be foreclosed. But the traders rarely had an intrinsic interest in the land; they were usually willing to resell it to a family member who paid the amount of the debt. A few families lost much of their lands in this way, and some were even forced to migrate to Tahiti because of incurred debts (Herve, 1933, 1934).

Danielsson (1952) provides an illustration of the callous fashion in which the Tuamotuan divers were often treated by their "agents". After spending a season working in Marutea Sud (an atoll near Mangareva, see Map 1.1), the Moana had guaranteed to return the homesick divers it had recruited to their home atolls. However, as most of the divers had already spent their money at the Moana’s shop, many of the divers were forced to sign on to dive at yet another atoll. Before they were able to get there, an epidemic broke out in Tahiti and the government ordered a halt to the diving. Nevertheless, the Moana dumped the hapless divers at Raroia, an atoll on the way, leaving them stranded for several months. During the intervening period, the whole population of Raroia had been infected, leading to several deaths. By the time the Moana returned, the divers had become so penniless that even those who originally wanted to go home were forced to sign on for another season.
By 1914, concerned about the problems of land alienation to Chinese entrepreneurs, the administration passed a law prohibiting a cash advance of more than 200 francs. "However, the Tuamotuans are difficult to protect," laments Herve, the Tuamotuan administrator at the time. "They only think of spending the money as quickly as possible and sign whatever the merchant requests. They do not ask advice until it is too late" (Herve, 1933, 1934). According to Herve, the foreclosures on land came to an end by the 1920s, when the Tuamotuans began to feel the full brunt of using family land for loan guarantees. From then on, the divers signed guarantees based on a percentage of the future dive or a future copra harvest. By this time, however, considerable land had already been alienated on Manihi and other atolls with pearl oyster stocks.

Additional factors intervened in the 1950s, tending to further promote land alienation in the Western Tuamotus. As the islanders migrated to Papeete and Noumea in search of employment and the attractions of town life, they had to find places to live. Rentals were difficult to find in Tahiti as well as Noumea. For some time, people were able to stay with relatives, but after a while, they needed to purchase homes or land in Tahiti, for which they were willing to exchange rights to pieces of land on their home
islands. By doing this, they made it increasingly difficult to return home. Their own rights had been given away and family members, unhappy that aliens now had access to the ancestral lands, were hardly likely to be very sympathetic toward the migrants.

Indebtedness also rose as a consequence of the pearl farming industry. When pearl culture was initiated in the Tuamotus, the government development bank willingly advanced low cost loans to purchase materials for stations, platforms, and floating lines. But the loans, as well as the revenues, were managed poorly. Instead of going to invest in the business, they were frequently used to buy vehicles or take vacations in Tahiti and overseas. During the mother-of-pearl industry, when there was little need for investment (relative to pearl farming), the inhabitants had gotten used to consuming the profits immediately (Herve, 1933, 1934). There were also substantial losses due to the occasional hurricanes, storms, and oyster epidemics. With the need to repay high debts, land alienation has again become a temptation for atoll populations.

Due to the lucrative new pearl farming industry, land on the atolls has also become extremely attractive to outside entrepreneurs. Tahitians had seldom been interested in acquiring very much land during the
mother-of-pearl industry, as they needed only a temporary base for their motile operations, which could easily be rented for the season. In the pearl industry, however, land has become a necessity, and particularly so for the large-scale pearl farms that are likely to get into disputes with neighboring landholders. Land has also become a necessity for obtaining a lagoon concession. The measure had originally been introduced as a safeguard to preserve lagoon space for the indigenous residents. But this has not been entirely successful, for it is easy enough for a determined investor to acquire a small parcel of land (see Chapters 5 and 7).

Land Tenure Today

In the contemporary communities of the Western Tuamotus, land tenure reflects the combination of traditional practices and laws introduced by the French colonial administration. The system is pivoted on the tōmite ("committee")—indigenous land claims that were officially investigated, surveyed, registered, and given legal title in the late 19th century (Newbury, 1956). On Takaroa, these claims were registered beginning in 1888, a year following the colonial government’s call for land registration in Tahiti and the Tuamotus, and ended in 1902. Each parcel of land was listed by name, its
natural boundaries and neighboring parcels of land, and its claimant. It is on these documents, supported by related genealogies, birth certificates, and other documents, that current land claims are based.

The survey was fairly rudimentary: Local chiefs, judges, and policemen, together with other notables and a visiting government agent, recorded the ancestral land exploited or claimed by a particular householder or several householders. At the direction of the claimant, the village policeman, armed with a long sennit rope, to the end of which a stone was attached, would climb up to the top of a tree and throw the end of the rope as far as possible. If the limit of the land was further, the procedure was repeated, but no more than two or three times. Beyond this, the estimate was made by "guesswork" (Newbury, 1956). Each claim was registered in the Department of Domain in Papeete--usually with several years of delay--and published in the official journal of the colonial administration.

On most atolls, the land was divided into several hundred tiny parcels. Where islets were small (less than 200 meters in length), one person typically claimed the entire islet. Where they were large, the islet would be bisected in parallel strips, each of which was a complete "slice" between the lagoon and the ocean, giving access to
the ecological resources present in the terrestrial zone and the two parallel beach zones. Some land parcels were registered individually for household heads, male and female adults, and even for minors (by their parents); others were claimed jointly by virtually every conceivable combination of the above. Accordingly, although few islands had more than about 200 persons in the late 19th century, there were often as many as 500 distinct individual and corporate claimants to each land parcel, most of which were widely fragmented across the chain of islets surrounding the lagoon.

Individual as well as corporate claims were sometimes followed by disputes and counterclaims, particularly when non-resident islanders returned home and found out that relatives had obtained titles to their own lands. Some of the cases were submitted for judgement to the Papeete courts. Some cases were ruled by travelling judges who regularly toured the Tuamotus and the other archipelagoes. But the disputes were complex and the claims often involved undocumented genealogies, land allocations, and previous occupation. For example, a chief of Makemo who had assisted in Takaroa’s survey, claimed at least partial ownership of over 100 parcels of land on Takaroa (a sixth of the total emerged land
surface); but most of his claims were disputed by the locals.

The survey was not conducted on all atolls, but where it was (such as Takaroa and most other atolls in the Western sector), the documents are currently held almost to be the critical proof of land rights. The claims recorded in the tōmite are regarded parau tupuna (words of the ancestors) and also proof of official government sanction. In a sense, the tōmite were validating the traditionally existing tenure patterns. But they introduced an important change in the system: Previously, the tenure system was fluid; rights waxed and waned with residence and affiliation in a particular area, as noted above, facilitating a relatively equitable distribution of people and scarce resources. The tōmite, however, "froze" tenure at a particular moment, with a number of important ramifications.

Firstly, by allocating land to individual titleholders, power was automatically taken away from the gāti, which soon went into a drastic and permanent decline. Other influences were also responsible for the breakup of the gāti, not least of which was the replacement of almost all native chiefs and the general cultural havoc perpetrated by the administration and the missionaries. But the process of surveying and
individualized title allocation is perhaps the most fundamental factor, it was through its control over land that the gāti drew much of its strength (as we shall see however, a new institution soon emerged that, to some extent, took the place of the gāti).

In the traditional system, land was occupied and exploited on the basis of inheritance (father or mother), affiliation (conjugal or adoption), use (residence and exploitation), and the accord of the gāti. When a person moved or did not use the land, it could be easily reallocated by the senior members of the gāti (usually to the resident next of kin). But in the French system, land cannot be reallocated by their senior relatives; moreover, individual rightholders, even when absent, could sell their land to a third party, permanently alienating the land from the original group. The authority of the gāti over land rights and succession became quickly eroded, replaced by an external legal and bureaucratic system (see Ravault, 1978).

However, due to the expense and difficulty of transport, surveying, and court cases, most land was soon left in a state of "indivision" between all the potential inheritors of a landholder. To the chagrin of the administration, a neo-traditional institution had emerged in the place of the gāti: the landholding group.
This comprised all individuals who traced their ancestry or succession to individual tōmīte titleholders. The landholding group is much smaller than the gāti, only extending back a few generations to the original titleholder. It had also lost virtually all of the gāti's sociological functions. But some of the essential features of traditional land tenure, succession, and allocation had been successfully transferred from the gāti to the landholding group.

The authority of group elders over land reallocation and succession has been eroded, but the following elements of the traditional tenure regime remain operative today:

1) There is a continued preference to maintain the land as a collective family property, a concern goes beyond the inevitable costs. 2) There is a recognition of succession based on adoption, whether or not this is licensed in French courts. 3) The powers of absentees are viewed skeptically despite the rulings of French law. 4) There is a strong reluctance to part with ancestral land, particularly in the form of sales. 5) Even alien tenure practices, such as sales and absentee designation of caretakers, are used in ways that support the traditional order.

The French, and later the Tahitian administration, have tended to view the preservation of traditional tenure
practices as an obstacle to production and have done everything possible to promote land division and appropriation by the market. But they have ignored the fact that traditional land tenure is a key defense against indigenous dispossession (Panoff, 1971). The maintenance of traditional tenure practices, even in modified form, constitutes a powerful and effective form of resistance to external intrusion. In the urban areas of Tahiti and even parts of the Western Tuamotus where traditional tenure patterns have been severely eroded, much land has already been alienated (Tetiarahi, 1987; Ravault, 1978). On Takaroa, little land has been alienated, due to these everyday forms of resistance.

This will be illustrated in two ways. Firstly, the tenure status of the 51 parcels of land used as pearl farming bases will be examined. I will show that—unlike lagoon tenure (see Chapter 5)—the majority of the land is still occupied by the indigenous population. Even the parcels occupied by aliens are almost all owned by the indigenous population. The aliens have only been granted leases and other temporary and contingent use rights. Following a presentation of the distribution statistics, I will show how the indigenous tenure system, based on descent, residence, affiliation, and adoption interface with the more novel tenure institutions introduced by the
French and serve as an effective means of everyday resistance to dispossession.

The current tenure order is best described as part of an evolving tradition. Actual tenure practices follow fluid, rather than fixed, guidelines, dependent on the maneuvering of individuals with initiative, but also subject to the final approval of other family members, neighbors, and the community as a whole, becoming progressively strengthened or weakened with continued use over a period of years, but generally serving to protect and support the rights of the resident indigenous community, as is the case with pre-European tenure regimes in other parts of the Pacific Islands (Crocombe, 1971b; Sack, 1974; Overton, 1989). The relation of the Takaroa case study to the wider body of literature on Pacific tenure patterns is explored in the conclusion of this chapter.

Tenure Status of Pearl Farming Land

Of the 51 parcels of land used for pearl farming, 34 (66.7%) were occupied by owners (Table 4.1, Map 4.1). This included the majority of the parcels owned by oldtimer and return migrant pearl farmers, but also four parcels occupied by alien pearl farmers. Two of these, opposite PF16 (pearl farm marked '16' on Map 4.1) and
PF47, were minute parcels of only a tenth of a hectare (1,000 square meters) that had been purchased by alien entrepreneurs in order to apply for a lagoon concession. The third of these (opposite PF46) was a parcel which had been purchased in the 1970s by a Tahitian meteorological officer who liked the atoll. The fourth (opposite PF32) was a parcel belonging to a Chinese pearl farmer who had inherited it from his grandfather, who had purchased it over half a decade ago, during the mother-of-pearl industry.

Table 4.1. Land Tenure, Pearl Farming Parcels

<table>
<thead>
<tr>
<th>Owner</th>
<th>Oldtimers</th>
<th>Returnees</th>
<th>Aliens</th>
<th>Total</th>
<th># Area</th>
<th># Area</th>
<th># Area</th>
<th># Area</th>
<th>Area(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner</td>
<td>5 10.4</td>
<td>25 89.0</td>
<td>4 12.4</td>
<td>34 (66.7)</td>
<td>111.4</td>
<td>67.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rent</td>
<td>0 0</td>
<td>0 0</td>
<td>6 13.5</td>
<td>6 (11.8)</td>
<td>13.5</td>
<td>8.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allow</td>
<td>0 0</td>
<td>1 5.4</td>
<td>7 25.9</td>
<td>8 (15.7)</td>
<td>31.3</td>
<td>18.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prescription</td>
<td>1 2.7</td>
<td>1 1.3</td>
<td>1 5.5</td>
<td>3 (5.9)</td>
<td>9.5</td>
<td>5.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6 13.1</td>
<td>27 95.3</td>
<td>18 57.3</td>
<td>51 165.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note #:Parcels; Area:Hectares

Six of the 51 parcels had been rented from the indigenous owners, all of them by alien pearl farmers. All except one were contiguous land parcels that had been rented by a large-scale alien pearl farmer as the support base for his workers and extended pearl farm on the far side of the atoll (PF24). The parcels had been rented from several landholding groups. One of these was
Map 4.1. PEARL FARMING

LAND TENURE

LAND PARCELS

• OWNED
• LEASED
• ALLOWED
• PRESCRIPTION

1430' 36" S
144 59' 44" W
TAKAROA ATOLL

PEARL FARMS

- OLDTIMER
- RETURN MIGRANT
- ALIEN

SCALE

1 2 3 KMS.

36° S
44° W
comprised of oldtimers; the other two was comprised of return migrants. The sixth (opposite PF35) was a parcel rented from an absentee indigenous owner who had no family members present on the atoll. The rented parcels comprised just over a tenth of the total land surface utilized by the pearl farmers, but a third of those occupied by aliens.

Eight parcels were occupied by pearl farmers by allowance of the indigenous owners. Rent was not charged for the use of these parcels, but use rights were mutually understood to be contingent on the continued goodwill of the islanders. One of these parcels was occupied by a return migrant whose landholding group had very few land parcels in the area suitable for pearl farming (PF17). The other seven parcels had been given to alien pearl farmers. Economic as well as social factors play important roles in allowing occupation: It is said that the owners were given preference when the occupants wanted to purchase seed oysters. In most parcels, the occupants were members of the same church as the those who granted permission.

Three parcels were occupied by prescriptive acquisition. One was a land parcel that had never been officially claimed, now occupied by an oldtimer pearl farmer (PF2) whose father-in-law had previously been
mayor, thus having gained knowledge about government land tenure records and unclaimed land parcels. A second parcel, claimed by the government, was occupied by a return migrant (PF26) who disputed the government's claim. The government sometimes claimed land parcels which had no apparent owner; but many of these did have an owner, and though missed in the 1956 land survey, may have had a valid title issued a century ago (unknown to the administration currently). The third parcel was occupied by an alien pearl farmer (PF24). The land parcel was an unclaimed islet that was situated between two other sets of landholdings which had been acquired through lease and allowance.

In total, the alienated land only represents a small portion of the land related to pearl farming (four parcels out of 51, altogether comprising only seven percent of the occupied land). The majority of the land occupied by aliens was only held on short-term lease, allowance, or (in one case) prescriptive basis. Of the four purchased parcels, two had been purchased decades ago, when the population was smaller and pearl farming possibilities not yet perceived; while the two more recently acquired parcels were relatively miniscule (1,000 hectares), having been purchased largely for in order to apply for pearl farming concessions. This is a marked indication of the
attachment of the indigenous people to their land, a feeling which has been reinforced by the high value of suitable lagoon-front parcels.

Descent, Residence, and Community Accord

The requirements of descent and residence are the fundamental features of traditional Tuamotuan tenure practices, as discussed above. Rights obtained through descent from the original community (but modified by the interpolation of the tomite titleholders) can wane when absent, but they are seldom irrevocably lost. Even though the land may be occupied by others for generations, they are generally easily reestablished upon return to the atoll, providing that the accord of the resident landholding group is obtained (Ottino, 1972; Ravault, 1978). In French law allows for prescription after 30 years of occupance (also a form of residence rights) but it makes no distinction between "original" owners and those of more recent status.

Traditional recognition of the potential rights to land after long periods of absence is a powerful form of insurance for the indigenous people of Takaroa. According to French law, the land would have been permanently lost to long-term migrants due to prescription by the their relatives and neighbors. Under traditional tenure,
however, migrants could leave to take advantage of employment opportunities elsewhere without fear of losing their ancestral land. Indeed, many did so during the 1950s and the 1960s when the pearl diving industry declined and the French military buildup in Papeete began. And when external opportunities evaporated, the pearl boom on Takaroa provided new opportunities at home and their recognized descent rights proved fortunate indeed.

But not all migrants were treated accordingly. One group of migrant households was refused access to land because their ancestor, the (tomite) titleholder, had—according the locals—originally been from another atoll and was not truly a "native" of Takaroa. The rights were therefore contingent. They did not automatically transfer to descendants and they expired after an absence of several generations. Still, the descendants might have been accepted had there not been other aggravating circumstances. Their ancestor’s claim had itself been heatedly disputed over a century ago. Moreover, the descendents, upon their recent arrival on Takaroa, had acted inappropriately. They did not bother to consult with neighbors and recent occupants of the land, as would normally have been expected even by those with an undisputed ancestral claim.
Informal Affiliation and Descent

Although Takaroa is a largely Mormon community, many couples live together without church or civil sanction of marriage and ambiguities of descent can result. French civil law does not accord inheritance rights to children of an unmarried mother unless official recognition by the father is inscribed in the birth certificate. This can be done even years after the birth, but for various reasons, such as a child from an extra-marital union, a child may not be officially entitled to inheritance rights. In practice, however, the inheritance is decided informally by the parents, who—in a society of few secrets—are usually well known to the community. Here again, local systems of social relations and inheritance offer an insurance for indigenous islanders, ensuring them with access to land, provided that good relations are maintained with relatives.

Two of the lagoon-front parcels were occupied by brothers migrating from Tahiti who had an extremely tenuous inheritance linkage (Figure 4.1). The title of the land had originally been held by a first partner (1) of their great-grandmother (2). The brothers (4 and 5) were descended from a second partner (3) who, like their great-grandmother, was not a Takaroa native. The descendents of the second partner, who resided in Tahiti,
Figure 4.1. Tenuous Descent
did not have a legally valid inheritance claim. On Takaroa, the land had been occupied by the descendents of the first partner (6 and 7) and legal rights of prescription had been long established. Nevertheless, when the two brothers arrived on Takaroa to begin pearl farming, they were permitted to do so without objection, although complaints later arose about alleged partnerships with external entrepreneurs.

A related situation occurs with fa'amu ("feeding"), traditional adoption. A grandmother often adopts one or more grandchildren, but distant relatives and strangers may also be adopted. In court, however, adoption is not recognized unless officially validated and inheritance rights are easily established for the adoptees and their descendents. But on Takaroa, adoptive rights continue to play an important role in succession. The same principle holds with parau tupuna ("ancestral words"), unwritten wills, which are not valid in court, but are recognized by the islanders. The case which follows (Figure 4.2) illustrates the above generalizations.

A titleholder (1) willed his land to two individuals: an adopted son (2) and a nephew (3). The nephew's daughter (4) moved to Papeete while young and the land on Takaroa was occupied by the grandson (5). When the pearl boom began, the nephew's daughter decided to move back to
Figure 4.2. Adoption and Wills
Takaroa and revive her father’s claim. However, a complaint arrived from the great-grandson (6), now living in Tahiti, arguing that his branch had the stronger claim. The nephew’s daughter (4) travelled to Tahiti with a gift and politely requested permission to remain on the land, duly apologising for not asking permission earlier. The apology was accepted and permission now granted. Here again, local tenure arrangements assured continued access to ancestral land.

Sale

Selling land was not a typical practice of pre-European tenure system, but it has been a fairly common practice in the Western Tuamotus for almost a century, and has now become a traditional practice, comprised of a mix of indigenous and European conceptualizations and uses. Land is still highly cherished but it is sold when necessary for money or used to pay debts. Less frequently, land is bartered for land in Papeete, as well as for boats, houses, and other desired goods. It is sometimes even gambled (all the cases I recorded occurred during the rough-and-ready mother of pearl industry, which, according to some observers [Herve, 1933, 1934; Baruch, 1936], left the islanders frequently in debt). In some instances, the
sale of land is used as a way to ensure the direction of succession.

However, the overlay of collective tenure with an introduced, Western regime inevitably results in occasions where individual initiative collides with the will of the landholding group. Compounded with the ambiguities surrounding succession patterns that have been described above, possibilities of manipulation, cross-purpose, mutual misunderstanding, and conflict within the landholding group are magnified. These problems can be severe if the land is being transferred to an alien. One individual may consent, but the rest of the group is likely to protest. The case which follows (Figure 4.3) illustrates some of the stresses and strains involved when an individual attempts to use or transfer land without previously obtaining authorization by all family members.

The titleholder (1) of a land parcel had several wives (2-4), as was common on Takaroa in the late 19th century. In order to provide for his wives and offspring, he purchased land to supplement his ancestral inheritance. One of his granddaughters (5), to whom purchased land had been designated, was living in the United States and had leased the land to a pearl farmer (6) from Tahiti. This pearl farmer was alleged (by the Takaroa residents) to be an agent Yi Fu, one of the largest pearl farmers in French
Figure 4.3. Individual and Group
Polynesia, currently established on other parts of the Tuamotus and the Gambiers. However, the alleged agent was forced to withdraw due to massive opposition within the community. The land was leased again afterwards, but reports soon surfaced that the new farmer (7) was also an agent of Yi Fu (see Chapter 7).

Two wives (3-4) of the abovementioned titleholder, both of whom currently had descendents on Takaroa (8-9), had a joint claim to the remainder of the inherited land. One of these descendents (8) returned to Takaroa during the recent pearl boom and occupied one of the lagoon-front land parcels. He also allowed one of the family parcels to be occupied by an alien entrepreneur (10). The entrepreneur was unrelated to the family, but he was one of the few people on Takaroa who belonged to the Sanito church and was on good terms with the land claimant (also a Sanito). Shortly afterwards, a quarrel broke out between the two, and the entrepreneur was ordered to leave the land. Nevertheless, the entrepreneur was permitted to remain on the land through the intercession of a senior member (9) of the landholding group.

**Modes of Alienation**

Due to the passage of French tenure laws, aliens could gain control of Tuamotuan land in a variety of ways, the
most important of which is the sale. But the sale of land does not fit easily and neatly into the still existing practice of collective ownership. Since land belongs to the landholding group rather than the individual, what part of the collective rights were transferred as part of an individual transaction? Two interpretations are possible: (a) the land had actually been ceded by the whole of the lineage (usually a misrepresentation of the actual situation); or (b) an individual portion of the collective land had been ceded, which could then be surveyed, divided, exploited, or resold without regard to the will of the rest of the family.

The first option has become rare, as claimants have multiplied with passing generations. Alternatively, a single share is claimed. A professional surveyor must be contracted to travel to the home atoll and survey the parcel and a competent attorney must be hired. All the family members must be contacted, copies of birth certificates, death certificates, and other papers must be obtained, and everybody must be persuaded to agree (with notarized signatures) on the details of the division. As many landholding lineages are into their sixth or seventh generations, with many members now living abroad, the expense, logistic problems, and long-distance negotiations...
over the allocation of each sub-parcel usually make this a nearly impossible task.

In spite of these difficulties, some land has been alienated through sales of entire parcels (early 20th century) or shares of a parcel (more recently). Aliens have also managed to gain control of land through other ways: by leasing land; by being allowed to use land; and through prescription (usually on government land or land that had never been officially claimed). A caretaker may also be designated to watch over an absent individual’s land. Gifts may be given periodically, but this form of occupation is more like allowance than a leasehold. All of the above are forms of temporary occupancy and are utilized by alien entrepreneurs as ways to begin pearl farming and establish a base on the atoll while negotiating for a more permanent tenure status, as illustrated below.

Lee, the largest pearl farmer on Takaroa initially gained entry through the purchase of a small, previously alienated parcel of land. The parcel had been foreclosed during a bankruptcy of the original titleholder, in 1923, but it was then repurchased by a Takaroa islander from a different landholding group. It was subsequently sold to a Chinese trader, who resold it to his daughter, born to a woman of Takaroa. The trader’s daughter was approached by
Lee, who could not have gotten access to lagoon without a prior claim to a land parcel. She was reluctant to sell the parcel, but her husband had run into problems with the law (he had allegedly killed a man on a neighboring atoll) and had incurred substantial legal debts. The land parcel, one of the few that was individually owned, was subdivided, and a tenth of a hectare (a miniscule parcel) was sold to Lee.

Lee was granted a concession, but his land and lagoon operations soon extended way beyond his allocated parcel and disputes arose with the neighboring landholders. Lee began to look for additional parcels of land, but individualized ownership was scarce and very few islanders were willing to sell portions of collective land. So he had to settle for less permanent means of land acquisition. Lee's favored location was across the lagoon, in an area where there was, at the time, not very much competition over space. Land was leased from two landholding groups, for a total of 350,000 CFP/yr. ($US 3,500) and the lease money was distributed among all members of the landholding groups. Other adjoining parcels were obtained through an allowance by a senior member of a third landholding group.
A Genealogical Paradox

When a member of a landholding group has been persuaded to sell his/her land, the resulting sub-parcel is usually so small as to have no real value. Moreover, as explained above, the expenses and logistical difficulties virtually preclude division unless an almost super-human effort is expended. Consequently, many parcels of land that have been partially alienated have never been divided subsequently, and a curious situation has resulted: Aliens (Tahitians or Chinese) have now become de-facto (but generally unwelcome) members of the ancestral landholding lineages. This is a kind of genealogical paradox, as landholding groups, as successors of the gati, do not include aliens except through affiliation or adoption. The following case shows how this problem has been dealt with.

The titleholder to several lagoon-front parcels of land had left the land to his natural descendents and an adopted daughter. In 1926, the adopted daughter sold the parcels to a Chinese-Tahitian entrepreneur. The entrepreneur did not make use of the land and in his absence, the land was occupied by the other branch of inheritors (the natural descendents). In their view, the sale of the land by the adopted daughter did not invalidate the claims of the rest of the landholding
group. However, Giscard, one of the entrepreneur’s grandchildren, decided to move to Takaroa during the pearl farming boom and declared his intention to reoccupy one of the parcels. The land remained in an officially undivided state, but Giscard was permitted to occupy one parcel, leaving the other parcels for the use of the landholding group.

Redemption

Although there are cases to the contrary, most individuals are extremely wary of land alienation, particularly in the form of sales. Cognizant not only of the economic threat posed by land alienation, but also of the cultural threat posed by alien incursions into the landholding group, still essentially one of the most important Tuamotuan cultural institutions, indigenous family members are rarely content to allow land alienation to remain unchallenged. In the optimal situation, the alien’s shares are repurchased by members of the landholding group. Even when this is not possible, the land is usually quietly reoccupied by relatives. The recovery of ancestral land from the hands of outsiders—whether through re-purchase or re-occupation—is considered an obligation.
Ironically, both re-purchase and re-occupation are modes of land recovery which have been facilitated through the introduction of civil law. In re-purchase, the sale of land—a non-traditional mode of land transaction—is used as a way of redeeming the ancestral land and reinforcing the traditional landholding groups. In re-occupation, the French law of prescription is invoked to reestablish traditional rights to land. According to this law, ownership can be declared for any land that has been occupied or exploited for 30 years. This parallels traditional tenure concepts, in which residence is a necessary component of establishing rights—except that traditionally, prior descent rights are not completely extinguished by occupance. In both cases, novel modes of land transaction have been co-opted in support of traditional rights.

Land Tenure: a Terrain of Everyday Contestation

Indigenous land tenure systems in the Pacific have been much maligned because of their purported ill effect on local industry (Fox and Cumberland, 1962; Watters, 1969; Ward and Proctor, 1980). Specifically, it has been argued that intra-family competition, fragmentation of parcels, insecurity of tenure, and the difficulties of large-scale land accumulation lead to "bad management"
(i.e., low yields). Recent studies, however, have disputed these assertions, providing evidence that large-scale farms are not demonstrably more productive than their smaller counterparts and are culturally inappropriate in many island societies (Hardaker et al, 1984a, 1984b).

Critics of traditional tenure systems have also neglected problems of equity and distribution. Rationalization and modernization programs might well lead to increasing overall productivity, but the benefits are often highly skewed towards a few wealthy farmers, increasing the competition for land and leaving the majority of local inhabitants with the unenviable prospect of smaller parcels, wage labor for the large farmers, and outmigration. In Fiji, individual accumulation and alienation are nearly impossible in traditional village agriculture, but it is an increasing occurrence in government-sponsored settlement schemes, where external "Victoria Parade" settlers (urban businessmen and bureaucrats) are displacing the small-scale farmers (Overton, 1989).

Some studies have shown that inequality of landholdings is possible even in settings where traditional tenure patterns are intact, but even these studies acknowledge that accumulation by local individuals...
and families is tentative, fluid, and not necessarily a forerunner of exploitation and class differentiation (Rodman, 1984; Finney, 1988). In contrast, alienation (acquisition by external investors) is a particularly noxious form of accumulation: individual holdings tend to occur rapidly, at a large scale, create oppressive relations of production, and remain permanently alienated from the community (Overton, 1989). That traditional tenure has important protective benefits is supported by the Takaroa study.

I have shown that almost all the 51 lagoon-front parcels associated with pearl farming remain in the hands of the original landholding groups, despite intense and persistent pressure by external investors. Even alien pearl farmers that have managed to become established had difficulty in obtaining access to the needed land. With the exception of two plots acquired prior to the pearl farming era and two miniscule plots purchased more recently, the alien pearl farmers rely on leases and allowances by the indigenous community, and remain dependent on their continued good will. Due to the obstinate retention of the modified or neo-traditional tenure system, persons of Takaroa ancestry wishing to begin pearl farming independently retain the possibility
of access to their ancestral land even after generations of absence from the atoll.

The Fijian village tenure system has been commended because of its demonstrated ability to withstand pressures for accumulation (Overton, 1989). However, it was not viewed as a form of political resistance because the traditional tenure system in Fiji was supported—and to some extent even "invented"—by a benevolent colonial administration mindful of the impact of land alienation on native populations (France, 1969; Rutz, 1987). In contrast, France had no such compunctions in its regulation and alteration of land tenure in New Caledonia (Connell, 1987), Vanuatu (Jolly, 1992), and French Polynesia (Newbury, 1956). In New Caledonia and (to a lesser extent) Vanuatu, where land alienation had been extensive, violent resistance has erupted repeatedly, centered primarily on land issues.

In French Polynesia, where European plantations never succeeded, land alienation was less extensive (Newbury, 1980; Panoff, 1971), and violent resistance seldom occurred. However, confronting an alien system of land tenure that was explicitly introduced to individualize and rationalize landholdings, the obstinate maintenance of the traditional land tenure system—through the mechanisms of descent, residence, adoption, conjugal, and other
informal linkages, and redemption for the family good; and even the co-optation of introduced elements such as sales and leases, as demonstrated in the above case studies of lagoon-front parcels—remains an effective, everyday form of resistance. Unlike Fiji, but like New Caledonia and Vanuatu (see Jolly, 1992), traditional land tenure in French Polynesia is an expression of indigenous resistance to dispossession.

In the following chapter, I will show that colonial modifications of lagoon tenure were met by open defiance. Why did this occur, when land was protected by everyday forms of resistance? The probable explanation is that Tuamotuan lagoon space has always been a highly contested resource because of the natural pearl oyster stocks, but there was considerably less competition for the small and impoverished strips of land. Open defiance would be unnecessarily risky when quiet resistance could accomplish the same task. Rebellious leaders could be deposed, fined, jailed, deported, and prohibited from returning to their home islands. The traditional tenure system, with all its inherent ambiguities, was an effective obstacle to would-be investors, who never quite knew who or what they needed to deal with.

By obstinately clinging to important aspects of the traditional land tenure system, the Tuamotuan populations
also scored important symbolic and psychological points in its contest with the dominant political order. For the contest between island populations and external interests is not only a question of the economic and social value of land. Like most struggles between dominant and subordinate populations, it is also a struggle for dignity, rights, and power (see Chapter 8). The assertion and perpetuation of their traditional land tenure practices, even in ways which do not openly confront the dominant authorities, provide an effective assertion of the islanders' linkage with their ancestral land, and this in turn helps to ideologically support the occasionally necessary manifestation of defiant resistance, as we shall see.
CHAPTER 5
LAGOON TENURE

The control of Tuamotuan lagoons has long been heatedly contested between local populations and external interests. Traditionally regarded as an exclusive resource of each atoll community, the lagoons were rapaciously exploited by visiting pearling ships beginning in the early 19th century. Lagoon rights were permanently expropriated from the atoll communities by the colonial administration's public domain decree of 1890. These blatant violations of centuries of traditional rights provoked strident protest by even the smallest of the atoll populations. Petitions were sent to the colonial governor's office, extensive lobbying was directed at Tuamotuan political representatives, lagoon rights cases were taken to the highest courts, and external entrepreneurs who did not meet community approval were forcibly deported to Papeete.

Due to these protests, a series of concessions was made by the colonial administration, the most important of which was the prohibition of underwater breathing apparatus from most lagoons by the 1930s. The long, but uneasy truce which followed was shattered in the 1980s when a wave of alien pearl farmers began occupying large
sectors of Tuamotuan lagoons on a permanent basis. On Takaroa, almost all of the authorized pearl farming area had been allocated to alien entrepreneurs. Alien pearl farmers occupy half of the total nearshore lagoon farm area, blocking more than a third of the occupied shoreline. They are also using a substantial proportion of the central lagoon area for spat collection. These activities violate previous agreements with the community as well as the authorized concession limits set by the administration.

Historically as well as today, the Tuamotuans have resisted the dispossession of their lagoon space through everyday and defiant fashions. The violation of administrative licensing requirements, quotas, and specified spatial limits all represent a quiet exercise of indigenous traditional rights. These acts, as well as gossip, pilfering, and arson, are forms of everyday resistance to alien entrepreneurs. Lagoon rights are also openly asserted through petitions, negotiations, confiscations, expulsions, and associations of protection. All of these forms of resistance are considered individually in this chapter. However, a full exploration of the external provocations; the escalation of indigenous defiance; the founding of a large-scale resistance movement; the ensuing community divisions; and
the suppression of this movement, is deferred to later chapters.

Lagoon Tenure Under Colonial Rule

At the time of European contact, the rights to Tuamotuan lagoon areas were held exclusively by the gāti, the collective descent groups that were resident on each atoll. In small or sparsely populated atolls where a single group inhabited the entire atoll (such as Takaroa), the lagoon was used collectively by all the inhabitants. On large atolls (such as Rangiroa) and more densely populated atolls (such as Anaa), which were shared by several groups, the lagoon was divided into sectors parallel with the adjacent land. Lagoon claims were connected with the rights to land and the strength of these claims and the defense of these rights waned with distance from land (Annuaire de Tahiti, 1863; Tetiarahi, 1990).

Until the beginning of the 19th century, the atolls were ruled by local chiefs—and in some cases—by the chiefs of neighboring atolls. If the ties between the population and its land and lagoons were strong, the ties of the chiefs were even stronger. A common saying throughout Tahiti and the Tuamotus was te iho o te fenua te ari'i: "The chief is the very essence of the land." The
power of the chiefs derived from their descent from the stem lineage of the original ancestors inhabiting the atolls. Individuals and their households had the rights to utilize the lagoon for fishing, pearling, transport, and recreation, but chiefs would periodically decree rāhui (taboos) on certain sectors, reserving the produce for ceremonial occasions and in time of need (Ottino, 1972; Ravault, 1979).

Around 1805, a series of devastating wars erupted in the Western and Central Tuamotus. The Parata, man-eating warriors from Anaa, a densely populated and land-rich atoll in the southcentral Tuamotus, sailed in dense fleets of double-hulled canoes across the archipelago, laying waste to the comparatively defenseless communities in their path. Men were killed or forced to flee, while women and children were carried away to Anaa for work as slave laborers in Anaa’s mosquito infested taro-pits. Escapees from Takaroa and many other atolls took refuge in Eastern Tahiti, where they came under the protection of King Pomare. By 1820, Pomare had extended his influence to Anaa as well, permitting the Tuamotuans to return to their home atolls, but upsetting and restructuring the traditional balance of power (Danielsson, 1955).

However, the territorial rights of local residents were protected by Queen Pomare and put into writing under
the missionary codes of 1842-1848. At the time of signing the protectorate agreement (1842), Pomare also stipulated that people's traditional rights to their land should not be altered; these rights were accepted by Admiral Petit-Thouars and King Louis-Phillipe of France. Lagoon rights were not specifically mentioned in this document, but they were explicitly included in the Pomare code of law of 1842 (Porlier, 1929):

The fishermen must remember to make arrangements with the owners of the lagoons, channels, and passes; all these places have owners with the exclusive rights to negotiate over their use.

Tuamotuan lagoon rights are also affirmed by the following correspondence, which has been used as a key argument in subsequent disputes (MT, 14 Sep. 1859):
May 13, 1859
To the Imperial Commissioner,
We are writing to tell you about Europeans who bring people to our island to exploit the pearl oysters. We are opposed to their coming in the future. It is for you to judge if our claims are rightly or wrongly founded, but consider that the pearl oysters are our sole riches.

The Chiefs of Manihi and Ahe
Chief Mairoto; Chief Raka; Judge Tetua

August 29, 1859
To the Chiefs of Manihi and Ahe
I have learned with regret that strangers have transported the islanders of Hao to Manihi and Ahe to exploit pearl oysters, without your authorization. You have asked if you have the right to stop them in the future. Yes, you do have the right. They must request your authorization. Do not act with violence, but maintain your rights, and do not let yourselves be imposed on by Europeans without conscience, because, unfortunately, not all Europeans are honorable. However, the Government will watch over you.

The Imperial Commissioner
E.G. de la Richerie

Nevertheless, in the mid-19th century, Tuamotuan lagoons came under siege because of their abundant pearl oyster stocks, recognized by Europeans as early as the first exploratory expeditions. Unscrupulous traders from England, Australia, and Valparaiso, had little concern with either traditional lagoon rights or the preservation of natural stocks. By the 1860s, it became evident that a valuable resource was becoming endangered. Consequently, a law was issued by the French regulating the exploitation of pearl oysters in the Tuamotus. From now on only
certain atolls, which were known to have adequate stocks, would be opened for pearling. All vessels heading for the Tuamotuan pearl trade were required to obtain advance permission from the administration. Minimal size restrictions, taxes, and fines were also announced (MT, 13 Feb. 1874).

The new regulations were justified as a conservation measure, designed to protect natural pearl oyster stocks from overexploitation (Porlier, 1929). However, like many colonial initiatives, the new measures actually tightened the grip of the colonial administration on Tuamotuan populations and their resources. In 1880, the protectorate became a territory, but it had already become so long before in all but name (Thompson and Adloff, 1971; Newbury, 1958). The native system of law and tenure was swept aside and replaced by French civil law, with important implications for lagoon rights in Tahiti and the neighboring archipelagoes. According to French law, all lakes and estuaries (interpreted to include lagoons) were legally "public domain", administered by the state (Code Civil, Article 538).

The close linkage between conservation measures and colonial hegemony is apparent in the report of Bouchon-Brandely, a noted French oyster biologist, who had come at the request of the French administration.
Bouchon-Brandely visited numerous atolls in the Tuamotus and concluded that even periodic lagoon closures would not be enough to restore the depleted stocks. Pearl oyster culture, using techniques for raising pearl oyster similar to those used for edible oysters in France, could help revive local stocks. Even at this early date, Bouchon-Brandely had suggested the possibility of black pearl culture. For this, however, French settlers would be necessary: "Industrious, active, and economical, the French oyster farmers are the people whose settlement in Tahiti would be beneficial for the colony" (JOEFO, 1885:223-24).

But European settlers were unlikely to come without assurances concerning lagoon tenure. Bouchon-Brandely argued, "Our public law proclaims that maritime domain belongs to the state, and is inalienable. Should the Tuamotu Archipelago, then, be placed in a unique situation (i.e., respect traditional rights)? If so, it will no longer be possible to navigate in the lagoons."

Bouchon-Brandely asserted that during his voyages in the Tuamotus, he had inquired of the inhabitants concerning their pretensions on lagoon rights. The people, he reported, told him that they did not claim to own their lagoons; they were only opposed to having French settlers come to their lagoons. He recommended that a law be
passed to resolve the question of lagoon rights and urged the immediate resettlement of French oyster farmers to the Tuamotus and the Gambier Islands (JOEFO, 1885:225).

Following Bouchon-Brandely's recommendations, a decree was drafted by the colonial administration. The decree specified that henceforth, contrary to indications from previous sources or agreements, Tuamotuan lagoons were to be considered public domain. Rules were also detailed for obtaining and maintaining lagoon concessions. These concessions were to be granted to European settlers, primarily in lagoons where natural stocks had become depleted, while productive lagoons were reserved for the continued exploitation of natural stocks. But the proposed decree, and the Bouchon-Brandely report on which it was based, was sharply criticized by the General Council, an elected council which represented outer island communities in Papeete.

The General Council charged that Bouchon-Brandely had reached erroneous conclusions due to his brief visit to the Tuamotus, his ignorance of the language, local customs, and geographic conditions, and his lack of adequate consultation with the indigenous inhabitants. The principal objection of the General Council was to the public domain law. Citing both oral and written Tuamotuan traditions, they argued that the lagoons have always been
claimed by the inhabitants of the atolls themselves. Lagoon concessions should therefore only be allocated through the express approval of the local district councils (CG, 1888:123-38; Wilmot, 1888). In response to their criticisms, some cosmetic changes were made in the proposed decree, but it was passed essentially as had been originally proposed, in the decree of 1890 (Porlier, 1929; Tetiarahi, 1990).

Following the decree of 1890, all lagoons in French Polynesia became public domain. Pearl diving was only permitted in the seasons authorized by the French governor. All French citizens had the right to participate in diving on any island or atoll of French Polynesia. Large sectors of the lagoon could be made available for pearl diving, pearl farming, or other purposes by non-residents (JOEFO, 22 Aug. 1890). Few French settlers arrived to begin pearl farming, in part because local ecological conditions were quite different from the river beds and coastal areas of France. But French and Chinese entrepreneurs from Tahiti soon began exploiting Tuamotuan mother-of-pearl shell, using methods which severely depleted natural stocks (Porlier, 1929).

Consequently, a stream of petitions was sent by Tuamotuan communities to the General Council demanding the retraction of the decree of 1890 and the prohibition of
the machine diving. The following petition, bearing over a thousand signatures (probably almost all the adults in the pearl oyster bearing atolls) is just one of numerous petitions that were addressed to the General Council during the early 1890s (CG, 1891:458):

We demand that our lagoons be left as our own property; that our old customs be respected, namely, that the inhabitants of the Tuamotus are owners of their lagoons, as the (missionary) law of 1842 confirms; and that diving machines should be suppressed. We also demand the abrogation of the decree dated May 31, 1890.

The General Council supported the Tuamotuan petitions, making the following arguments: The Tuamotuans were the owners of their own lagoons by virtue of traditional rights as well as colonial guarantees. The protectorate agreement guaranteed that local property rights (broadly interpreted to mean lagoons as well) would be maintained by the colonial government. The application of civil law could not take away these rights either prospectively or retrospectively. They also asked to ban diving machines because of the dangers of overexploitation. Unfortunately for the Tuamotuans, the governor (apparently in retribution) abolished Tuamotuan representation in the General Council in 1899. In 1903, the General Council was
abolished altogether, replaced by a non-elected and purely advisory body (Danielsson, 1983).

But Tuamotuans continued their complaints, repeating their claims to their lagoons, and charging that the governor had no right to license the diving teams, particularly when they endangered local stocks. In Manihi (1903) and later on in Hikueru (1929), scaphanders (underwater breathing apparatus) were confiscated and their owners were sent back to Tahiti. In both cases, the resistance leaders were seized by French gendarmes and imprisoned in Tahiti, and fines were levied on local populations because of the costs allegedly incurred by the machine divers. The local populations sent petitions to the governor explaining the reason for the confiscations, restating their traditional claims to lagoon rights, and repeating their opposition to the decree of 1890 (Porlier, 1929). By now, however, this was almost a lost cause (— ecological aspects of the problem are further explored in Chapter 6).

As the General Council had predicted, the French colonial attempt to open Tuamotuan lagoons to outsiders had dire long-term ecological and demographic implications. By 1952, due in large measure to the depredations of large-scale external entrepreneurs, pearl oyster stocks in most Tuamotuan lagoons had become near
extinct. Only four Tuamotuan lagoons (excluding Gambier and Marutea Sud continued to produce significant amounts of mother-of-pearl: Hikueru, Takaroa, Takapoto, and Takume. With their only resource gone, atoll populations from the Western Tuamotus, like those of other outer islands in French Polynesia, began to migrate to Papeete in large numbers, leading to depopulation and malaise on the outer islands and problems of overpopulation in Papeete (Connell, 1985).

Lagoon Tenure Under Territorial Administration

Colonial lagoon tenure policies were not modified under the Tahitian territorial administration, to which autonomy was increasingly devolved. As we have seen above (Chapter 4), in 1958--one week following Pouvenaa’s arrest--the Territorial Assembly, now controlled by demi politicians influenced by Western ideas and a desire for personal wealth and power, began a series of deliberations which consolidated territorial power over lagoon space (JOPF, 1958:655; 1963:362; 1971:513; 1978:1072). Authorizations for occupying lagoon space could be obtained through annual lease fees. The lagoon space previously expropriated as public domain was simply transferred to the Tahitian administration. In theory, anybody could apply for these concessions; but the rules
favored those who could afford the fees. It is doubtful if these measures could have passed easily had Pouvenaa remained in power.

But government control over lagoons did not remain unchallenged. Numerous individuals in Tahiti and the outer archipelagoes possessed ancestral deeds to reef and lagoons space that were awarded over a century ago. In 1978, the Fuller family in Tahiti brought a lawsuit against the territory for construction work on reefs that were claimed by their ancestors in 1862 and recognized by the colonial government at the time. However, the Territorial Department of Domain and Registration (SDE) argued that private claims to lagoons had not existed in the traditional land tenure system; the claims had not been validated at any subsequent point; and in any case, the lagoons had been retroactively made public after the institution of French civil law in 1866. Surprisingly (to the SDE), the Papeete Court of Justice supported the Fuller claims (Tetiarahi, 1990).

The court ruled that (1) early historical accounts of Tahiti indicate that territory was claimed by the indigenous residents and could not be expropriated by the rulers except in time of war; (2) the meticulous preservation of family genealogies demonstrated the reality of these claims; (3) traditional claims to both
land and lagoons were legally recognized as constituting private property (and not merely use rights) and guaranteed under the act of annexation and the Pomare laws of 1842; (4) civil law (making lagoon waters public domain) did not apply retrospectively, even in France; (5) these property rights remained valid whether or not the lagoon was exploited by the family in intervening decades; and (6) the fact that subsequent survey documents which did not mention the lagoon did not invalidate the original titles even if the survey was signed by family members (Tetiarahi, 1990).

However, the SDE appealed the ruling, and it was subsequently decided by the Court of Appeals that the disputed lagoon space was public domain (and not the Fullers'); the surveys and acts of sales subsequent to 1868 only referred to the land claim and did not mention any adjacent lagoon claims. But in 1982, following a counterappeal by the Fuller family to the Supreme Court, the ruling was reversed in the family's favor, on the grounds that subsequent transactions which failed to mention the lagoon space did not invalidate the original claim and its transferability. The SDE filed numerous counterappeals, armed by battalions of well trained lawyers, but after a long legal battle, the Fuller family
was definitively recognized as owners of their ancestral lagoon (DT, 7 Nov. 1991).

Although the Tuamotuans had been in the forefront of the battle for lagoon rights in the late 19th century, they did not become involved in the above dispute. In the 1970s, the decade in which the Fuller case began, the mother-of-pearl industry was virtually extinct and the pearl culture industry had barely begun. At the time, neither the Tuamotuans nor administrative fisheries experts could have predicted that, within a decade, cultured pearls would become the primary export of French Polynesia. But the economic potential of the new industry was recognized even then and, having now been given the power over public domain, the territorial administration, which had put a considerable amount of effort into the development of the industry, did not want this source of income to slip through their hands.

By 1980, the potential of the industry had become recognized by the Tuamotuans themselves, and numerous applications for pearl culture concessions began to arrive in the offices of the SMA in Papeete. Applicants for lagoon concessions were asked to specify the area, location, and type of use desired. They were also asked to provide a valid birth certificate, a projected blueprint of their pearl farm, a survey of the adjacent
land, a residence certificate, and a signed approval by the mayor. If approved, a concession was granted for nine years. However, applicants were advised that the administration would not be held responsible for disputes between local residents. They were also warned against any transfer or subleasing of the concession to other parties without the explicit approval of the government (JOPF, 15 Dec. 1970:667).

Although the requirements for obtaining lagoon concessions might appear to be quite strict, approval was generally easily obtained, providing that the applicant could pay the fees. The applicant was normally required to be a local resident, have obtained the mayor’s approval and demonstrate rights to an adjacent land parcel, but in their desire to promote the industry--at least in the early stages--the administration did not investigate each application in detail. The residence requirement was never defined precisely and external entrepreneurs were awarded pearl farming concessions on Takaroa, Manihi, and other Tuamotuan atolls even though they lived primarily in Tahiti and visited the atolls only occasionally, leaving their workers in charge of operations.
Lagoon Allocation on Takaroa: Trends

When the first lagoon concessions were officially allocated (1981), pearl farming was still experimental. At the time, there was only one cooperative and a handful of private pearl farmers on Takaroa. In 1982-83, a series of hurricanes hit French Polynesia, destroying much of the pearl industry infrastructure, and no further concessions were authorized. However, the debris deposited by the hurricanes into the lagoons provided a substrate (and probably nutrients) which had an invigorating influence on spat collection, providing an incentive for return migration, which is reflected in the number of concessions allocated (Table 5.1).

The oyster mortality which hit Takapoto, Manihi, and other atolls, did not have a marked impact on Takaroa, but it led to an administrative investigation of pearl farming practices on a number of atolls. The 1987 SMA lagoon survey on Takaroa indicated that the number of oysters being farmed might be approaching the ecological capacity of the lagoon (see Chapter 6). Despite unsolved questions on how precisely to calculate the maximal capacity of the lagoons—a problem which has caused heated, mutual recriminations between government regulatory and scientific agencies—the survey recommended "prudence if not a complete halt in the authorization of new
Table 5.1. Annual Concessions, Takaroa, 1981-90

A. Spat Collection

<table>
<thead>
<tr>
<th>Yr.</th>
<th>Oldtimers</th>
<th>Returnees</th>
<th>Aliens</th>
<th>Total</th>
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<td>#</td>
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</tr>
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<td>4</td>
<td>900</td>
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<td>150</td>
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<td>0</td>
<td>2</td>
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<tr>
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<td>6</td>
<td>7</td>
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<td>T.</td>
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<td>9400</td>
<td>69</td>
<td>34264</td>
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B. Pearl Culture

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<th>Returnees</th>
<th>Aliens</th>
<th>Total</th>
</tr>
</thead>
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<td>T.</td>
<td>18</td>
<td>11100</td>
<td>61</td>
<td>536044</td>
</tr>
</tbody>
</table>

Note: aNumber of Concessions  bSquare Meters

Source: SDE, JOPF, CATG
concessions" (Hauti, 1987). This is reflected by a decline in authorizations in 1988-1990, a trend which is visible on the other atolls in which the survey recommended prudence.

There are distinctive trends in terms of the area allocated. For spat collection, the total area of allocated lagoon space declined (less than 5,000 square meters during 1988-90), reflecting a decrease in the number of concessions (a total of 29, compared to 59 in the prior three year period) as well as the area allocated per individual (an average of 150 square meters compared to well over 200 in the preceding years). For the majority of the decade, spat collection, an industry which requires relatively minimal capital investment, was reserved almost exclusively for the indigenous islanders. In 1990, there is evidence of a shift in policy. For the first time, there are numerous concessions allocated to non-indigenous applicants as well. In all this time, less area was allocated for spat collection than for pearl culture.

For pearl culture, the total area of lagoon space allocated increased sharply (almost 300,000 square meters were allocated during the three year period). To some extent, this was due to an increase in the average size of concessions to all recipients (1000 square meters and
above), an effort to decrease density and improve survival rates. But it also reflected enormous concessions (relative to the others) given to a few alien entrepreneurs. One pearl farmer (PF16 and PF24, Map 5.2) received a concession of 20 hectares (200,000 square meters) in 1988, while another (PF32) received four hectares in 1989, and 20 hectares in 1990. Apparently, the administration felt that it was necessary to limit spat collection, but not pearl culture.

Why has there been a differential allocation of lagoon space to spat collection and pearl culture? In part, this is attributable to the need for balancing supply (of seed oysters) and demand (pearl farmers). Spat collection is produced exclusively for purposes of pearl culture and there is no point in delivering concessions for more spat collection than can possibly be utilized by existing pearl farmers. On the demand side, at least 1.3 million oysters were needed in 1990 (a year for which survey data are available). This is based on an estimated 400,000 oysters needed for grafting on Takaroa (based on my own survey) and 922,000 oysters for transfer to neighboring atolls (data from SMA). On the supply side, an estimated 5.2 million oysters were produced on Takaroa in 1990 (see Chapter 6). Consequently, there is concern about oversupply.
But the most important administrative concerns relate to lagoon surcharge and oyster mortality. Intes (1990) has suggested that, for each lagoon, there is a maximal capacity of how many oysters can be introduced, determined by the amount of available phytoplankton. Spat collection presents a substantial strain on available nutrition due to the rapid growth of juveniles and the enormous numbers of oysters being raised (many of which is sold to other atolls). In contrast, pearl culture involves mature, slow growing oysters, and much fewer oysters (it is the capital and labor-intensive phase of the industry). But pearl culture poses its own risks, due to contamination during grafting, potentially facilitating epidemics (see Chapter 6).

A policy which favors an expansion of pearl culture and restraints on spat collection has important social implications for Tuamotuan communities. Spat collection requires a relatively minimal investment (Chapter 2). A station of 200 meters typically costs less than 100,000 CFP (approximately $US 1,000); considerably less if manufactured from local materials. If this station is optimally located, it can potentially produce 10,000 oysters, which can be sold for one million CFP. This is a phase of the industry which is attractive to the islanders because it is affordable. It is less attractive to
investors because of the uncertainty of both yields and market. Until recently, spat collection was deliberately preserved for the islanders to maintain a kind of balance and mutualism between themselves and outside entrepreneurs.

In contrast, pearl culture requires, among other expenses, the services of skilled grafters, costing as much as 40,000 CFP/day (for grafting 200 oysters). This kind of investment is prohibitive for most islanders because they do not have the capital or the necessary credit. Most islanders are also not interested in this kind of investment, preferring to work on an artisanal basis, on operations that can be undertaken with family workers alone. But pearl culture is attractive to external entrepreneurs who are willing and capable of investing all the needed capital and skilled labor. At a 25 percent success rate, a day's work would produce 50 pearls which could be sold for 500,000 CFP, a yield which is highly profitable and represents a reasonably secure return on the initial investment.

Lagoon Allocation on Takaroa: Spatial Distribution

Of the pearl farms existing on Takaroa in 1991—only 15 of which had existed in 1987—30 had been established by return migrants, 12 by oldtimers, and 10 by aliens.
Although there appear to be 54 pearl farms numbered on map 5.1, there are actually only 52 pearl farms, as PF16 and PF24 are parts of a single enterprise; similarly with PF26 and PF7. Of these, only 41 pearl farms had been officially authorized by the government in 1991, at the time of a survey by SMA. The alien pearl farmers occupy a disproportionately large area of the lagoon surface and they have also received the lion’s share of lagoon concessions. In all categories the occupied area of lagoon surface is many times larger than the authorized area (Table 5.2; Maps 5.1, 5.2).

<table>
<thead>
<tr>
<th></th>
<th># Farms</th>
<th>Area (Ha.)</th>
<th>#Authorized</th>
<th>Area (Ha.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oldtimers</td>
<td>12 (23.1%)</td>
<td>34.6 (10.0)</td>
<td>10 (24.4%)</td>
<td>1.2 (2.5)</td>
</tr>
<tr>
<td>Returnees</td>
<td>30 (57.7%)</td>
<td>155.5 (45.1)</td>
<td>24 (58.5%)</td>
<td>4.3 (4.9)</td>
</tr>
<tr>
<td>Aliens</td>
<td>10 (19.2%)</td>
<td>154.6 (44.9)</td>
<td>7 (17.1%)</td>
<td>41.4 (87.7)</td>
</tr>
<tr>
<td>Total</td>
<td>52</td>
<td>344.7</td>
<td>41</td>
<td>47.2</td>
</tr>
</tbody>
</table>

Source: Based (in part) on data from SMA, SDE, JOPF

The low authorized/occupied ratio of pearl farming area is related to several factors. Firstly, beginners almost always get established before they receive their authorization. The authorization process is lengthy and can take years and few are willing to wait until all the papers have been finalized (birth certificates, land titles, mayor’s approval, notarized genealogies, and
Map 5.1. PEARL FARMING

OCCUPIED AREA

TAKARA

14 30' 36" S
144 59' 44" W
Map 5.2. PEARL FARMING

AUTHORIZED AREA
EA

Authorized Area
~ .01 HECTARE
~ 20 HECTARES

PEARL FARMS
 OLDTIMERS
 RETURN MIGRANTS
 ALIENS
administrative inefficiency and delays). Moreover, the successful establishment of a pearl farm is usually taken by the administration to be a powerful proof that an applicant is worthy of the authorization. Finally, many pearl farmers are simply not willing or not able to pay the fees required for the necessary lagoon surface.

The above data may appear to indicate that only a small amount of the lagoon surface (8,400 hectares) has been occupied by the pearl farms. This is true. However, virtually all of the central lagoon area is generally reserved for spat collection, so there is actually considerably less area available for the pearl farms; specifically, the area immediately adjacent to the shoreline (Map 3.5). Some of the first established pearl farms were located on patch reefs in the center of the lagoon, within a short distance by sea from the village islet. However, these farms are disadvantageously situated. Farmers must commute everyday (there are buildings on the reefs but they are rarely sites of residence), whereas on the outer islets, one can live and work on location. Moreover, during storm and hurricanes, it is far better for the farm to be situated closer to land.

It is therefore relevant to measure the length of shoreline occupied by the pearl farms of the various
categories. In Table 5.3, the pearl farm widths (the side parallel to the shoreline) are compared with the length of the shoreline. Over ten kilometers of shoreline is occupied (about a third of the total shoreline suitable for pearl farming). The oldtimers occupy relatively little shoreline since half of their farms are located on patch reefs, without relation to shoreline at all (see Figure 2.13; Map 3.6). The pearl farms of the return migrants extend across half of all the adjacent shoreline length, just as they occupy the majority of the lagoon area (compare with Table 5.2).

Table 5.3. Pearl Farm Widths

<table>
<thead>
<tr>
<th>#Farms</th>
<th>Pearl Farm Width</th>
<th>Total Suitable Shoreline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oldtimers</td>
<td>12</td>
<td>1,225 (12.0%)</td>
</tr>
<tr>
<td>Returnees</td>
<td>30</td>
<td>5,350 (52.2%)</td>
</tr>
<tr>
<td>Aliens</td>
<td>10</td>
<td>3,675 (35.9%)</td>
</tr>
<tr>
<td>Total</td>
<td>52</td>
<td>10,240</td>
</tr>
</tbody>
</table>

Note aMeters

Source Based (in part) on data from SDE, SMA

Unlike pearl farms, which can be compared in terms of area or occupation of shoreline length, spat collection is situated in the center of the lagoon, is comprised of scattered lines, and cannot be neatly circumscribed by areal boundaries (see Map 3.5). The spat collection
stations cannot be considered farms at all; they are simply emplacements set at locations that are thought to be propitious for spat collection. Spat collection lines are rarely maintained in the same location on a permanent basis. However, spat collection may be compared on the basis of length (Table 5.4). Note that the data which follow include the spat collection of 34 individuals; there were additional spat collectors posed in the lagoon whose proprietorship could not be identified by me and were could be included in the analysis.

Table 5.4. Spat Collection Length

<table>
<thead>
<tr>
<th># Farmers</th>
<th>Occupied Length a</th>
<th>Authorized Length a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oldtimers 7</td>
<td>24,700 (22.9%)</td>
<td>6,250 (48.1)</td>
</tr>
<tr>
<td>Returnees 22</td>
<td>67,200 (62.4)</td>
<td>6,000 (46.2)</td>
</tr>
<tr>
<td>Aliens 5</td>
<td>15,800 (14.7)</td>
<td>750 (5.8)</td>
</tr>
<tr>
<td>Total 34 b</td>
<td>107,700</td>
<td>13,000</td>
</tr>
</tbody>
</table>

Note  

a Meters  
b Only some of the farmers could be identified  

Source  Based (in part) on data from SMA, SDE

This is only a sample survey, based on the set of spat collectors who are also pearl farmers. The data include over half of all spat collection stations, but only a third of all farmers engaged in spat collection. My own data, obtained from longitudinal questionnaire responses (Table 3.16), indicates that the proportionate involvement
in spat collection by each demographic category in the entire population is similar to that of the above sample. As in the previous comparisons, the actual utilization of lagoon space exceeds by several times the authorized concessions. Over 60% of the spat collectors have been deployed by the return migrants; while the aliens are only marginally involved.

Forms of Resistance

Traditional tenure regimes have been radically altered under the successive colonial and territorial administrations, but there is an important difference in the way land and lagoon tenure affected the Tuamotuan populations. In land tenure, the individualization of property claims, the erosion of collective collective control, and the possibility of sales all conspired--consciously or unconsciously--to promote alienation, but indigenous control of the land was not radically diminished by the new laws. In lagoon tenure, rights that had been claimed by the Tuamotuans had now been expropriated in a single legislative blow (the public domain decree). Tuamotuans could no longer decide the fate of (what had previously been) their lagoons; it was now subject to the arbitrary decisions of a distant administration.
To the uninformed observer, it might appear that the Tuamotuan populations have accepted the expropriation of their lagoons, as indigenous and alien pearl farmers alike generally apply for lagoon concessions by the Tahitian administration. As with land tenure, however, Tuamotuan populations have not let external manipulation of their own resources go unchallenged. Assertion of traditional lagoon tenure is present, but it is often manifested as quiet or everyday resistance rather than as open defiance. Due to the power asymmetry between the Tahitian administration and the miniscule atoll populations, this may be the only logical avenue open to them. At times, however, the Tuamotuans have responded by openly and defiantly resisting the dispossession of their lagoons. The various forms of resistance are described individually below.

Unauthorized Exploitation

Indigenous pearl farmers and spat collectors often lay down their cables, deploy their stations, and set up their grafting and collecting operations at the location and time of their preference, without bothering to apply for an official lagoon concession. Almost as an afterthought, they apply for the required concession to "regularize" their pearl farms. Most do not pay the required
concession fees and some do not even bother to apply for
concessions altogether. Interestingly, local farmers are
not penalized for pearl farming without concession;
instead, the existing pearl farm often serves to reenforce
the demand for a concession. However, this is primarily a
reflection of the several hundred kilometer distance from
Tahiti and related difficulties of enforcement, and not a
sign that indigenous lagoon rights are recognized by the
administration.

Alien pearl farmers also sometimes deploy cables and
spat collectors without prior authorization by the
administration. However, this is generally effected by
pre-agreement of the local landholders from whom they have
purchased, leased, or been allowed, and the approval of
the local mayor is also required. Local objection to the
activities of alien—less often indigenous—pearl farmers
is usually less over unauthorized farming and more over
the fact that the aliens may not have been able to secure
the consent of relatives, neighbors, and the rest of the
community; and in some occasions, objections are raised
due to the fact that the activities of these farmers are
at variance with the initial agreements, as we shall see
later on.
Regulative Violations

Due to concerns over adverse ecological implications, as well as undue competition between farmers, the administration has put a quota on the number of spat collection lines that may be deployed. Until 1991, only three stations of 50 meters apiece were authorized for most applicants (a total length of 150 meters). As we shall see, however, these quotas are generally ignored, particularly by the indigenous pearl farmers, who do the majority of the spat collection. The majority of the indigenous pearl farmers have spat collection lines that run several times longer than the specified distance. This is highly uncharacteristic behavior for a population which is normally abiding of government law and is further evidence of the reassertion of traditional lagoon tenure rights.

Similarly, limited areas are specified for each pearl culture concession, most of which are less than a hectare (10,000 meters) in total extent. The area is calculated by the surface occupied by underwater platforms, and for floating lines, by the boundary formed by the junction of extreme points. However, these areas, too, are routinely exceeded. The occupied areas are much larger than the authorized concession. Alien pearl farms are proportionately less in excess than the islanders, but
considering the larger extent of their farms, even small excesses occupy a large absolute area and are quick to arouse the ire of their neighbors. This is so especially when an islander’s lagoon space becomes blocked or occupied by an alien pearl farm—whether or not a pearl farm has actually been established by the islander.

Elusive Locations

Location provides further illustration of local initiatives in lagoon tenure. When people turn in applications for concessions, it is they, rather than the administration, that prepare a map of the desired concession limits. The applications are generally accompanied by a survey map of the adjacent land (a government survey having been carried out from 1956-1962), but the maps of the desired lagoon areas are roughly sketched, without any scale or locational coordinates. The applications may indicate how far the concession will be placed from land, what method of pearl farming will be utilized, and how platforms or floating lines will be arranged, but they rarely specify the geographic coordinates of the requested concessions.

During the greater part of the past decade, the administration—anxious to encourage pearl farming and unwilling to require costly individual surveys by
professionals--has accepted local concession proposals, providing that no specific objections are found by reviewing agencies of the territorial government. Objections might occur because of "too much" area requested, non-residence, lack of mayor's approval, inadequate preparation of oysters or work site, too close to another concession, disputed ownership of the adjacent land, concession already granted to other family members, unapproved foreign investment (such as from Japan), and applicant "too old".

When the government allocates a lagoon concession, it announces this in the official journal, but it does not provide a map or geographical coordinates of the authorized concessions. It simply announces the grant of a concession X meters from Y land and does not include any delineation of the geometric shape of the concession or its polar orientation. Moreover, the land parcels (and sometimes reefs) being used as reference points lack specificity. There are often many land parcels (the result of past divisions) with exactly the same name and even when the particular land parcel is precisely identified (by reference to a previous government survey), the concession does not specify which point on the land (which may be several hundred meters in both width and
length) should serve as the geographic reference point for the lagoon concession.

Due to this inherent imprecision, it becomes very difficult for the Tahitian administration, situated several hundred miles away from the atolls, to monitor the extent to which pearl farming conforms with administrative guidelines. To deal with this problem, the administration has initiated periodic surveys of pearl farming on a number of atolls. Even these surveys can be circumvented by completely evading the survey; understating the area actually being farmed; disguising the real ownership of surveyed farms (e.g., farm X belongs to Y, but Y does not have an authorized concession, so Z, who does have a concession, is said to be the proprietor); moving or removing the lines at the time of the survey; and giving misleading information as to the use of specific cables (e.g., a line actually used for grafted oysters is said to be used for spat collection if grafting has not been authorized).

Deadly Words

One of the most ubiquitous ways in which everyday resistance is manifested—in Takaroa as well as in many other parts of the world—is in the form of conversation and gossip. I first became aware of the significance of
this form of resistance after a visit to one of the alien pearl farmers. I had been invited to his house on one of the far islets and he was trying to explain why he tended to avoid the village. "Talk," he said enigmatically, shaking his head from side to side. At the time, the meaning of his words eluded me. But after some time, it became clear. It was not only what the villagers (as well as the islanders resident on the outer islets) said about the presence of unwanted aliens; it was the tone and the sidelong glances which indicated feelings of unwelcome.

These were all ways of expressing feelings that could not be fully voiced, due to the islanders' feelings concerning appropriate speech to one's neighbors--welcome or not--as well as the natural reticence of persons situated in positions of marginal power vis-a-vis the powerful and well connected (to the administration in Tahiti). Talk might not be able to eject somebody from the atoll, but it might well be an effective way to prevent a farmer from expansion and encroaching on a neighbor's shoreline. Moreover, from the point of view of the islanders themselves, words had power. In Tuamotuan tradition, spoken curses were greatly feared (just as praise and blessings were highly valued), and are still thought to be capable of causing poverty, illness, and even death.
Pilfering and Arson

Pilfering, poaching, and arson are also ubiquitous means of everyday resistance throughout the world, often as an expression of the continued assertion of use rights in territory which has been unduly expropriated. However, they can be easily mistaken for natural losses and are sometimes conveniently overlooked by governments and other intruders (Scott, 1990). On Takaroa, many of the alien pearl farmers had experienced oyster losses, suspected (by the aliens as well as some islanders) to be due to theft, of which local antagonism may have been an important motivating or legitimating component. However, these charges were almost impossible to prove and were undistinguishable from naturally occurring losses such as the sinking of heavy oyster cables or the loss of oysters during stormy weather.

Negotiation

Dispossession can also be resisted quietly through negotiations. At present, the islanders receive no direct benefit when an alien occupies a sizeable portion of the lagoon for his own profit. However, since the approval of the vice-mayor is normally required for obtaining a lagoon concessions or periodic extensions and expansion, continued local goodwill can be an important bargaining
tool. Islanders may be persuaded to approve applications for lagoon concessions. They may even be willing to sign a petition of support for an external applicant in exchange for return benefits to the community such as guaranteed oyster purchases, contributions of labor, expertise, leases of land, cash to social or religious causes, or even direct payments.

Many islanders are practiced and even formidable masters of negotiative techniques because of their previous life experience. Firstly, the Tuamotuans are heirs to the well developed rhetorical skills of the Polynesian culture, of which preserved myths, history, rituals, and songs are cogent evidence. Moreover, islanders--atoll dwellers in particular--are experienced in the delicate art of neighborly coexistence within a small and closed space, in which daily peace is preserved largely through tacit negotiations and understandings. Due to their limited resources, minute populations, and isolation, islanders are usually quite powerless relative to external forces, and negotiation can be a more useful tool than outright resistance.

**Petitions**

Written petitions illustrate how islanders have utilized Western political processes in attempting to
defend their traditional territorial rights. Tuamotuan petitions dating back as far as the mid-19th century have protested against the rapacious, exploitation of their lagoons by external economic and political interests. This mode of asserting traditional lagoon rights has resurfaced as Tuamotuan lagoons again become coveted by outsiders, due to the developing black pearl culture industry. On Takaroa, a variety of demands have been made via petitions, including the preservation of lagoon space for islanders, the expulsion of aliens, and devolution of the power of approving concession applications from the mayor to the island council.

The similarity of the petitions from the mother-of-pearl industry and the pearl farming industry suggests that there is a continuity in Tuamotuan territorial and political grievances that belies the counterclaims of colonial and territorial administrations. The petitions have usually been summarily shelved by successive governments, arguing that the claims did not truly represent the will of the relatively unsophisticated atoll populations, having been written, misleadingly translated, or at least inspired by Tahitian politicians seeking to curry favor with their constituencies. It is true that politicians often use local rights as a component of their electoral platforms,
but use or misuse of these claims by outsiders hardly proves that these attitudes are not held by indigenous populations themselves.

Confiscations and Expulsions

Atoll populations have also used more defiant forms of resistance, the most important of which include confiscations and expulsion. There are many accounts of European pearling ships that were seized and gutted by the atoll inhabitants in the early 19th century (some are cited in Chapter 6). The attacked crews barely escaped with their lives. These incidents became increasingly rare following incursions by Tahiti and the French colonial administration, but lesser forms of confiscation continued. However, unauthorized ships entering the lagoon of Manihi were seized as late as 1905; and in the 1930s, underwater breathing apparatus, generators, and other goods were confiscated on Hikueru in an attempt to prevent the overexploitation of natural stocks, forcing the French administration to reconsider its policy on diving regulations.

These defiant forms of resistance continue to play an important role in the pearl farming industry. On Takaroa, there have been repeated episodes of confiscation of cargoes of pearl farming equipment sent to alien
entrepreneurs, whether or not they had been authorized by the Tahitian administration (see Chapter 8). As in the 1930s, this cargo was not damaged or appropriated, but held in the community storehouse until such period that indigenous demands were fulfilled. But expulsions are a different matter. During the mother-of-pearl industry, external divers and entrepreneurs only came on a seasonal basis and could be summarily shipped out. In the pearl farming industry, however, alien entrepreneurs have built houses, set up permanent habitation, and raised children on the atoll. Consequently, even the most objectionable entrepreneurs have not yet been ejected from the atolls.

Organization

Unlike everyday forms of resistance which can pass undetected or unproved, defiant resistance presents a serious provocation for the dominant authorities and hence requires careful planning and organization. Where supported by local leaders or chiefs, resistance can be well organized and the administration can ill afford to altogether ignore the will of a community’s official recognized representatives. In the mother-of-pearl industry as well as the pearl farming industry, island chiefs and mayors have, at times, played a prominent role in negotiations as well as confiscations and expulsions.
But the leaders have sometimes opposed the resistance, fearing administrative retaliation, co-opted by various material incentives or even ideologically supportive of the need for external investment.

In this situation, an emerging resistance movement may find itself in opposition with external political and economic interests as well as local authorities, and an autonomous organization may form. Supported by a substantial portion of the population, these organizations, called "committees of defense" or "associations of protection", appeared during the period of the mother-of-pearl industry as well as today solely for the purpose of defending local lagoon space from external exploitation. These organizations have repeatedly been declared illegal by the political authorities due to their espousal and promotion of "revolutionary", "unlawful", and counter-productive activities and the leaders have been jailed, fined, and deported to Tahiti (see Chapter 7).

**Why Lagoon Protest is More Defiant**

If the protest against lagoon alienation was more open and more strident than in the case of land alienation, it is because the provocation was far greater. The black pearl oyster stocks have long been recognized as the most
important natural resource—perhaps the sole valuable resource—of the isolated, impoverished atolls. Expropriating these stocks in a single legislative blow—contrary to centuries of native use rights, previous agreements, and the explicit objections of current populations was an unwarranted provocation which could not be taken lightly. Consequently, defiant protests were repeatedly voiced by atoll communities. However, these protests rarely lasted for very long, due to intervention by the administrative forces of law and order, claiming to be the guardians of the public domain.

What the administration did not recognize (or did not wish to recognize) is that even in the long quiet intervals between episodes of defiant protest, traditional rights were not forgotten by local populations. Dissatisfaction was continually expressed through everyday resistance in what superficially appeared to be natural losses, theft, or thoughtless sabotage. Like the forests and the open sea, lagoons are notoriously difficult places to protect but they are equally difficult for an external authority to effectively police. It may well be through the heavy political and social costs paid during the lengthy campaign of undeclared but unremitting everyday resistance—rather than the sporadic formal confrontations—by islanders that the Tuamotuan lagoons
are ultimately returned by the Tahitian administration to their rightful owners.

The importance of defiant protest, therefore, may lie less in the unrealistic expectation (considering the balance of power involved) that a single episode of strident resistance at the village quai will instantly accomplish the liberation of the lagoons and more in terms of the "hidden transcripts" which emerge, as discussed by Scott (1990), and as we shall see below in the case of the Takaroa resistance movement. Voiced at crucial moments, defiant protest—whether successful or not—permits the necessary periodic reassertion of claimed traditional rights, without which everyday resistance would be left without ideological support, easily degenerating into pointless pilfering, sabotage, unrestricted competition, and resource degradation.
CHAPTER 6
ECOLOGICAL PERTURBATION

Antipathy between Tuamotuan populations and outsiders is not only generated by questions of tenure, its interpretation, and distribution. Even stronger passions have been inflamed when pearl oyster stocks were rapaciously overexploited. Protests against external entrepreneurs and administrations rose dramatically when the survival of pearl oyster stocks was threatened. In most atolls, the black pearl oyster has become much less abundant than in the 19th century. In some atolls the pearl oyster has already become endangered or extinct. Today, shell diving exists no longer, replaced by the more lucrative pearl farming industry. Natural stocks are protected in order to provide larva for seed oysters, but it is not yet certain whether and how spat collection or pearl farming may themselves be responsible for ecological perturbation.

We shall see in this chapter that ecological concerns have been rekindled due to epidemic oyster mortality in Takapoto and other heavily farmed atolls in the Western Tuamotus. The Tahitian administration, supported by one line of scientific thought, claims that mortality is caused by malnutrition, arising primarily because of
extensive spat collection. However, an infectious etiology has not yet been ruled out. The simultaneous occurrence of the epidemic in various atolls of differing pearl farming densities, all of which import oysters from Takapoto, suggests that a biological pathogen, may have been involved. If so, the grafting procedure, which involves greater farming densities and a highly unsterile, invasive manipulation of live oysters, may implicate pearl farming (rather than spat collection) as the cause of disease.

It will be argued that the question of etiology is important in determining who is responsible for the oyster mortality and what kind of pearl farming needs to be restricted. If the problem is due to malnutrition and total numbers of oysters, it may well be the islanders that pose the greatest danger to the lagoon ecosystem. If disease is due to contagion, farm sizes which reach a critical epidemiological threshold may be more significant. Surveys on Takaroa show markedly declining oyster survival rates in recent years, a time pearl farming was dramatically increasing. At present, the majority of juvenile oysters (80 percent) as well as mature oysters (60 percent) are farmed by the indigenous islanders themselves. However, it is the alien
entrepreneurs who run the largest pearl farms and may pose the greatest risk of propagating epidemics.

Traditional Significance

In islands as small and isolated as coral atolls, the dependence of resident populations on the natural environment is evident. This was especially so prior to European contact, when the islanders relied on their own resources for food, shelter, and all other needs. In many atolls, even coconut trees were scarce, apparently due to inter-island wars and the resulting devastation. Breadfruit was not present at all. Dogs were often present, but chickens and pigs were absent from many areas at the time of European contact (Danielsson, 1955). Taro was formerly planted on most atolls. It involved considerable labor, grown in pits dug to the fresh water lens with an enormous expenditure of manual labor, and the fruits (of this labor) were meager and small. Consequently, the islanders turned to their bountiful lagoons, reefs, and nearshore waters for a major part of their daily sustenance requirements.

From the offshore waters, the islanders harvested tuna, wahoo (kingfish), and turtles. From the reefs and lagoons, they harvested *Tridacna* clams, pearl oysters, octopus, and abundant fish species. Marine resources were
harvested with various implements, including hooks, spear, nets, and even catching by hand. Skilled fishermen were intimately acquainted with the locations, movements, and habits of each species. They had a detailed understanding of the relationship of various marine species with the season and phases of the moon. The islanders also built stone traps near the passes and channels, constructed in the form of funnel-like mazes to trap the fish on their way to and from their periodic migrations. These traps also served as fish ponds, providing storage for occasions when fishing was unproductive or impossible (Emory, 1975; Ravault, 1979).

Mollusc species were of special importance to many atoll populations due to the relative ease with which they could be harvested, at least when they were abundant. In the small, shallow lagoons of the Eastern Tuamotus, the Tridacna clam is exceptionally abundant and has always served as a primary source of food, particularly during times of famine and bad weather. Thick banks of Tridacna still line the shorelines of atolls such as Vairaatea and Napuka, and immense mounds of shell dot the lagoons, forming little islets in the lagoon nearshore. These mounds are considered 'ohipa tupuna (the work of the ancestors) and are regarded as sacred sites by contemporary populations. Even today, Tridacna
clams--eaten raw or cooked--contribute an important and valued component to the daily meals of populations in the Eastern sector of the Tuamotus.

In the mid-sized, deeper lagoons of the Western sector of the Archipelago, it is the black pearl oyster--rather than the Tridacna clam--that is abundant and highly valued by resident populations. But the value is not due to any direct contribution to the diet. The flesh of the pearl oyster is occasionally eaten, but it is much smaller than that of tridacna, and it is not a diet staple. The pearl oyster is highly valued because of its iridescent mother-of-pearl shell and because of the occasional brilliant pearls that are naturally created in response to irritants caught in the interior of the oysters. The shell and probably the pearls as well were traditionally used as ornamentation by warriors and chiefs. The shell was also used as a first-class material for fashioning tuna hooks, which--apparently as attractive to tuna as they are to humans--served simultaneously as excellent lures (Emory, 1975; Herve, 1933, 1934).

Pearl oyster stocks became even more valued in the mid-19th century when mother-of-pearl shell became an important item of commerce. Shell diving was hard work and could be dangerous but it was highly profitable, particularly if pearls were found. Along with copra,
shell diving soon became the mainstay of the economy on most atolls in the Western and Central Tuamotus. The labor-intensive and marginally productive taro pits were abandoned and the populations soon became dependent on imports for the majority of their food and daily requirements. However, a new problem soon arose. Within a few decades, the lagoons would become subject to a frenzy of exploitation by outsiders, mirroring that of phosphates and sandalwood on other islands. The account which follows shows how successive administrative interventions have failed to prevent overexploitation, with devastating implications for natural stocks, possibly foreshadowing a similar sequence of events in today’s pearl farming industry.

The Mother-of-Pearl Industry

As early as the 18th century, the possibility of exploiting pearl oyster stocks had struck the minds of navigators. Passing through the northwestern Tuamotus, Roggewein noted the abundance of pearl oyster shells and suggested that a profitable industry could be established (Behrens, 1739). By the early 19th century, a successful industry had indeed been established. Although natural pearls were occasionally found, the mother-of-pearl shell was the main item of commerce, used primarily in the
button industry. However, the flagrant pillaging of Tuamotuan lagoons quickly aroused resentment among the inhabitants. In 1802, when the Margaret—attempting a pearling expedition—wrecked on Apataki, the crew was attacked and barely escaped with their lives (Turnbull, 1813).

Ships continued to be attacked by local populations (Beechey, 1831; FitzRoy, 1839; Moerenhout, 1837) until the 1840s, when the French gained supremacy over much of the archipelago. But the pacification of the Tuamotus, combined with spiralling prices of mother-of-pearl, led to a shell rush and stimulated other forms of trading (Newbury, 1980). Merchants would descend on an atoll with teams of 30 or more divers and virtually eradicate all the pearl oysters from the accessible patch reefs. By this time, local populations were becoming increasingly dependent on imports and sometimes willingly collaborated. By 1868, oyster stocks had become endangered throughout the archipelago, and the colonial government in Tahiti began to initiate regulatory measures.

In 1868, Anaa was closed to diving for three years. In 1873, the prohibitions were applied to five other atolls and to the specified shell beds of ten more. In 1874, the administration decreed that all atolls would
be classified into three categories: those where diving is prohibited, restricted, or freely allowed. Each atoll would be reclassified annually, depending on the state of local stocks. A minimum marketable shell weight was set; pearling expeditions required French authorization; a duty was levied on exported shells; and fines were announced. However, the fine of 50-60 francs was a poor deterrent and it is uncertain if the legislation was ever strictly enforced. The pearl industry was one of the few valuable local resources and French attempts to regulate diving were frequently overridden by economic interests (MT, 13 Feb. 1874:29-30).

In 1875, to facilitate the exploitation of stocks, the first license was granted for the use of scaphanders (pre-SCUBA underwater breathing apparatus, also called diving suits or diving machines). In 1877, minimum shell weight regulations were lifted, due to the fact that the application of the law posed "a hindrance to honest shell commerce" (BO, 1877:326). However, continuing fears over declining stocks forced the administration to backstep and reinstate requirements that marketed shells be of "adult age" (BO, 1882:297). But scaphanders continued to pose a threat to natural stocks, and the governor was forced to repeal their use in 1892 (BO, 1892:139). In 1902, a new governor reintroduced scaphanders to the Tuamotus,
explaining (rather unconvincingly) that the previous prohibitions had been based on "non-scientific reasons" (BO, 1902:391).

A Commission on Scaphanders, designated and appointed by the governor, determined that scaphanders were useful in inaccessible or dangerous lagoons, that they cleaned the substrate for further oyster growth, that a rest of three years was enough for the oysters to regenerate (untrue), that scaphanders could be used during seasons which were too cold for free-divers, that they could better exploit the "wasted" deeper portions of the lagoons (in fact, these oysters were the primary source of spawning and necessary for stock regeneration!), that it promoted jobs (mainly for Tahitians), and that it helped discourage the "nomadic tendencies" of the free-divers. They suggested that scaphanders be permitted in ten "underutilized" lagoons (AT/CA, 12 Nov. 1903; see Ranson, [1952] for a later perspective).

Following a severe hurricane in 1903, which killed hundreds of divers who had been encamped in temporary dwellings on the outer islets of Hikueru, the government decided to take further steps to discourage the inter-atoll free-diving circuit. Henceforth, all atolls would be divided into sectors which would each be opened every three or four years. All lagoons would be closed
during October-February, which is both the hurricane season and the spawning period for pearl oysters. In 1906, following complaints by the islanders, scaphanders were banned again. However, shell exploitation continued to intensify as a result of the newly introduced diving eye-glasses, permitting good underwater visibility. Prior to this, the divers had to sight from the top with a glass and grope their way blindly on the bottom (Intes, 1982). However, since the oysters had been more abundant, the early divers did not have to go down as deep as in the later period.

Shell exports rose substantially following 1918 because of two reasons: firstly, with the advent of the first world war, Australia (which had previously been exploiting the Great Barrier Reef and the islands between Australia and New Guinea) ceased to be a major supplier of mother-of-pearl (Intes, 1982); secondly, in 1920, scaphanders were again authorized in the Tuamotus (mainly in "inaccessible/dangerous lagoons") due to the need to exploit resources which were "immobilized at the bottom of the ocean, not profiting anybody" (JOEFO 1920:128-129). In 1928, Herve, Administrator of the Tuamotus, decided to permit scaphanders for use in Hikueru, an atoll extremely rich in pearl oysters, and had hitherto been the exclusive domain of the native free-divers (Herve, 1933, 1934).
Herve wrote numerous administrative reports and even scientific articles to back up his plans. He argued that free-diving was inefficient, wasted lives, and benefited Chinese (rather than French and Tahitian) merchants. Moreover, scaphanders were better ecologically: the divers had more time to be selective and choose the oysters of mature sizes; while free divers, whose time was limited by their breath, often had to grab anything they could during the brief time underwater. He also claimed that scaphanders could eliminate old, excess oysters which posed a disease risk for healthy stocks. In any case, he said, the lagoons were public domain, and it was the government's decision alone on how to extract the oysters; the indigenous islanders had no special rights over this resource (Herve, 1933, 1934).

Pearl oyster exports rose during Herve's administration, but standing stocks continued to diminish. On Hikueru, the newly introduced scaphander team extracted over a thousand tons of shells in a single season. In protest, the locals formed a committee of defense, confiscating the scaphanders, and forcing the operators to halt work. But a team of gendarmes was soon dispatched from Papeete and the committee leaders were imprisoned and sent to Papeete. The confiscated scaphanders were released and the operators were permitted
to resume their operations. The population continued to protest through petitions, but the administration explained that the scaphanders were needed to provide jobs, income, and safeguard resources that would otherwise be wasted (Porlier, 1929).

Pearl exports started to plummet following 1930, due to declining stocks as well as a deteriorating international market, and by 1932, scaphanders were banned again. Exports increased again in 1940 when the Australian pearl oyster production was again halted due to war activities. The introduction of diving accessories, including rubber fins, masks, and snorkels, and the reintroduction of scaphanders (1943) caused a marked and sustained increase in shell production, despite declining stocks. By 1952, it was becoming apparent that only a few lagoons had sizeable stocks left, while the majority appeared to be reaching the point of extinction. A new oyster expert, Gilbert Ranson, was dispatched from Paris to evaluate the situation.

Ranson made the following recommendations: 1) The lagoons should be closed during the season of oyster reproduction (October-February). 2) Reserve areas should be maintained in each lagoon in which oyster banks are left in a virgin state. 3) Spat collection could be achieved inexpensively using bundles of local brushwood
suspended beneath the lagoon surface. 4) Divers should not be permitted to harvest oysters less than three years old (about 15 centimeters at the longest length). 5) As the stocks had declined dangerously, scaphandlers should only be permitted in dangerous or inaccessible lagoons (Ranson, 1955, 1962). These recommendations (slightly modified) were incorporated into the government’s diving regulations (JOEFO, 1953:55-56).

A Department of Oyster Culture was created in 1956, headed by a veterinary scientist. Oyster reserves were begun on a number of atolls and Ranson’s spat collection experiments were continued. A Japanese company was also hired to graft several hundred oysters for round pearls, but this was discontinued because of difficulties in marketing the black pearls. Notwithstanding the efforts of Ranson and the local administration, and despite high shell prices on the world market, pearl oyster stocks continued to decline, and during the 1960s, production dropped to a fraction of that of the preceding decades. On Hikueru, where divers had captured as much as 100 kilograms per day in 1961, the catch declined to as little as 23 kilograms by 1969 (EVAAM, n.d.)
Pearl culture is not as obvious a source of ecological perturbation as mother-of-pearl diving. Whereas in the shell industry oysters were removed from the lagoon, depleting natural stocks, the pearl culture industry adds oysters to the lagoons. Indeed, the pearl culture industry was originally promoted as a way to reverse the depletion of natural stocks. Through the introduction of spat collection, larva which would have otherwise been swept out to sea, consumed by predators, or perished in the sandy lagoon floor are now intercepted, boosting existing stocks. Natural oysters are seldom used in grafting due to both ecological concerns and their poorer suitability for artificial culture conditions. But it is becoming clear that pearl farming has also had adverse ecological implications.

As early as 1970, when the first spat collection efforts began in Hikueru, there was a noticeable rise in the number of oysters which had deformed and retracted mantles, poorly formed prismatic layers in the shells, and abnormal secretion of nacre; at the same time, mortality (normally 20-30 percent) rose to 40-50 percent. Although bacterial infections were discovered (Vibrio and Benechea), it has not been proved that these were the causative factors. Initially, the disease symptoms were
present mainly in oysters which were subjected to the stress of grafting or sudden hydrological perturbations (EVAAM, 1983). The disease was also confined to only a few atolls (Hikueru and Gambiers), while Takapoto, the main oyster producing atoll, was left relatively untouched. But in July, 1985, oyster disease became manifest in Takapoto as well, reaching annual mortalities as high as 30–90 percent (EVAAM, n.d.).

By the fall of 1985, the mortality had spread to Manihi and Aratika as well, being highest in the zones which were near the cultivated pearl farms. These were both oyster-poor atolls (having been exploited to near extinction during the mother-of-pearl industry) which had previously gotten their oyster supply from Takapoto spat collection. During the height of the epidemic, oyster mortality increased two-fold in pre-graft oysters and up to five-fold in post-graft oysters, but the disease had also spread to natural stocks as well as to other mollusc species, including *Pinctada maculata* and *Tridacna* clams. Pearl retention rates plummeted from 37 to 14 percent and many pearl farms became financially endangered. Consequently, a group of collaborating local scientific institutions organized a series of studies to analyze the problem and suggested several hypotheses (Cabral, 1990).
In the first hypothesis, the mortality was due to pollution problems. When the lagoon hydrological conditions (on Takapoto) were compared to those taken a decade earlier (at the very beginning of pearl farming development), water temperature, pH, and oxygen were within the normal seasonal range, but there was now a sharp increase in phosphates, nitrates, and silicates. The rise in mineral salts may have been due to village wastes, which had washed into the lagoon during the 1982-83 hurricanes. But there were also high levels of certain heavy metals in the diseased lagoons, and even higher concentrations in living oyster tissue (ten times normal for lead; higher for iron and copper). This rise was attributed to the decomposition of the metallic platforms used in pearl farming.

A second hypothesis related the mortality problems to an infectious agent, as bacteria had previously been found in the diseased lagoons of Hikueru and the Gambiers and had also been suggested as a source of mortality in Australia and the Red Sea (Pass et al, 1987; Nasr, 1982). Fecal organisms had been found at certain points in the lagoon and organic sediments had also accumulated under the pearl culture platforms. However, there have been conflicting reports from EVAAM concerning an infectious etiology. At first, it was claimed that "neither parasite
nor any other microorganism" were found (EVAAM, 21 May 1986); but afterwards, viral infections were reported (SMA, 25 Mar. 1987). The primary histological abnormalities were lesions of the digestive glands and destabilization of lysozomes (cell components involved with waste removal), but these could have been caused due to heavy metal pollution, other toxins, and other natural causes.

A third hypothesis was that the disease had been caused by oyster malnutrition, due to the large number of cultivated oysters. On Takapoto, for example, it was estimated that seven million oysters were being farmed, equivalent to the total amount of natural stocks. Chlorophyll concentrations (an indication of phytoplankton density) were extremely low in the area where pearl farming was densest, suggesting that oyster farming was stretching the lagoons nutritive capacity. Previously, nutrition may have been abundant due to the enormous amount of organic debris washed into the lagoons by the hurricanes. But by 1985, this material had settled or been consumed and the lagoons reverted to their normal state of equilibrium. The oyster surcharge could no longer be ecologically supported without supplementary nutrients.
In view of the industry's economic importance, there was no time to wait for the results of an exhaustive ecological study and a number of remedial measures were proposed: Pollution problems could be tackled with relative ease. Pesticide use should be carefully monitored and village wastes should be drained to the ocean side, away from the lagoons and pearl farms. Metallic platforms supporting the cultivated oysters could be replaced with non-polluting long line systems composed of synthetic fibers, similar to those used in spat collection. This method was already being adapted by some of the farmers as it permitted greater water circulation around the oysters and induced more rapid growth. The long lines could be kept sufficiently deep to protect them from storm damage (EVAAM/Coeroli, 21 May 1986, 23 May 1986).

Although the etiological agent has not yet been definitively established, it is suspected that a microbial agent could indeed have been transferred with oyster exports, contaminating outlying lagoons. Prudence therefore required the quarantining of affected atolls, and alternative sources of seed oysters would need to be found. In addition, there would be periodic monitoring of transferred stocks, the elaboration of a detailed statistical base on production and inter-atoll transfer,
and special agents could be employed to enforce these standards. The shift to mobile, extensive, and surface lying long line systems would also help to lessen the chance of microbial contamination, as waste buildup is much reduced compared to the fixed, spatially compact, and bottom lying platforms used previously (EVAAM/Coeroli, 23 May 1986).

To keep the oysters within the lagoon's nutritive capacity, it was necessary to limit the number of concessions being given for spat collection and pearl culture. There should be stock surveys, following which the number of oysters farmed should be kept in proportion to the lagoon's carrying capacity. In areas where the lagoon's capacity was already exceeded, additional investment could be discouraged by placing fees on spat collection (it had been free previously) and raising fees on oyster farming and pearl culture. Exploitation of natural stocks should be prohibited altogether, increasing the likelihood of preserving genetic diversity and facilitating the chances of discovering a strain of oysters which can survive at lower (or more sporadic) levels of available nutrition and are more disease resistant (EVAAM/Coeroli, 23 May 1986).

To discourage pearl farming expansion in the atolls which were densely farmed and heavily affected by the
disease, it was also recommended that government aid programs be reduced. The small pearl farmers should be held to a ceiling of 10,000 oysters to be grafted annually. Allowing them more than this would make it difficult (on the basis of family labor alone) to adequately clean and care for the large number of oysters necessary for grafting. The large pearl farmers (having access to sufficient capital and labor) could continue to expand, provided that the techniques and spacing recommended by the administration were implemented (EVAAM, RA, 1986; EVAAM/Coeroli, 23 May 1986).

Most of the above measures were implemented. Farmers began to shift to the long line systems, Takapoto was quarantined, and Takaroa became the center of spat collection and oyster production. Fees were charged for spat collection and the small farmers were discouraged from farming too many oysters (SMA, 27 Feb. 1987). However, the mortality problem, coming at the time that many farmers were just beginning to recover from the previous hurricane damage, represented a severe challenge to the developing industry. The new series of regulations (replacement of platforms, cutting down on spat collection, pollution controls) could be easily absorbed by the large-scale entrepreneurs, but they discriminated
against the family run farms of the islanders who could ill afford these innovations.

The administration also took another measure to avert an aggravation of the disease problems. Considering that there were far more spat being collected than mature oysters being raised, it was necessary to curtail the expansion of spat collection. Concessionaires were henceforth limited to three stations with a maximum length of 50 meters apiece (SMA, 27 Feb. 1987). But limiting spat collections rather than pearl culture was a further measure which restricted the earning possibilities of small-scale, predominantly native farmers, while leaving the large-scale, predominantly alien farmers to expand their production. The apparent justification for this policy was the argument that spat collection, because of the greater quantity of production and higher metabolic needs (relative to the selected group of mature oysters used in pearl culture), was more likely to cause malnutrition.

But islanders still recall the times when natural pearl oyster stocks were so dense they could be gathered with buckets from shallow water. The absence of disease during this period may indicate that the lagoon can indeed support much larger numbers of oysters than currently present and current problems may be due to the grafting
activities of the large-scale entrepreneurs. The situation became exacerbated when the administration decided to raise fees on spat collection (previously free), but lower the fees on large-scale pearl farms (SDE, 21 Mar. 1990). It is not very surprising that the limits on collection were tacitly ignored, the expansion of the alien pearl farmers met continued opposition, and the Tahitian administration became increasingly viewed as a meddling adversary.

Intes (1988) has recently supported the administration's claims, arguing that malnutrition is indeed the primary source of the disease problem, and that the (near) simultaneous disease occurrence on several atolls would have been unlikely if the problem was pollution or an infectious agent. Instead, he argues that the nutrients in the lagoons are considerably reduced because of predation by zooplankton and other organisms and the remainder is simply not enough to feed the natural stocks as well as the cultivated stocks. He bases his arguments on measurements of phytoplankton production in Tikehau, surveys of natural and cultivated pearl oyster stocks on Takapoto (particularly on the large number of oysters raised in spat collection), and calculations relating nutritional requirements to oyster biomass and productivity (Intes, 1988; Intes et al, 1990).
According to Intes, the estimated eight million farmed pearl oysters (primarily in spat collection and pre-graft oysters) on Takapoto represents a 100 percent surcharge on the natural stock (estimated at eight million) for which not enough additional nutrients are available. The surcharge is particularly difficult to sustain since farmed oysters require about 30 percent more energy than natural stocks. This surcharge occurs primarily in the upper layers of the lagoon which are normally poor in natural pearl oysters, indicating marginal nutritional availability. Although there are an estimated 90,000 tons of phytoplankton produced annually on Takapoto, only 5,000 are consumed by the filter feeding molluscs, including the pearl oysters; the low ecotrophic efficiency (.05) indicates that most of the phytoplankton production is consumed by predators and unavailable for use by additional filter feeders (Intes et al, 1990). But this argument is based on several weak premises:

1) The fact that the farmed stocks are a 100 percent surcharge on natural stocks does not prove that this represents a burden on the lagoon’s natural capacity. In the past, the natural stocks were considerably larger than today, and were apparently abundant precisely in the near shore, relatively shallow layers which are currently utilized for pearl farming. 2) A low ecotrophic
efficiency does not prove that surplus nutrients are unavailable; the claim that they are consumed by predators is unsubstantiated. The excess phytoplankton may indeed be available for spat collection. 3) Extrapolations from phytoplankton surveys on Tikehau—an atoll with a pass and quite different ecological conditions—are not satisfactory for estimating productivity on Takapoto. 4) The calculations of pearl oyster energy requirements are based on equations with admittedly unsubstantiated parameters.

Moreover, there is increasing concurrence today that reefs and reef based organisms are limited by substrate rather than the amount of available nutrients (Muscatine and Porter, 1977). Kinsey and Domm (1974) have found that even after increasing the levels of nitrogen and phosphorous by 40 times, productivity increased by only 50 percent; conversely, rates of reef calcification and primary productivity in areas with extensive three dimensional substrate are equal to more than 200 percent that of areas of higher temperature and light intensity, but poorer in substrate (Smith, 1981). On the basis of these observations, as well as evidence from artificial reefs, it has been argued that space may be the critical factor in productivity (Grigg et al, 1984). Although Intes refers to the latter study, he does not consider its
comments concerning nutrient versus space as limiting factors.

Intes asserts that the simultaneity of the mortality on several lagoons proves that the problem is nutrition deficiency rather than infection. The reverse would seem to be the case. It is highly unlikely that a nutritional deficiency would develop simultaneously on lagoons with varying degrees of ecological conditions and intensity of exploitation. But it is possible for disease to occur almost simultaneously if an infectious agent is transmitted to a number of sites within a short time interval (Mackin, 1959). This may indeed have happened with the pearl oyster mortality, as an infectious agent that became epidemic on Takapoto, the main supply source of oysters, would naturally be expected to spread to recipient atolls.

If oyster mortality is due to infection, risk may be related to quite other problems than those suggested by Intes and large-scale pearl culture rather than spat collection may pose the greater risk. While spat collection may account for more total numbers of oysters than pearl culture, pearl culture entails a number of important risk factors. Pearl culture, unlike spat collection, involves a surgical procedure, with a graft of living, potentially infectious tissue, without any steps
to prevent the transmission of disease (sterile technique, antibiotics, etc.). Pearl culture also generally occurs in densely crowded farms, which remain stationary for a year or more following the graft, sometimes reaching aggregations of 50,000 oysters or more on a farm only a few hectares in area. This may well approach the numerical threshold for epidemiological transmission of a critical infectious agent.

Ecological Stress on Takaroa

Although disease studies have not been conducted on Takaroa’s oysters, a comparison of the survival rates of grafted oysters provides preliminary evidence that Takaroa may indeed be experiencing oyster disease (Table 6.1). Takaroa ranks sixth (lowest) out of nine atolls, with a survival rate of only 43.3 percent, not very much better than Takapoto, Makemo, and Manihi, atolls that are reported to have been heavily impacted by disease. The survival rates are not an absolute indication of disease, as other factors can be involved. Farmers may have reported an undercount in order to evade the deduction of a percentage of the harvest by the technician. There is also a natural mortality even with healthy oysters (normally in the range of about ten percent per year).
Nevertheless, the following figures are held to be indicative of the current disease problem (Cabral, 1990).

Table 6.1. Survival Statistics of Various Atolls, 1988

<table>
<thead>
<tr>
<th>Atoll</th>
<th>Survival Rate(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raraka</td>
<td>95.1</td>
</tr>
<tr>
<td>Katiu</td>
<td>72.4</td>
</tr>
<tr>
<td>Hao</td>
<td>53.2</td>
</tr>
<tr>
<td>Kaukura</td>
<td>46.1</td>
</tr>
<tr>
<td>Arutua</td>
<td>43.8</td>
</tr>
<tr>
<td>Takaroa</td>
<td>43.3</td>
</tr>
<tr>
<td>Takapoto</td>
<td>36.5</td>
</tr>
<tr>
<td>Makemo</td>
<td>31.5</td>
</tr>
<tr>
<td>Manihi</td>
<td>18.0</td>
</tr>
</tbody>
</table>

Note: Based on Survival of Grafted Oysters at Harvest, Reported by grafting Technicians

Source: Cabral, 1990

Studies of survival rate changes in various atolls show a marked decline during the mid to late 1980s, and provide a good indication of temporal trends of disease occurrence (Cabral, 1990). In the early part of the decade, the survival rate in most atolls were high, ranging between 50-90 percent. Beginning in 1986, the year after epidemic mortality was reported in Takapoto, mortality on most atolls began declining, reaching 40 percent or less on some atolls. At first, Takaroa appears to have suffered less mortality than many of the neighboring atolls, remaining at a steady mortality rate of about 60 percent between 1985-1987. In 1988, Takaroa
experienced a decline in survival rates (Cabral, 1990). This was a period in which pearl farming was increasing dramatically, as shown by the number of new pearl farming concessions awarded in 1986-88, compared to 1981-85 (Table 6.2).

Table 6.2. Number of New Pearl Farming Concessions, 1981-1988

<table>
<thead>
<tr>
<th></th>
<th>Spat Collection</th>
<th>Pearl Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oldtimers</td>
<td>6 (26%)</td>
<td>17 (27)</td>
</tr>
<tr>
<td>Returnees</td>
<td>16 (70)</td>
<td>45 (70)</td>
</tr>
<tr>
<td>Aliens</td>
<td>1 ( 4)</td>
<td>2 ( 3)</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>64</td>
</tr>
</tbody>
</table>

% Increase (1985-88) 178 77

Source Based on Data from SDE

The data show that it is the islanders accounted for the majority of the concessions during both of the above periods. It is also the islanders, primarily the return migrants, who farm the majority of the oysters in the lagoon. The islanders accounted for over 80 percent of the juvenile oysters (estimation) and almost 60 percent of the mature oysters (actual count) in Takaroa’s lagoon (Table 6.3):

277
Table 6.3. Estimated Number of Oysters

<table>
<thead>
<tr>
<th></th>
<th>Juvenile Oysters</th>
<th>Mature Oysters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oldtimers</strong></td>
<td>617,500 (22.9%)</td>
<td>80,025 (5.8%)</td>
</tr>
<tr>
<td><strong>Returnees</strong></td>
<td>1,680,000 (62.4)</td>
<td>695,506 (50.3)</td>
</tr>
<tr>
<td><strong>Aliens</strong></td>
<td>395,000 (14.7)</td>
<td>605,956 (43.9)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2,692,500</td>
<td>1,381,487</td>
</tr>
</tbody>
</table>

**Note**  
\( ^a \) Estimate, based on 25 oysters/meter spat collection line  
\( ^b \) Actual count

**Source** Based on Data from SMA

But the total amount of oysters in the lagoon is, in itself, not an adequate indicator of crowding and ecological stress. The oysters are not evenly distributed in the lagoon; they are arranged in different geometric patterns by each farmer (see Map 3.5 and Map 5.1), depending on the location of the farmer’s land and the proximity of neighboring pearl farms and spat collection stations. Mean size and density of individual farms may prove a better indicator of potential crowding, ecological stress, and disease risk. Viewed in terms of these indicators, the alien pearl farms may pose the most substantial risk. While the mean density of alien pearl farms is similar to that of the islanders, the mean size of alien pearl farms is much larger (Table 6.4). This is
particularly so in the case of PF16 and PF24 (Map 5.1), both operated by one alien entrepreneur.

Table 6.4. Size and Crowding in Pearl Farms

<table>
<thead>
<tr>
<th></th>
<th>Mean Size</th>
<th>Mean Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oldtimers</td>
<td>6,669</td>
<td>2,312</td>
</tr>
<tr>
<td>Returnees</td>
<td>23,183</td>
<td>4,472</td>
</tr>
<tr>
<td>Aliens</td>
<td>60,595</td>
<td>3,920</td>
</tr>
</tbody>
</table>

Note:  
\(^{a}\)Mature Oysters/Farm  
\(^{b}\)Mature Oysters/Hectare

Source: Based on Data from SMA

Protection for Whom?

Over the past two decades, a heated, sometimes rancorous, scholarly debate has revolved on the issue of the ecological implications of lagoon tenure systems in Oceania. One school of thought holds that tenure systems which have emerged over centuries of sustained use reflect a demonstrably effective, culturally appropriate, and potentially applicable solution to the evident problems of competition and resource degradation on small islands (Johannes, 1978; Chapman, 1985). Others argue that traditional systems of tenure rights are not as widespread as previously claimed; that where these do exist, they have evolved for social reasons rather than ecological reasons; and that there is no real evidence that
traditional tenure systems actually preserve (Polunin, 1989).

We have seen that traditional tenure rights were invoked by Tuamotuan populations in attempting to defend their lagoons from exploitation by environmentally hazardous techniques during the mother-of-pearl industry. But it is not at all certain that traditional tenure systems would have protected the islanders from their own overexploitive tendencies, had they had sufficient capital and motivation. In the pearl farming industry, ambiguities in the relative risk posed by different kinds and scales of farming practices have enabled each position to blame the other side for potential ecological problems. Nevertheless, as little is really conclusively known about potential ecological perturbation, other issues appear to be pivotal in the current conflict on Takaroa, as shown below.
CHAPTER 7
RESISTANCE ON TAKAROA, 1982-1991

In its most highly organized and defiant phase, resistance on Takaroa took place over a period of months, but resistance to land and lagoon alienation had been escalating gradually over the better part of a decade. Beginning in the early 1980s, the arrival of alien entrepreneurs was regarded with apprehension by many islanders and actively opposed by the majority of the community. Despite this, several entrepreneurs did manage to become established on Takaroa, with the help of contacts from the indigenous islanders. Community concerns were partially allayed by guarantees that the entrepreneurs would not compete with local spat collectors, and moreover, they would purchase seed oysters from the indigenous population.

Within a few years, however, concerns were reawakened when it became apparent that previous arrivals were only the beginning of a massive invasion of indigenous lagoon space. With the help of charismatic leadership by a return migrant, an organized resistance movement was formed, named the Association to Protect Takaroa. Its primary goal was to protect Takaroa’s lagoon for the indigenous population; it was particularly opposed to
large-scale alien entrepreneurs. The association achieved some notable victories but it lost much of its support following the deportation of its leader and sustained opposition by the administration.

Just as the sudden rise of the resistance movement depended on years of building tensions its subsequent decline was due to decades of hegemony exercised by political authorities who were themselves under the sway of the entrepreneurs. It was not through a sudden show of force that the islanders were cowed. An arriving platoon of armed gendarmes was faced by a resolute show of defiance by a group of unarmed islanders. It was primarily through words that the islanders were undone. The trinkets and vain promises of a few alien pearl farmers and the persuasive rhetoric of skillful Tahitian politicians legitimated by the Papeete courts would drive a wedge in the community, shattering the emerging consensus of resistance and enabling the further penetration by external interests.

1982-84: Cautious Acceptance

Richard, the first of the alien entrepreneurs on Takaroa, initially came with the assistance of one of his Papeete employees, who was a native of Takaroa. As we shall see, the incursion was viewed with apprehension by
the local inhabitants, many of whom were just beginning to launch out into pearl farming themselves. This apprehension was explicitly communicated by the mayor who--at the time--was an islander. Nevertheless, Richard was permitted to become established on Takaroa following the negotiation of a deal with an islander and promises to aid in local employment and purchase local seed oysters. The fact that this rather limited incursion did not awaken any strong antipathy by the islanders is an indication that resistance did not begin from an a priori ethnic prejudice, but rather from the chaotic expansion that would characterize future encounters.

Richard is a successful housing contractor from a well to do Chinese-Tahitian merchant family. Richard had previously vacationed in the Tuamotus and first considered pearl farming in 1982. An acquaintance of Richard had already established a successful pearl farm in the Gambiers. Richard also had good relations with the mayor of the Gambiers, who would have been willing to help him. However, the Gambiers were over a thousand kilometers from Tahiti and Richard wanted a location with less competition and easier communications. Meanwhile, Tagaroa, one of Richard’s construction workers, invited Richard to accompany him on a visit to the Tuamotus. By then, news of Takapoto’s success had appeared in Tahitian newspapers
and the pearls that were produced were quickly purchased at the annual Papeete pearl auction.

Takapoto already had an airport by this time so Richard joined Tagaroa for a trip to Takapoto and they deployed several trial spat collection stations in the lagoon. Tagaroa had previously lived on Takara, but he had ancestors from Takapoto and was eligible to claim family land and rights to lagoon space. Richard returned to Tahiti, with the understanding that Tagaroa and his family would take care of the stations. Several months later, however, while visiting Takapoto, Richard was informed that the mayor had ordered their stations pulled out of the lagoon, indicating that Tagaroa’s efforts would better be expended in developing the industry on his home atoll. The mayor also did not want Richard competing with local enterprise.

Richard was surprised because the mayor, who was part Chinese, had previously approved his application for a lagoon concession on Takapoto. Apparently, the mayor had reconsidered under intense pressure by the local population. Soon afterwards, the village policeman came to Tagaroa’s house and ordered him to remove the stations, but Tagaroa said, "I’m not going to pull out the stations. They’re already in the lagoon. If you want to pull them out, go ahead." The police left the stations in
the lagoon and they were attended occasionally by Tagaroa’s family but most of the oysters disappeared. Not wanting trouble with the local population, Richard decided to transfer his operation to Takaroa. In his move, he was assisted by Tagaroa’s brother, who was a resident of Takaroa.

At the time, spat collection was still slow on Takaroa. However, Richard deployed some trial stations and Tagaroa was to remain on location and mind the stations. Richard financed the cost of all the materials and paid Tagaroa and his family a monthly salary. During his visits to Takaroa, Richard was a guest at Tagaroa’s house in the village. Richard was not received warmly by the neighboring population. He attributed this to their natural reserve rather than as a sign of hostility.

During the hurricanes of 1983 Takaroa was severely hit. Hardly anything remained of the five stations which had been deployed by Richard the previous year. At the same time, Richard had learned from contacts in the administration that a pearl farm on Takaroa was up for sale. The farm had been recently started by Teva, a Tahitian radio announcer who had been adopted and grown up on Takaroa and had been well accepted by the local population. Following the hurricane damage, Teva was facing financial difficulties and decided it was not worth
the trouble of continuing pearl farming. Richard had anticipated difficulties in obtaining local consent for a new pearl farm and he now reasoned--quite correctly--that purchasing Teva's farm, whose concession had already been authorized, might be a short-cut in getting into Takaroa.

Richard contacted Teva in Papeete and offered to purchase the farm, but he was warned that the concession would not transfer automatically and he would need to reapply. On his next visit to Takaroa, Richard brought along the papers for the signature of Pere, the local mayor. He was concerned because Pere was known to be opposed to people from the outside, but Tagaroa assured Richard that everything would be arranged, as Pere was a relative of his. Pere did eventually consent, partly because of promises of purchasing local oysters and partly to help Teva with his financial problems. Richard paid 30 million CFP for the farm, including the underwater platforms, cables, work stations, and 2,000 grafted pearl oysters. However, the farm was in poor shape and only 200 pearls were eventually harvested.

While waiting for the completion of his authorizations, Richard sent two of his workers to Takaroa to construct houses and rebuild the farm. When the authorizations came through, Richard joined them, but he left his family in Papeete since transport was difficult.
at the time. They occasionally hired workers from the village, but otherwise, there was little communication with the village. Richard was content that he was left undisturbed by the local population.

At the time, Richard was the only one living permanently on the far islets of the atoll. There was a village law which mandated that all residents live in the village except for temporary work seasons on the far islets. Even then, they would return to the village on weekends for church services. But Richard lived on the far side year round and spent his weekends on his pearl farm. One day, Tagaroa came to visit and informed Richard that he was required by village law to return for the weekend. Richard explained that his work did not permit him to leave, that he had no house in the village, and that this was "just an old custom."

Richard added that he had no interest in living in the crowded village. He tried to explain to the people that they, too, would be better off moving out to the outer islets. Moreover, Richard did not want to have too much contact with the islanders. Many people with experience in the Tuamotus had warned Richard, prior to his venture on Takaroa, "Don't keep too close contact to the Tuamotuans. If you do, they will take advantage of you." Richard was worried because he had a large pearl farm,
lots of materials and gasoline, and people would
frequently ask for loans and not repay.

Richard made his first harvest in 1986 and another
successful harvest in 1987. The success rate was not
high, but the quality of the pearls was excellent, with
numerous large, round pearls of a deep, iridescent color.
During the auction, the average price of pearls sold was
10,000 CFP (approximately $US 100); the highest was
15,000. Richard’s lot sold for an average of 25,000 CFP,
yielding more than 50 million CFP for his pearls. Word of
Richard’s success spread rapidly. When he returned to
Takaroa, Richard sensed that the local people were
envious. Richard told them, "This is a good example for
you, you can succeed as well."

1985-87: Entrenched Opposition

Within a few years after Richard’s settlement, two
additional entrepreneurs, with established pearl farms on
Manihi, attempted to settle on Takaroa. They, too, had
come by invitation of a Takaroa islander, but they faced
entrenched opposition by the local population, worried by
their interest in an immediate, large-scale enterprise.
The entrepreneurs managed to secure an arrangement based on
promises that they would confine themselves exclusively to
pearl farming, leaving spat collection for the islanders.
The following account explains why these farmers expanded to Takaroa, how they were initially resisted, and how they eventually became established.

Until the early 1980s, external investment in Tuamotuan pearl farming had been limited largely to Manihi, an atoll which had an airstrip, an accessible pass, and is close to Tahiti. Manihi’s population had been amenable to the establishment of the first private pearl farm in 1968, although there had been some hesitation even then. Nevertheless, the community at Manihi had accepted the farm because of the many jobs it provided for the islanders. Moreover, as a consequence of the experimental farm, a community airstrip and a small hotel were built, giving the islanders additional jobs and easy communications with Tahiti. However, Manihi’s lagoon was poor in natural oyster stocks and pearl oyster seed stock depended on periodic supplies from Takapoto spat collection.

By 1985, four entrepreneurs had acquired land on Manihi, received the approval of the local mayor, and installed large-scale pearl farms. The largest of these was Lee, a Chinese-Tahitian building contractor who decided to invest in the rapidly growing pearl business. It took him two years to negotiate the purchase of land and obtain the necessary permits. By 1982, buildings,
kitchens, and a warehouse were installed on Manihi, eight workers were employed, and 80,000 oysters were purchased at Takapoto. Lee began spat collection, hired two full time grafters and planned to graft 100,000 oysters a year (Salomon and Roudnitska, 1986). In 1985, however, just as he had begun to recover from the 1983 hurricanes, disease struck Lee’s farm and he lost almost all of his seed oyster stocks.

Lacking suitable oysters, Lee requested a permit to import 50,000 oysters from Takaroa (Takapoto had now been quarantined). Four other large private farms had made similar requests. The mayor objected to the proposed oyster transfers, fearing that Takaroa’s oysters might be contaminated as well. Instead, the mayor suggested that a diving season be opened for natural oysters. The private farmers argued that these oysters would be purchased primarily by the Manihi cooperatives, leaving little for themselves. Nevertheless, the mayor refused to endorse the transfer requests. He warned that if oysters were transferred despite local objections, the population would seize all the oysters and burn them. But Lee and the others continued to press the administration to override the mayor’s veto and permit the transfers of oysters from Takaroa.
While the administration pondered, Lee decided to expand to Takaroa, where there was little competition and abundant oyster stocks. Lee did not have an approved lagoon concession from the administration in Tahiti, which normally only allocated one concession at a time, and only after approval of the local mayor. To smooth his way, he made arrangements with Tagaroa, who had previously helped Sylvain become established, and had also worked for Lee. On arriving in Takaroa, Lee informed the mayor, Pere, of his plans. Pere told him that he would have to discuss things with the council as well as with the population as a whole. Lee was surprised. On Manihi, he had made the arrangements directly with the mayor. Why did the population have to be involved over here? Nonetheless, he returned to Papeete and waited for the reply.

Lee eventually received a call from Tagaroa, telling him that the council meeting was held and there was only one opposing vote. But there was considerable opposition to Lee among the wider population. Takapoto's lagoon had been quarantined and Takaroa was going to be the major oyster supplier for all the Tuamotus. Most of the people were just beginning to set up their pearl farms and there were many more Takaroans who intended to return from Tahiti, Noumea, and other places. Many islanders felt that the lagoon was their own resource and they were not
happy when outsiders began converging, particularly when they intended to occupy large portions of the lagoon. Nevertheless, Tagaroa advised Lee to go ahead with his plans and label his shipments to Takaroa with both of their names.

One morning, an entire shipload of construction materials suddenly arrived at the Takaroa quai along with five Tahitian laborers. The whole population had assembled, as usual, at the quai. As the materials were being unloaded, the people noticed that the cartons were labelled, "Lee/Tagaroa". Tagaroa explained that Lee was his partner. Seeing the misgivings of the population, the mayor ordered the entire shipment to be confiscated and held at the community warehouse at the quai. In the meantime, the laborers waited at Tagaroa's house. Soon afterwards, a petition was sent from the community on Takaroa to the High Commissioner's Office in Papeete. It bore 97 signatures, a substantial part of the adult population of the atoll, with the following message:

We, the population of Takaroa, forbid the entrepreneurs to become established in to our lagoons. We, the population, do not want the entrepreneurs to come to our lagoons and take away a treasure that is ours alone. If the entrepreneur wants to buy oysters, this is okay, but he should remove his oysters from this lagoon.
Following this was a letter from the mayor:

I, vice-mayor of the Commune of Takaroa, section of Takaroa, do support this petition of my population. I, too, strictly forbid the entrepreneurs to come into our lagoons and establish their companies inside. Leave this wealth inside of our lagoon for my population.

Tagaroa travelled to Papeete and informed Lee of the events. Lee went to court and deposed a complaint:

I represent my partner, Mr. Tagaroa, resident of Takaroa. My partner has a maritime concession on Takaroa dated 12/26/85. The materials for exploiting this concession for raising oysters have been confiscated on their arrival at Takaroa by the order of the mayor. In addition, my partner has hired workers which must be paid. I demand that the material be returned and the mayor pay 413,776 CFP for my workers’ salaries and 61,110 CFP for my partner’s plane ticket to Papeete.

The mayor travelled to Papeete by sea and consulted the Tuamotuan administrator. Following this, he went to court and responded to Lee’s complaints:
I am aware of Mr. Tagaroa's request. It is true that I confiscated the debarked goods; but since then, I have released some of the goods to Mr. Tagaroa. The reason for the confiscations is the following: The rules of Mr. Tagaroa's concession state clearly, 'Any transfer or lease--total or partial--of the present authorization is forbidden without the express agreement of the administration.

I am attaching a copy of the petition of the population of Takaroa protesting against the actions of Mr. Lee and Mr. Tagaroa. I have informed the administrator of the Tuamotus of this affair, who will advise, in the administration's name, of the eventual sanctions to take against the concession holder. Meanwhile, I am prepared to let Mr. Tagaroa take possession of half of the unloaded goods and will give the orders upon arriving in Takaroa.

The SMA, which handles applications for concessions, was aware of the opposition of the population on Takaroa and was not willing to grant Lee a concession even if he had found a local partner. Lee complained that he was being unfairly discriminated against. The SMA told him that he was not eligible to obtain a concession since he was not a local landholder. So Lee returned to Takaroa and rented a tenth of a hectare of lagoon shore land from Hina, one of Tagaroa's relatives. He took his application to the mayor for approval. Lee explained to him that since he now had a land lease, the mayor had no valid legal basis for refusing his request.

The circumvention of local objections caused anger among the islanders, who then threatened to purchase the
leased land for "community welfare". Lee realized that all his efforts would be to no avail without the willingness of the population itself. He went from house to house, explaining to the people in Tahitian that his acceptance on Takaroa would benefit the local population. He would only raise and graft oysters, and would leave spat collection for the local people, which they could then sell to him. He asked them to sign a petition for his lagoon concession, and managed to obtain the signatures of the majority of the population.

With the mood reversed, the mayor approved the application for a concession and restored the confiscated materials. While the application was pending, Lee built bungalows for his workers, laid out an extensive series of long lines in the lagoon, and purchased tens of thousands of oysters from the population. The SMA received his application in August, 1987, but it was reluctant to give its approval, considering that he already had a pearl farm on Manihi (which he was continuing to maintain) and that the establishment of an additional large pearl farm on Takaroa would pose a threat to a lagoon that was currently the major supplier of seed oysters for the archipelago.

In the meantime, Giscard, also a Chinese-Tahitian entrepreneur who had farmed in Manihi, decided to relocate to Takaroa. He went to see the mayor about approval of a
having barely finished with Lee, the mayor was not very pleased to see the arrival of Giscard, and refused to sign. However, when he saw Giscard's property deeds, inherited from his grandfather (who had purchased it in the 1920s), the mayor thought again. The mayor's previous efforts had been expended in vain, as the population had been convinced to reverse their petition. So why should he waste his time again in a fruitless battle? The mayor signed Giscard's application, provided that he not deploy any collection stations on Takaroa.

While waiting for his own authorization from Papeete, Lee continued to expand his Takaroa pearl farm. It took over a year until the government responded to his request for a concession. In the meantime, he received a letter from the SMA, demanding payment of 5.6 million CFP, the equivalent of the concession fees on 280,000 square meters of lagoon, which he had now illegally farmed for two years. In the following September, Lee went to see the Commission on Maritime Concessions in person. He explained the reasons for his unauthorized pearl farming activities and renewed his request for a lagoon concession on Takaroa.

Lee explained to the commission that during 1980, he had established a pearl farm on Manihi, for which he had (retroactively) obtained authorization in 1982. He lost
20,000 oysters during the disease of 1985, and his activities were substantially reduced. In 1986, he obtained only a five percent success rate for 30,000 grafted oysters, and the resulting pearls were of a poor quality. By then, he had already invested 100 million CFP. Because of his financial difficulties, he had been forced to ask his workers to return to Papeete. But some workers had insisted on continuing, pleading financial need, so Lee decided to establish a farm on Takaroa, a more promising atoll.

Lee explained that he had already obtained approval by the mayor of Takaroa, and since the administration had been silent on the matter of his lagoon concession, he had taken the initiative and began operations in February, 1987. By September, 1988, he had invested 140 million CFP on Takaroa. To finance his operations, he had utilized his personal funds from his previous construction business, and 15 of his former employees from Papeete. However, he did not want to defy the authorities, and wished to invest in good faith, believing in the future of the pearl. Concerning Manihi, he would leave it to his workers, or some other legal arrangement, in which he had no personal share.

Following a discussion, and "taking into account the date of the concession demand" (it had been shelved for
almost two years), the commission gave a favorable opinion on Lee's concession, providing that he gave up his Manihi pearl farm. Giscard's request was also considered by the SMA the following January (1988). The administration was still reluctant to allocate new concessions on Takaroa, particularly for large-scale farming. However, as in Lee's case, the now established pearl farm had created facts on the ground (actually, in the water) which made it difficult to refuse. The concession was granted, on the grounds that the investment would promote "economic and social development" (MMA, 15 Sep. 1988, 18 Jan. 1989).

1990-1991: Organized Resistance

By 1990, return migration from Tahiti was at its height; hardly a month passed without the arrival of additional households demanding land and lagoon space from their relatives, and the influx showed no signs of abating. Meanwhile, Louis, Takaroa's newly elected mayor, a Tahitian politician, was decidedly in favor of external investment. Lee was expanding his pearl farming way out of proportion to the terms of his original agreement and authorization, and it was rumored that another wave of investors was scheduled to arrive on Takaroa. In July, 1990, an Association to Protect Takaroa was formed, supported by about half of the households on the atoll,
but opposed by the mayor. The following account documents the brief history of this rather remarkable resistance movements, inspired and led by one courageous return migrant.

Moeroa, founder and president of the Association to Protect Takaroa, was (in 1990) a 46 year old unmarried man. Moeroa’s father, Raka, lived on Fakarava, but was related to the people on Takaroa. Raka was a skilled free-diver who travelled throughout the Western Tuamotus on Tahitian cargo boats or locally built and designed sea-going sailing boats. He followed the great mother-of-pearl diving circuit, spending several months each year on Hikueru, Takaroa, and other atolls. By the 1950s, however, Raka could no longer dive, and the family moved to Tahiti. There was plenty of employment then, as the French nuclear testing program (CEP) was just beginning its establishment in French Polynesia.

In Papeete, Moeroa’s family kept in close touch with other families from Takaroa. By 1965, a large part of the population on Takaroa was, in fact, living in Papeete or Noumea, where there were also opportunities related to the nickel boom. Awarded a scholarship by the French government, Moeroa travelled to France in 1960 and studied construction for about three years. After this, he worked for two years in construction at the Noumea nickel mines.
At the age of 27, Moeroa returned to Tahiti where he continued working in construction. In 1972, Moeroa joined the Tetua Mai party, a radical pro-independence movement which had already formed a provisional Tahitian government.

Moeroa rose in the ranks of the Tetua Mai, becoming the Minister of Defense and representative for the Tuamotus. The French administration did their best to destroy Tetua Mai, but the organization persisted. In the course of his work, Moeroa visited sympathetic post-independence governments in the Solomon Islands and Vanuatu and received messages of support from many other Pacific Islands. Moeroa's movement were followed; his telephone tapped. He soon developed stress ulcers of the stomach. It was partly because of his health concerns and partly out of a desire to return to his ancestral roots, that Moeroa decided to move back to the Tuamotus.

 Relatives that had worked with Moeroa in Noumea had already started a pearl farm on Takaroa and urged Moeroa to move back there as well.

Moeroa moved to Takaroa in January, 1990. Shortly after his arrival, Moeroa observed an "embarassing" situation on the island. Certain of the island leaders, such as the mayor and vice-mayor approved applications for
lagoon concessions by aliens ("people who have no land here and were not originally from here"). But Moeroa felt that lagoon farming should be reserved for the indigenous inhabitants of the atoll. He was particularly opposed to incursion by large-scale investors. He did not object to the arrival of persons with local ancestry or affiliation. Nor did he object to the establishment of individual aliens, provided that they were welcomed by the indigenous community, and provided that the enterprise was run on an equitable level (see below).

Moeroa came to the conclusion that the pivotal problem was the government’s lagoon concession policy. Regulation by Papeete was leading to a situation in which a few take everything. External investors had already received large pearl farming concessions on Takaroa (up to 20 hectares) while some of the indigenous islanders could not even receive a tenth of a hectare of lagoon surface. If large investors continued to arrive, they could well saturate the lagoon with their pearl farms before the locals—or their relatives now living in Papeete—have the time and resources to begin pearl farms on the atoll. Even if the lagoon is not saturated, the dense occupation of lagoon space was already causing problems of access for islanders. Moeroa was especially suspicious of the
Chinese-Tahitians, who were the largest of the external investors on Takaroa.

In July, 1990, Moeroa created the Association to Protect Takaroa. According to Moeroa, there are already associations in Tahiti for the defenses of horses, pigs, etc.; why should there not be one for humans? Moeroa approached the vice-mayor and island council but they were opposed to his plans. They said it was "not worth the trouble". "They wanted to guard their privileges," explains Moeroa. So Moeroa went from door to door, asking his friends, relatives, and neighbors to become members of his association. Eventually, 26 households became signed members and an additional 30 households promised their informal support. When it became apparent that the association had gained widespread support within the community, the members of the council signed as well, except for one councilor and the two vice-mayors.

At the Mormon mission in Papeete, where Moeroa was well known, he received a lukewarm reception. The Mormon mission in French Polynesia had taken an extremely conservative political course, fearful of repression by the local administration. The Mormon missionaries had already been banned from French Polynesia for several decades during the previous century (due to suspected pro-American sentiments) and did not want additional
difficulties. Moeroa's activities (both in Papeete and Takaroa) could easily jeopardize the good current relations between the church and the local government. Consequently, the mission urged Moeroa to focus on spiritual teachings instead of local politics. If Moeroa defied church orders and continued to violate government laws, he would be excommunicated from the church.

In August, 1990, news had come to Takaroa of the impending arrival of Yi Fu, a Chinese-Tahitian investor who had pearl farms on several other islands in the Tuamotus and the Gambiers and currently produced 80 percent of the total pearls annually exported from French Polynesia. Yi Fu had not yet received a lagoon concession for Takaroa, but he was apparently confident that once--like Lee and Giscard--he had actually begun pearl farming and the appropriate incentives were provided to the administration--the concession for Takaroa would not be long in coming. Chu, Yi Fu's agent, arrived in advance, rented a parcel of land from one of the islanders and started to prepare for Yi Fu's arrival. Chu explained that Takaroa was intended to be used as a stocking station for purchased oysters. But the islanders suspected that this was a ruse to take over the lagoon.

When the next cargo boat arrived from Papeete, carrying hundreds of tons of buoys, cables, and other
pearl farming equipment—the first of four shiploads scheduled to carry Yi Fu’s cargo—the association confiscated everything, as well as additional equipment sent to established alien entrepreneurs as well as indigenous islanders said to be secretly associated with investors in Tahiti (Figures 7.1-7.3). One of the vice-mayors was there, but there was no interference with the confiscations as they were supported by a massive turnout of people supportive of the association. Towards evening, the ship began unloading equipment sent by a Tahitian investor who was in partnership with the vice-mayor. These goods were confiscated as well. The confiscated goods were taken to the village storehouse at the quai and heavy planks were nailed down to seal it off. When all was finished, the people dispersed to their homes.

On the following day, which was a Sunday, Moeroa attended church services at the Mormon church, and the previous day’s events were diplomatically ignored. However, the vice-mayor sent an urgent request to the Papeete gendarmerie to dispatch a force to Takaroa to apprehend Moeroa and release the cargo. Six weeks later, two gendarmes arrived. They stayed at the home of one of the vice-mayors. In the evening, they convened the population at the mayoral building, warning that the
Figure 7.1. Unloading Cargo at the Quai

Figure 7.2. Village Storehouse with Confiscated Goods
Figure 7.3. Association President
entire population would be fined if the confiscated goods were not released. Moeroa told the people, "Do not listen to them, hold the goods!" The gendarmes repeated, "You had better release the goods!" Moeroa replied, "We will hold the goods!" Moeroa was vociferously supported by the majority of the population present.

Moeroa added, "Do not fear the gendarmes. They are not judges. They want to impose on us but they have no legal rights to force us to release the confiscated goods. They are only entitled to conduct an inquiry and record their observations. That’s all." The gendarmes were not very happy to hear this. They repeated over and over, "Release the goods! Open the warehouse!" Moeroa would answer, "Don’t listen to them; don’t listen to them!" Moeroa spoke in both French and Tuamotuan so that the gendarmes as well as the people would understand. The vice-mayor interjected repeatedly, "Moeroa is a fool, an idiot! Don’t listen to him!", but the cries were shouted down by the rest of the population.

A week went by without much progress. In the day, the population worked their pearl farms. In the evening, the gendarmes would try to frighten the population into submission. But the population would not give in. At the vice-mayor's home, located in the center of the village near an uncovered cistern, the gendarmes were harassed by
hordes of mosquitoes. At the end of the week, there was nothing the gendarmes could do but take Moeroa to Papeete. They warned Moeroa, "The judge has already made up his mind to imprison you if you continue to hold the goods!" Moeroa ignored this and submitted voluntarily to the arrest and deportation.

They travelled to Tahiti by plane and Moeroa was left to spend the night at the gendarmerie. The next morning the gendarmes took Moeroa to see the judge, charged with robbery. The judge asked Moeroa, "Are you the Robin Hood of the Tuamotus?" Moeroa replied dramatically, "Yes!" He added, "You had no right to extradite me with the gendarmes. You are abusing your power. This is not a criminal affair!" The judge said, "I can see you are ripe for prison! I firmly intend to imprison you!" At that moment, Moeroa's lawyer (a relative of an association member and a well known indigenous rights advocate) arrived. The lawyer spoke privately with the judge and then Moeroa was called in again. He was asked, "Have you ever been imprisoned before?" Moeroa said, "No." Moeroa was released, but he was told that he had to remain in Papeete until further notice and would not be allowed to return to Takaroa.

During the following weeks, Moeroa continued lobbying for the association in government offices. One of the
people he visited was a councilor at the Territorial Assembly. Moeroa told the councilor that he heard that the prosecutor was getting ready to send a detachment of gendarmes to Takaroa to release the confiscated goods and arrest the association leaders. The councilor was very attentive, keenly aware of the proximity of the next elections to the Territorial Assembly and the importance of the Tuamotuan votes. The councilor telephoned the court during the meeting and asked, "Are you getting ready to send gendarmes to Takaroa (to release the goods)?" They said, "Yes, we are." The councilor said to them, "Think twice about this, because I will be there before you do!" The mission was put on hold and the confiscated goods were not released.

Ten weeks later, Moeroa was permitted to return to Takaroa. His lawyer warned him to go easy on additional confiscations if he wanted to stay on the atoll. But when Moeroa returned to Takaroa, he found that the attitude of the people had changed. The required bail had been raised by the population, but they were afraid of additional encounters with the administration. Nobody said hello. In the church and on the road, people were polite, but in general, they avoided Moeroa and hoped that no new gendarmerie visits would be needed. "That's how they
are," Moeroa explained, "They have always feared the
gendarmes, the law. . ."

There was another reason for the decline of Moeroa’s
support. Many islanders had supported the association as
long when it was opposed to alien entrepreneurs. But
Moeroa had begun confiscating the equipment of islanders
as well, arguing that some had had aliens "behind them". Some islanders felt that Moeroa was becoming paranoic;
they would have liked him to concentrate on the alien
entrepreneurs on Takaroa before he started investigating
the faults of relatives and neighbors. One of the
association’s key supporters, an island councilor,
publicly reversed his position and broke with the
association after his own brother was being investigated
by Moeroa. Due to his lack of support, and also because
of warnings by his attorney, Moeroa retired to a house on
one of the outer islets and appeared to have temporarily
abandoned the resistance.

Moeroa’s silence was taken as the "Go" signal for
several outside investors. Chu had left Takaroa along
with all of Yi Fu’s goods, but a new entrepreneur arrived
who rented Chu’s old buildings (which had remained
intact). This person was an experienced pearl grafter and
was also rumored to be associated with Yi Fu. Additional
pearl farms were also being established by Tahitians and
Tuamotuans from neighboring atolls, many without even a
government concession. Some of these newcomers claimed to
have ancestral land on Takaroa. However, the "titles"
were said (by some) to have been fraudulently obtained,
and--in any case--most of the lands claimed by the
newcomers had been occupied and worked by local community
members for numerous generations.

So despite their reservations, the people began to
urge Moeroa to take action again. One Sunday in April,
1991, a cargo boat arrived, stocked with shipments for
alien investors, including some who had never even been
heard of on Takaroa. Moeroa came prepared with a
bullhorn. He sat on top of copra sacks piled in front of
the community warehouse. He announced, "Additional goods
will be confiscated by the association. Please do not
resist!" A group of young men assisted Moeroa in a long
"assembly line" passing along sacks of merchandise as they
were unloaded from the boat’s winch to the quai. The
vice-mayor tried to resist, personally attacking Moeroa.
But the population massed threateningly across the narrow
quai, shielding Moeroa, and the confiscations continued.

When one of the newcomers attempted to protect his
confiscated goods, an altercation ensued. In the scuffle,
Moeroa struck a man, knocking out two of his upper teeth.
The man was Patira, a Tuamotuan from Makemo with a
disputed ancestral claim. Patira’s relatives were at the pier waiting with their boats. When they saw that Jean was struck, lying on the pier with a bloody mouth and broken teeth, and the population massed menacingly, they quickly seized their relative, hurried him to their boats, and retreated to their newly built pearl farms on the far islets.

The gendarmes arrived one early morning about a week later—a whole platoon of them—aboard a military vessel. Some twenty young gendarmes, all in military olive-grey fatigues, were lined up along the pier front, their hands on their hips. Additional gendarmes were walking about the quai. They demanded the release of the confiscated equipment. However, numerous islanders massed around the pier, threatening to light drums of gasoline if the gendarmes came any closer to the hangar and the gendarmes did nothing.

They probably would have done something, with considerable costs in both bodily injury and merchandise, had there not been any further intervention from Papeete. But word of the escalating crisis had reached the government, who grew concerned about a bloody showdown. At the same time, new elections had been held and the councilor Moeroa had seen had been awarded the presidency of the Territorial Assembly. True to his earlier promise,
he demanded that the gendarmes be called off. The territorial government president, also recently elected, personally telephoned the court and asked on whose orders the military vessel had been sent. He was told that the force had been sent at the request of the vice-mayor to enforce the law. The president explained the potential dangers of the current situation on Takaroa and requested the mission’s recall. He promised that a high level government delegation would travel to Takaroa and handle the affair.

The next day, the gendarmes received an order to return, but they did not leave without re-arresting Moeroa and hauling him onto the military vessel. As previously, Moeroa surrendered voluntarily. This time, the gendarmes warned, it would be a long time before Moeroa would be permitted to return. The same afternoon, the territorial president and other important government officials came to Takaroa on a chartered plane (Figure 7.4, 7.5). They urged the population to have faith in the newly elected government and to follow the law. The confiscated goods would be returned to Papeete, as demanded by the local population, at government expense. They also promised that the community’s complaints would be taken seriously by the administration. The criteria for the allocation of
lagoon concessions would be reviewed at the highest administrative level.

Encouraged by the president's visit, two petitions were addressed to the administration in Tahiti. The first petition was drafted by an association activist, requested that all the alien pearl farmers, listed individually by name, be expelled from Takaroa. The activist went from door to door requesting that people sign the petition and managed to gather over a hundred signatures. The second petition was drafted and signed by five island councilors. They requested that Takaroa be separated administratively from the neighboring atoll of Takapoto, so that the elected mayor would represent the majority will of Takaroa itself. Neither petition was likely to be seriously considered by the administration since they lacked the signature--and were certainly against the will of--the mayor and vice-mayors.

The president's visit was followed several weeks later by a mission headed by the director of the SMA. The director met with the village councilors and then held a public meeting with the population (Figures 7.6, 7.7). She explained that the SMA was being overwhelmed by requests for concessions. In her view, the problem was that the applicants for lagoon concessions had not
Figure 7.4. Arrival of Government Delegation

Figure 7.5.
Director, SMA
Figure 7.6. Government Delegation, Village Meeting

Figure 7.7. The Population, Village Meeting
properly established their rights to adjacent land, as most titles were still listed under the names of grandparents who had died several generations ago. Some of the people objected that their genealogies were established and well known, yet they had still been denied concessions. Others complained that their concessions were too restrictive, and needed to be extended.

These issues, however, had little to do with the problem of the alien entrepreneurs from whom the goods had been confiscated, and for which the mission had been sent. Some of the villagers, including one of the councilors, tried to bring the discussions around to the real problem: Some alien entrepreneurs were pearl farming without any concession or agreement by the community; others had concessions, but were occupying too much area, and blocking their neighbors. The director replied that the villagers were themselves guilty of pearl farming without concessions, exceeding their limitations, and neglecting the required annual fees. Consequently, they had no right to complain about others. She urged the islanders to stop wasting their time with petitions when it was they who had initially sold land and approved the establishment of alien entrepreneurs.

The director announced that henceforth the administration would be more watchful on lagoon
concessions. Applicants would have to provide legal proof of genealogies and rights to land on Takaroa and the application would require the approval of the village mayor. In addition, a team of divers would be sent from Papeete to survey existing pearl farms and penalize those which had not been officially authorized. None of these measures, however, addressed the complaints that the association had raised. The director returned to Papeete and announced happily that she had successfully performed a session of "collective psychotherapy" for the islanders. Additional staff were hired to carefully review applications for lagoon concessions, and interministerial meetings were held to review existing policy.

Moeroa’s support declined even further once he was deported to Papeete. The association had been declared illegal and revolutionary. Some islanders still felt that something had to be done to protect the community against the continued arrival of pearl farmers. With or without concessions, outsiders continued to come and the administration was apparently unwilling or incapable of regulating the influx. The local councilors (most of whom had previously supported the association) announced that they would assume the responsibility for protecting Takaroa. The council, an elected body that is government
authorized, did have the power of arrest and confiscation if laws were being violated. However, few confiscations were carried out.

Moeroa was held in Papeete throughout the following year and in December, 1992, he was brought to trial on criminal charges of robbery for the confiscations and assault and battery for the scuffle with Patira (a civil case is also pending to cover the cost of Patira's broken teeth). Had the judge treated the case broadly, it is quite possible that some important rulings would have come out in favor of indigenous lagoon rights, as several previous rulings have established. Unfortunately for the islanders, the case was treated narrowly. The judge denied all Moeroa's claims to be defending the lagoon, arguing that "personal philosophy" did not vindicate taking the law into his own hands. The judge remonstrated Moeroa for his violation of the law and for his "racist" attitudes. However, he let him off with a small fine and a suspended sentence in view of "extenuating circumstances."

The Importance of Leadership

One of the most significant problems with resistance in peasant and rural society worldwide is that its aims and goals are narrow and ill-formulated, often expressed
in terms of millennialism and banditry, and are sometimes entirely inchoate (Hobsbawm, 1974; Scott, 1979; Desai and Eckstein, 1990). These forms of resistance may suffice to deal with the everyday experience of domination, but they are entirely inadequate in containing or staving off a resolute attempt at further exploitation. No matter how passionate the rebels, the limited immediate interests, traditional subordination, and lack of organization have doomed most rural protest movements to impotence, regardless of the damage they have wrought. Dominant regimes have rarely been truly challenged by rural societies without an educated, radical elite leadership which can supply an innovative, explicit ideology of resistance. Even these elite groups often fail due to the inability to intelligibly communicate with their supporters (Desai and Eckstein, 1990).

It was precisely this leadership niche that Moeroa filled. Moeroa had been away from Takaroa since he was a child, living in Tahiti and New Caledonia and had been actively involved in indigenous rights movements. He was familiar with the ideology, the methods, and the practice of resistance. Unlike some radical elites, Moeroa was not socially removed from his compatriots. During the time of his absence, Moeroa kept a close contact with relatives and other Tuamotuans. He was only slightly better

320
educated than his compatriots, but he had developed the interest in and experience of a mode of resistance which went beyond the parochial interests of most persons on Takaroa. Moeroa could not have returned to the island and--within the space of a few months--organized a resistance movement which claimed the explicit support of half the population unless his ideas resonated with unexpressed, widespread sentiments.

The association’s support declined following Moeroa’s departure, due to its discrediting by the administration and the vice-mayor as well as to internal divisions within the association itself, largely dealing with the problem of indigenous associates of alien investors. However, a number of important victories had been achieved. Yi Fu, who in all likelihood would have deluged the lagoon with his spat collectors and pearl farms, was blocked. Other would-be investors were also stopped, worried about the determined resistance of the local population. Existing investors are likely to be cautious in their future attempts at expansion. One of the most important achievements, however, was that an ideological ferment had been catalyzed within the community as a whole and certain ideas had begun to be formulated and articulated explicitly, as shown below.
Among the indigenous community on Takaroa, the progressive alienation of land and lagoon resources resulted in marked internal social divisions. Some islanders profited through sales, leases, or other alliances with outsiders. Others lost because of the decreasing area now available for pearl farming. Community solidarity, a potentially powerful defense against external challenges, was breached. Deep ideological rifts had opened up between relatives and neighbors. On one side were those supporting the resistance movement, on the other were those who sided with the government-sanctioned alien entrepreneurs. Although there was some action, the struggle was waged primarily through rhetoric. The power of words was well recognized by both the resistance movement and their opponents.

Concern over increasing dispossession and insistence on the continued legitimacy of traditional tenure claims, the fundamental importance of indigenous descent, and the essential inalienability of land and lagoon space were key elements of the ideology of the resistance movement. In contrast, those who consented to the establishment of
alien entrepreneurs espoused government control over Tuamotuan lagoons, Western capitalism and democracy, and a preference for an intensive development of the industry. But the ideological divide was not sharply demarcated; there were points in common with both factions. Various using interpretive, statistical, and observational tools of study, this chapter explores the opposing ideologies, the particular demographic constituencies, and the overall strategy employed by each faction.

**Opposing Factions**

It is one thing to categorize a population to categories based on easily measurable criteria such as age or sex. But it is quite another task to use more elusive, subjective criteria, such as religion or ethnicity. Ideological position is an exceptionally difficult criterion to utilize for aggregative, statistical purposes. Prominent proponents of an ideological faction--such as the leaders of a resistance movement or their opponents--may be easily identifiable but this is not usually the case for the average person. Some individuals are likely to not even have taken up a particular position. The analysis is made more difficult when, as a consequence of repression, adherents of a
particular ideological persuasion are compelled to conceal their affiliation.

Nevertheless, it is clearly important to know whether the constituency of a particular position is broad-based or exclusively represented by a few "radicals". Also, the characterization of constituencies allows a useful correlation between ideology and factors such as economic standing, ethnicity, and religious affiliation. Accordingly, the 90 indigenous households on Takaroa were categorized as follows: 1) Resistance Faction (RF)--households whose senior representatives explicitly demonstrated their resistance to alienation of land and/or lagoon territory, either by signing petitions to the administration or by signing the association charter. 2) Consent Faction (CF)--households whose senior representatives accepted the alien pearl farmers, including those who sold, leased, or transferred land to aliens as well as those who stood clearly apart from resistance activities.

The breakdown of factions by migration is shown in Table 8.1:
Table 8.1. Households by Faction and Migration

<table>
<thead>
<tr>
<th></th>
<th>RF</th>
<th>CF</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oldtimers</td>
<td>19(63.3%)</td>
<td>11(36.7)</td>
<td>30</td>
</tr>
<tr>
<td>Returnees</td>
<td>33(55.0)</td>
<td>27(45.0)</td>
<td>60</td>
</tr>
<tr>
<td>Total</td>
<td>52(57.8)</td>
<td>38(42.2)</td>
<td>90</td>
</tr>
</tbody>
</table>

Though guided by a handful of influential leaders, the resistance movement has a wide support base, comprising 52 households, over half of the indigenous households resident on the atoll. Interestingly, the resistance movement drew a proportionately greater support from oldtimers than from return migrant households, despite the fact that the leaders were predominantly return migrants. Prior to the large wave of return migration, which peaked around 1987, the resistance movement had indeed been led by oldtimers. However, due to the dynamic influence of return migrants exposed to radical thought and organization, including households which had previously resided in New Caledonia, the leadership was taken over from the oldtimers (see Chapter 7).

There is a marked correlation between ideology and religion (Table 8.2):
Table 8.2. Households by Faction and Religion

<table>
<thead>
<tr>
<th>Faction</th>
<th>RF</th>
<th>CF</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mormon</td>
<td>43(69.4%)</td>
<td>19(30.6)</td>
<td>62</td>
</tr>
<tr>
<td>Sanito</td>
<td>2(33.3)</td>
<td>4(66.7)</td>
<td>6</td>
</tr>
<tr>
<td>Catholic</td>
<td>6(37.5)</td>
<td>10(62.5)</td>
<td>16</td>
</tr>
<tr>
<td>Protestant</td>
<td>1(16.7)</td>
<td>5(83.3)</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>52(57.8)</td>
<td>38(42.2)</td>
<td>90</td>
</tr>
</tbody>
</table>

The proportion of Mormon households supporting the resistance movement was over twice that of other faiths. Conversely, the majority of non-Mormon households belonged to the consent faction. The social networks within the local Mormon church have apparently contributed significantly to the resistance movement. However, the resistance movement did not receive the support of the Mormon church leadership in Tahiti. In fact, the Mormon church was quick to censure its members for the violation of administrative law. Church authorities in Tahiti also instructed local church leaders to disassociate themselves from the resistance movement, threatening resistance leaders with excommunication for violation of government law.

Data on education and language indicate that exposure to Western cultural influences has had an important impact on ideology (Table 8.3):
Table 8.3. Households by Faction, Language, and Education of Household Head

<table>
<thead>
<tr>
<th>Education</th>
<th>RF (%)</th>
<th>CF (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>32(65.3)</td>
<td>17(34.7)</td>
<td>49</td>
</tr>
<tr>
<td>Secondary</td>
<td>20(48.8)</td>
<td>21(51.2)</td>
<td>41</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>52(57.8)</td>
<td>38(42.2)</td>
<td>90</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>French Language</th>
<th>RF (%)</th>
<th>CF (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Used</td>
<td>30(66.7)</td>
<td>15(33.3)</td>
<td>45</td>
</tr>
<tr>
<td>Used in Household</td>
<td>22(48.9)</td>
<td>23(51.1)</td>
<td>45</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>52(57.8)</td>
<td>38(42.2)</td>
<td>90</td>
</tr>
</tbody>
</table>

Proportionately less support for the resistance movement came from household heads who had received secondary education and who were fluent in French. Education and language were both important media by which external culture and ideas could be disseminated among the islanders. Ostensibly, Western education and language were introduced—and often welcomed as—an administrative desire to improve the cultural welfare of the islanders. But the above data point to a darker aspect of culture: it can play a critical role in the establishment of hegemony.

Indicators of material wealth, such as the possession of automobiles, are also correlated with ideological position (Table 8.4):
Table 8.4. Households by Faction and Possession of Material Goods

<table>
<thead>
<tr>
<th></th>
<th>RF</th>
<th>CF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical Generators</td>
<td>18 (34.6%)</td>
<td>21 (55.3%)</td>
</tr>
<tr>
<td>Air Compressors</td>
<td>9 (17.3)</td>
<td>13 (34.2)</td>
</tr>
<tr>
<td>Automobiles</td>
<td>13 (25.0)</td>
<td>17 (44.7)</td>
</tr>
<tr>
<td>Boats</td>
<td>39 (75.0)</td>
<td>32 (84.2)</td>
</tr>
<tr>
<td>Total Households</td>
<td>52</td>
<td>38</td>
</tr>
</tbody>
</table>

Proportionately more of the consent faction owns the most expensive luxury goods. The majority of households own boats because it is a necessity for work. But electrical generators, air compressors, and automobiles are not indispensable items. It is quite possible to engage in spat collection and even small-scale pearl culture without owning any of these. Automobiles are the best example of a luxury good. They retail for several times the price in the U.S. (due to French Polynesia's steep import taxes). They are not necessary for work and there is a very limited area of the atoll upon which automobiles can even be driven.

Success in pearl farming also correlates with ideology (Table 8.5):
Table 8.5. Pearl Farming Data by Faction

<table>
<thead>
<tr>
<th></th>
<th>RF</th>
<th>CF</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Pearl Farm Area (Ha.)</td>
<td>1.43</td>
<td>2.68</td>
<td>1.96</td>
</tr>
<tr>
<td>Mean Annual Graft (#Oysters)</td>
<td>973</td>
<td>2,907</td>
<td>1,777</td>
</tr>
<tr>
<td>Mean Annual Spat Collection (#Stations)</td>
<td>12</td>
<td>9</td>
<td>11</td>
</tr>
</tbody>
</table>

The mean lagoon area for the consent faction was twice as large as that occupied by the resistance faction. Moreover, while both sides were actively involved in spat collection, the annual graft of the consent faction was three times that of the resistance faction. Proportionately more of the consent faction were return migrants who had the capital for pearl farming. Their capital was also increased through sales, leases of land, and other arrangements with the alien pearl farmers. In contrast, support of the resistance movement required voluntary work, yielded no financial benefits, and sometimes even incurred fines.

The Ideology and Practice of Resistance

The resistance movement on Takaroa was not a one-man enterprise. It was supported by a wide proportion of the population, as seen above. Resistance to outsiders began many years before Moeroa moved to Takaroa and continued after he was deported. But the fortuitous and timely
presence of a charismatic leader played a critical role in
the mobilization of the resistance movement. Moeroa was
persuasive because he had a well articulated ideology
concerning indigenous people, their territory, and
external intruders (discussed below). Moeroa’s ideas,
formed from Tuamotuan tradition and a lifetime of activism
in Tahiti and New Caledonia, found fertile soil on
Takaroa.

The influence of Pouvanaa, founder of Tahiti’s
independence movement, was seminal in the ideology of the
resistance movement:

Pouvanaa warned about this. I was one of his
followers. I was about 28 then. He said, ‘Tahitians:
watch out for your future! Watch out for your ‘āi’a
(patrimony)! Europeans are coming. . .’

In Pouvanaa’s teaching, as understood by the leaders of
the resistance movement, territory is not an exchangable
commodity; it is an ‘āi’a, a "patrimony" which should
remain in trust for future descendents. The arguments
offered by the government—colonial tenure laws, the need
put land to the highest productive use, equal rights,
permanency of sales—were invalid. The dispossession of
lagoon space on Takaroa provoked feelings among the
islanders which resonated strongly with Pouvanaa’s ideas,
articulated by the resistance leadership.
But Moeroa’s support plummeted after he was deported to Papeete:

In January, I was notified that I could return to Takaroa. I was under no illusion concerning my reception. When you do something over here for the people, you do not wait for thanks. You will not receive it. I was treated like a released convict. Nobody came to say hello. They didn’t talk to me. These people have always feared the gendarmes, the law.

The gendarmes had convinced the population that the association’s activities went against the law and those who supported it were liable for punishment (however, other factors may have been involved as well, as noted in Chapter 7). There was no better example than the deportation of Moeroa. During his months of absence, his ten spat collection stations gradually sank into the lagoon and disappeared. Very few of the islanders would have liked to endanger their families’ welfare by risking deportation. Moeroa, however, was a bachelor and had no family to support on Takaroa.

Local observers felt that support for the resistance movement would eventually reassert itself:

The association does have power. Moeroa lost support because he was arrested. But he will regain it his support. Knowing the Tuamotuan mentality. Not right away. People will be cheeky to him. But if the situation on Takaroa gets worse, they will back him for sure.
Support for the government, the entrepreneurs, or the resistance movement could wax or wane, depending on changing circumstances. The authority of the government could be successfully challenged by a charismatic leader. Support for this leader could, in turn, be withdrawn if government force is applied. But the government, too, realized that it had to tread lightly, and acted accordingly. Concessions were made to the demands of the islanders. The population on Takaroa would only tolerate so much; pushed beyond acceptable limits, even a rejected leader could regain a following.

**The Association Charter**

The Association charter specified the following aims:

- (1) to protect and preserve all sites, monuments, and natural places in Takaroa, including the zones of agriculture, fisheries, spat collection, oyster raising, and pearl culture.
- (2) to inform and ward off the possibility of sale or purchase of land to and by an alien (étranger).
- (3) to monitor any alien deployment in the exploitation of lagoon resources.
- (4) to promote productive activities and related industries.
- (5) to improve and raise the standard of living in the island and within the community.
The above text is somewhat cryptic: Article 1 reveals that the general purpose is to protect all the natural resources of the atoll (from what or from whom?). Articles 2-3 are opposed to alien pearl farming activities (but who is an "alien"?). Articles 4-5 promote economic development of the community (innocuous enough, but how does this fit into protection?). One must bear in mind that the association was attempting to receive recognition as a genuine community institution. Had its statute had been politically explicit, it would surely have been refused authorization.

For additional detail, we must turn to evidence supplied by oral discussions with its leaders and supporters.

Material Concerns

Gradually, the lagoon will be alienated. The small farmers will be crushed. Our children will not be able to begin. Maybe as workers of the large farms. It will be the same as Papeete. Only the large will survive.

The other islands do not have the same riches. So they don’t really try to protect it. Over here, they really produce the oysters. That’s the only difference.

The key aim of the Takaroa resistance movement was the defense of the lagoons; it was not larger political
pretensions. By 1991, most of the authorized lagoon space had been allocated to a handful of alien entrepreneurs, while some of the islanders had been denied concessions, were still waiting, or had received concessions that were too small. Aliens also purchased, leased, or otherwise occupied many of the land parcels parallel to the pearl farms, blocking access to the adjacent lagoon space. There was fear that the continued arrival of these entrepreneurs would make it impossible for the islanders to compete, eventually displacing them from their own lagoon.

The 'Ona

The fear of dispossession was provoked primarily by the large-scale entrepreneurs:

The pearl industry has been good for us. But we are not happy with one thing: the coming of the 'onas ("entrepreneurs") in the lagoon.

If the société ("companies") come with the necessary resources, before the islanders have time to apply, they will saturate the lagoon.

The key terms used here are 'ona (the common Tahitian term for businessman, probably derived from the English "owner") and société ("company" in French). As we have seen, the alien entrepreneurs were involved in much larger
pearl farming operations than the islanders. Initially, several entrepreneurs had been willingly accepted by the population as a whole. However, resentment at the scale and expansion of the largest of these resulted in a revival of traditional lagoon claims, an intensification of ethnic distinctions, and opposition to all non-indigenous pearl farmers, large or small (see below). But there was no opposition to indigenous pearl farming operations, even to those islanders who were also large-scale pearl farmers.

**Partnerships**

The association’s opposition to partnerships with external investors caused division within the association and was viewed by some as undue paranoia:

> Start from the bottom, work hard, and earn your money properly. This is the right way. But some people are associating with entrepreneurs. If everybody does this, there’s a lot of money outside.

> You are allowed to be associated. As long as you stick to the limits of the concession and the land parcel. But you can’t put a big farm, that’s for sure.

> When I came to Takaroa, I built everything for ourselves: a store, a boat. People began to say, ‘There are people associated with him.’ It’s not true. That’s one of the problems over here. They don’t believe we can get anywhere on our own.
Accusations seldom referred to a formal financial partnership, since concessions were legally limited exclusively to the applicant. More often, they referred to informal liaisons, such as external entrepreneurs providing capital and receiving a return on the investment. This was viewed differently than a bank loan because the investors could try to exploit the situation and establish themselves, as in the cases cited in Chapter 7. But these charges were generally vague, rarely substantiated, and often arose in the natural course of island gossip and rumor. A surprising large number of islanders, including association leaders, were accused at some time or other of being partners with external investors.

**Lagoon Claims**

The lagoon is claimed by all members of those "originally" coming from Takaroa:

The island belongs to all those originally descending from Takaroa. It is our ancestors who claimed the land and lagoon.

The lagoon is ours alone--from our ancestors. Leave our wealth for ourselves.

This was, in fact, a change from attitudes in recent decades. The lagoon had been appropriated by the
government generations ago the Tuamotuans had since complied with administrative lagoon regulation. Members of the resistance movement had themselves applied to Papeete for lagoon concessions, implicitly accepting government control. Government law was also supported by the Mormon and Catholic church. However, pressure by alien investment led to a reconsideration of generations of compliance and long dormant, almost forgotten claims were now being dramatically revived.

It is notable that the rhetorical claims of the resistance movement were framed in the language of patrimony and property rights, not on a "deep" and "intimate" society/environment bond, as has been argued by proponents of indigenous rights elsewhere (e.g., Martinez-Cobo, 1983). Apparently, traditional lagoon claims were thought to be a more powerful argument than more emotive appeals. It is also possible that after centuries of colonial rule and missionization, the more metaphorical conceptualization of territory had lost much of its salience, abandoned and even feared along with the marae and other vestiges of the tau 'etene ("heathen period").
Ethnic Distinctions

Ethnic distinctions and even ill-will were evident but primarily in relation to territory:

We were opposed to the settlement of all persons that did not originate from Takaroa. We do not dislike aliens. But their settlement will one day be a problem for us. For this reason, we decided to put on the brakes.

The example of Fiji is quite relevant. One day we will do the same to the Chinese here. They are a small minority which attempts to manipulate the whole population with their economic power.

The articulation of indigenous lagoon claims in the wake of the settlement and expansion of alien pearl farming resulted in an intensification of ethnic distinction and ethnic animosity. However, there was no evidence in numerous interviews or public meetings of any general antipathy towards non-indigenous people. Quite the contrary. Most islanders have part-Tahitian or part-Chinese ancestry. When alien pearl farmers or their families visited the village, they were not treated with any personal antagonism.

The Contingency of Alien Rights

Rights granted to aliens are seen as temporary and contingent:
Tahitians cannot come here and buy land. It is not the land of their ancestors. They may be accepted temporarily, but if there is trouble, they can be expelled.

They are sending themselves away. If they had respected the law, if they had listened to our advice, we would not have given them trouble. We would not have any reason to quarrel with them.

Only four of the 16 alien pearl farmers owned land and the two recently purchased parcels were miniscule and purely symbolic. Those who owned land were also considered to be dependent on the continued goodwill of the community. Indigenous individuals had much stronger rights, due to their ancestral heritage, but even they were dependent on the community as a whole. Return migrants were accommodated as a rule but they too needed to reach an understanding with relatives and neighbors.

The Rights of Landowners

Lagoon rights were considered to be connected with rights to land:

Lee is farming 20 hectares without our approval. His concession has spread across land and channels he does not own. Now he is trying to occupy the whole lagoon between his two farms.

Hina gave him (Lee) only one small portion of land, but he continued to expand. He now blocks my land which lies right next to Hina’s. My son told him to keep clear, but he keeps on expanding.
The occupation of nearshore lagoon space—for both islanders and alien pearl farmers—should not extend outside the borders of the adjacent land parcels. Individual pearl farms, usually situated within a few hundred meters from land, should be confined to a strip of lagoon perpendicular to a legitimately claimed land parcel. Spat collection, however, is conducted in deep waters in the center of the lagoon, which is commonly claimed by all the indigenous inhabitants of the atoll, without respect to the location of particular landholdings.

**Commitment**

Alien entrepreneurs are perceived to have no true commitment to the island:

Giscard’s father bought land here seventy years ago because of the oyster trade at the time. Once oysters became scarce, he left. Now that the oyster trade is back, his grandson wants to come. We should not allow land sales to aliens who have no real interest in our community. Their only motive is to exploit the oysters. Once finished, they will leave.

The islanders are dependent on their land and lagoon resources to sustain themselves and their descendents for generations to come. The traditional collective tenure system helps protect the land from alienation and absentee ownership. The lagoon is more difficult to protect owing
to the arbitrary allocation of concessions by the Tahitian administration. But the alien entrepreneurs were not felt to have a real commitment to the atoll or the community. They came primarily "for the oysters", and attempt to make profits as quickly as possible, regardless of the long-term consequences.

Ecological Concerns

The alien entrepreneurs are criticized because of their potential role in oyster mortality:

We have asked for his concession to be reduced from 20 hectares to the concession area he was originally given. The more emplacements in our lagoon, the more the risk of disease.

Why don’t we sell our oysters to pearl farmers on another, uncrowded atoll, instead of letting aliens come to start large farms on Takaroa?

The islanders know that disease epidemics have affected small-scale farmers on Takapoto and they are concerned about increasing mortality rates on Takaroa as well. They are concerned that the large-scale pearl farms of the alien entrepreneurs poses a greater disease risk than islander spat collection and small-scale pearl farms. The islanders need to be here because it is their home and returning migrants need to be accommodated. But the aliens could just as easily farm pearls on any of the numerous, less
crowded atolls which do not have naturally abundant pearl oyster stocks and purchase their seed oysters from Takaroa.

Religious Appeasement

Religious authorities were criticized, but not repudiated:

The Mormon church will do nothing. It is run by people who are themselves aliens. It is all Mormons who were with us on the quai. But the Presidents are silent. We are not against them. But we would like them to take a position.

The leaders and members of the resistance movement were faithful churchgoers. They did not fundamentally challenge the authority of their leaders. But they did question their judgement. And when the leadership was deemed to have failed the population in order to appease the government, violation of church authority became not only acceptable, but necessary. The religious leadership was human and infallible. The Catholic church was biased because of contributions from the entrepreneurs. Central church leaders needed to be brought back in line with the reality of the situation on Takaroa.
Strategy: Blocking, Containment, and Rejection

A tit-for-tat strategy was employed by the Takaroa resistance movement. Responses escalated with the progressive insinuation, settlement, and expansion of alien settlement on Takaroa. Initially, the community tried to block the entrepreneurs from settling. When this did not work, they attempted to confine the entrepreneurs to a limited space and production activity. When expansion could not be contained, the community became radicalized, demanding rejection of all external entrepreneurs. The increasing defiance of resistance activities is a reflection of the deepening sentiments of fear and anger, a reevaluation of the current system of lagoon management, and a shift of attitudes vis-a-vis external investors and the administration.

Blocking

The alien entrepreneurs that initially settled on Takaroa met with minimal opposition by the islanders. Their scale of operations was moderate and their work did not seem a threat to the local community. Consequently, they were generally well accepted. Things began to change when Lee arrived, assisted by an indigenous household, but unauthorized by the Tahitian administration, with enormous quantities of goods.
Fearing an eventual takeover of the lagoon, the mayor, backed by the population, confiscated the merchandise, prevented the exploitation of local lagoon waters, and sent the investor back to Tahiti. Petitions were also sent to the administration in Tahiti, explaining that the population was opposed to external investment of any kind in local lagoons.

**Containment**

Lee returned to Takaroa, leased a parcel of land, and persuaded the population that his presence would be beneficial to them. He would confine his farming to a specified area of lagoon space and would engage exclusively in pearl farming, purchasing the necessary seed oysters from spat collection efforts of the islanders. They agreed to sign a supportive petition and Lee was granted a concession. But it soon became evident that the strategy of containment was not working. With each succeeding year, Lee continued to expand. By 1990, he was occupying an area of lagoon well in excess of the area initially allotted, blocking the lagoon access of his neighbors. Lee's workers were also accused of deploying their own spat collection stations in the lagoon, as well as oyster and pearl theft from local farmers.
Rejection

The situation was exacerbated in 1990, when a wave of new investors, including Yi Fu, an investor several times more powerful than Lee, threatened to deluge Takaroa. The Japanese were also on their way. At this point, the population decided they had had enough. Led by a return migrant who had considerable experience in political organization and action, an association of protection was formed. The majority of all households supported the association, participating in meetings and a variety of other activities. The association did not only block new arrivals; it attempted to eject those already settled. A number of small-scale alien pearl farmers were also included, as well as their indigenous partners.

The new wave of alien entrepreneurs was blocked from settling on the atoll. This was a particularly upsetting defeat for Yi Fu, who had shipped hundreds of tons of equipment to Takaroa, and under cover of a local, had already leased land and built several houses on an outer islet. In addition, a series of shipment confiscations, sustained over a period of several months, was directed at established farmers. A platoon of French gendarmes, attempting to release the confiscated merchandise, was repulsed. The recently elected territorial administration, facing severe political and economic
problems in Tahiti, decided to defuse the crisis on Takaroa, and covered the costs of shipping the confiscated merchandise back to Tahiti.

But the previous wave of entrepreneurs had already become entrenched and could not be dislodged, short of violence. Wary of encounters with the law, the islanders began to withdraw their support from the association. The resistance movement entered a dormant phase, but it did not expire, and could be reorganized if the need arose. The population had successfully stood up to the gendarmes and it had provoked the administration to reconsider its lagoon policy. Young children had been exposed to ideologies and practices which might serve as an example in the future, much as the leaders of the current resistance movement on Takaroa had drawn on observations and narratives of resistance in New Caledonia, memories of Pouvanaa's courageous resistance in Tahiti, and even earlier yet, the valiant battles waged by Takaroa's legendary heroes.

The Ideology and Practice of Consent

Unlike resistance, consent was never organized under a single leader and could not be considered a movement in any meaningful way. It was rather a group of circumstantially aligned households who, in quite
different situations, and for a variety of reasons, chose to consent--less often to defend or promote--to the establishment and continued presence of alien pearl farmers. Material inducement was an important factor for those islanders who sold or leased land to alien pearl farmers. Preference was given to those households for purchasing seed oysters. When alien entrepreneurs first became established on Takaroa, they often began in partnership with locals, offering their supporters a salary, a small percentage of the graft, and a chance to learn farming techniques.

Financial factors also played a role in other ways. A previous mayor is said to have accepted an alien entrepreneur only after a "suitcase full of money" was presented to him (however, others, including the mayor himself, said that the suitcase was not accepted). Votes for the current mayor, who approved the concessions of many alien entrepreneurs, are said to have been offered incentives through sports equipment, other gifts, and large promises. These are charges which have been brought to court, and have been at least partially substantiated. Even some islanders who sold land to aliens are said to have been initially opposed to the sale and to have only gone ahead because of personal financial difficulties.
Force and threats played a prominent role in the making of consent. Islanders were repeatedly warned that participation in the resistance movement was considered a revolutionary act. The leaders of the resistance movement were extradited from the atoll and threatened with imprisonment, fines, and prohibition of returning to the atoll. Resistance activists were denied lagoon concessions on the basis of having been involved in criminal activities. Repeated visits of gendarmes from Tahiti, as well as follow-up visits by the political authorities and regulatory surveys by the SMA all helped to discourage resistance and induce consent. As mentioned, church authorities threatened their adherents with punishment or excommunication if they violated the law of the government.

The ideology of consent was less overtly voiced than that of the resistance movement. At least partly, this is because material inducements and force played an important role. However, conversations with articulate members of the consent faction indicated that, to a certain extent, consent was ideologically based. Consent on Takaroa was linked to the ideology of an external political, religious, economic, and cultural hegemony. The political authority of the Tahitian administration and courts, the moral authority of the externally based Mormon and
Catholic churches, Tahiti's economic preeminence, as well as the more subtle cultural dominance of a predominantly Western education, language, religion, and media, were unquestioned by many islanders.

**Political Authority**

Among the consent faction, the authority of the administration over the allocation of lagoon concessions was legitimated by law:

Over here we cannot make any decisions. The only thing we can do is to follow... We follow civil law. It is not the population who makes the law. It is the Council of Ministers, with the advice of the mayor.

Everything was done perfectly against the law, without right. The people revolted against the law and the government... If people do not respect the law, there will be no control.

Administrative authority actually reflects the concerted influences of a number of powerful, entrenched political institutions: the Tahitian legislature (which drafts the laws on the administration of public domain), the SMA (which conducts periodic surveys and makes recommendations on each applicant file for a lagoon concession), the Council of Ministers (who allocate the concessions), the courts (who interpret the law), the gendarmerie (who enforce the law), the president (head of the Council of
Ministers), and the High Commissioner’s Office (who has general supervisory powers over matters of law and order). Tilting with this combined and seemingly awesome power would be quixotic.

Religious Authority

Defying the administration is also morally unacceptable:

Moeroa was going outside the law. He would not submit. There is a policeman here. The association can defend the lagoon but not break the law. . .I told him, 'Don't do outside of our law. Now he has gone to prison. His identity papers have been taken away. He is not free. The law is behind him. . .We cannot go against the law, even the church.

Local Mormon church leaders had initially supported the resistance movement, assuming that they were empowered by the law to protect their lagoon. Many aliens had indeed violated the terms of their original concessions and local agreements. But the islanders reversed their positions when the resistance movement ran afoul of the law. The resistance movement never received much support from Catholic church members. The Catholic church receives much of its funding from the Tahitian government’s social programs and works quite closely with elected politicians and bureaucrats. The Mormon church is less politically
involved, but it too is wary of antagonizing the administration.

**Economic Dependence**

Equally important is the economic dominance of Tahiti over the miniscule and remote atoll communities:

If we don’t let others come here, when we no longer have this resource, this gold, we will go to Papeete to look for work. And if they don’t let us go over there? May be they will do the same thing. They will say nobody else can go there.

Self-sufficiency may have been possible in the past, when standards of living were not as high. Today, however, outer island communities are heavily dependent on Tahiti for jobs; subsidies for copra and transport; development aid for harbors, airstrips, telephone and satellite linkages; and government funded schools and health clinics. In return, the outer island communities are expected to reciprocate for the benefit of the territory as a whole. During the mother-of-pearl diving industry, Tahitian divers and entrepreneurs were allowed to work in the atolls and it is now the same during the pearl culture industry. A closed doors policy would result in Tahiti shutting its doors as well, which would be unacceptable to most Tuamotuans.
Individualism

Individualism is an important feature of the ideology of consent:

Many in the community spoke badly about me. But I didn’t get angry at them. That was their business. I minded my own business.

Takaroa is becoming like the cities. The people are individualistic. They separate. . . . Everybody minds his own business.

It is not that the community ethic has disappeared altogether. Fish is still distributed freely to relatives and neighbors and people frequently borrow items from each other for indefinite periods. There is also a powerful undercurrent of gossip flow which keeps the community informed about the activities of its members. In-group marriage is common and lines of descent and kinship still bind the community tightly together. However, the collective ethic has weakened considerably and individuals now feel increasingly that given sufficient incentive, it is within their right to act in their own material interests.

Capitalism

A capitalist ethos was clearly articulated by an indigenous pearl farmer:
We are all capitalists. We live in a capitalist society. You do what you want with your money.

The pre-European economy of subsistence and social exchange has been replaced by one based on Western style capitalism. The improvement of standards of living is proof of the greater power of the new economy. Individuals or families should be permitted to advance their own self-interest, even if this means—and it usually does—transferring land or otherwise supporting external entrepreneurs. Other members of the community should not complain as they, too, are free to profit in this way should they so desire.

Democracy and Human Rights

Migrants (irrespective of ancestry) must be admitted to Takaroa on moral and religious grounds:

You can't discriminate. It's a matter of the evolution of a population.

I speak to my people through the Gospels and they understand. All the people here are my brothers. Even Lee. Even Richard.

In the past, exclusion of outsiders may have been necessary for protection from enemies, but things are necessarily different today. People have become
enlightened by Western moral and religious values. It is no longer acceptable to discriminate on an ethnic or racial bias. This applies to work opportunity as well as acquisitions of territory. Ownership of land, lagoon, or other material goods need to be freely available to any person with sufficient capital, regardless of the ethnic identity of the individual.

Land Tenure

The traditional principles of descent and residence are giving way to free exchange, even in situations of collective ownership, but they have not altogether disappeared:

People have the right to sell land, to lease land.

If you sell your grandmother’s land because you need money, it’s too bad. Just to have a new car, a new appliance? (But) once they have bought the land, nothing can be done. A Tahitian can buy land here just like Tuamotuans can buy in Tahiti.

The above statements indicate the limitations of hegemonic persuasiveness: Even those who accepted the Western tenure system were not entirely content with its ramifications. There were frequently personal compunctions as well as family and community pressure. It was commonly recognized that land should be preferentially
kept within the family, just as it is in capitalist societies. It was acknowledged that outsiders have unfair advantage because of their superior access to administrative bureaus and financial resources. Nevertheless, if an islander feels that economic imperatives are compelling, the land should be freely transferrable.

Lagoon Tenure

It is the Papeete government, not the communities, who determines the allocation of lagoon concessions:

If more people want to come, there is a law. There are people in Papeete authorized to grant (lagoon) concessions.

It is not for the population to decide who is to deploy stations in the lagoon. It is... the Council of Ministers, with the advice of the mayor.

The local population, represented by the mayor, has a purely advisory capacity. It is the Council of Ministers who award concessions, depending on the applicant’s assessed financial means, technical ability, and potential for contributing to the development of the industry. Like all parts of the public domain, lagoons were governed by the Tahitian administration. Ideally, the concession applications of local inhabitants should be given
priority, but lagoon allocation must meet the needs of the territory as a whole.

Tradition

There were varying views as to the residual significance of traditional land and lagoon tenure practices. According to one view, the islanders never had genuine territorial claims:

In that time, very few people owned land. The land was owned by the chiefs. When the French took over, it was they who distributed rights to the land. It had nothing to do with the ancestors.

To some, the traditional culture could not be taken seriously:

In the character of the people here, nothing is profound, everything is superficial. Even the religion is superficial.

To others, it was a question of social progress:

This is all part of civilization. There will be social evolution. It will be bad from the point of view of Tuamotuan culture. It's bad to lose your culture. But you can't stop the future. It has already begun.
Strategy: Caution, Discretion, and Power

In contrast to the members of the resistance faction, who formed a group with common purpose and organized activities, the consent faction functioned as individuals and rarely operated concertedly. Transactions with alien entrepreneurs were conducted cautiously, due to concerns over reaction by the local community as well as the administration. Those who collaborated with the entrepreneurs did so with secrecy, although they were invariably discovered. The collaborators attempted to defend their interests by achieving positions of political power.

Caution

Even those who consented to the presence and establishment of alien entrepreneurs on Takaroa did not easily give up their ancestral land parcels. Intense family and community pressure (mainly in the form of gossip) was directed at any islander attempting to give up land to aliens. Few of those who consented to the establishment of alien entrepreneurs gave up land, and even fewer actually sold land. The aliens were generally accepted as temporary occupants of the land, either on a lease basis or on a free-of-charge basis, subject to the ultimate approval of the rightholding families and the
community as a whole. Less frequently, a lagoon concession and/or a pearl farm would be sold to an alien. Under current administrative regulations, lagoon concessions were valid only for the applicant and the applicant's household and could not normally be sold or otherwise transferred.

Even when land was sold, it was usually only a miniscule portion of a particular plot; the majority of the land remained under the control of the original owner and landholding group. Initially, this was not a great problem, as the pearl farming operations were conducted in the lagoon and even the buildings were usually constructed on reef pilings some distance into the lagoon. But problems did arise. Due to the ensuing land/lagoon disequivalence, access to pearl farming was denied to claimants of neighboring land. Consequently, further negotiations were needed and to the surprise of the entrepreneurs, who thought the deal was concluded, additional compensation sometimes had to be made to the claimants of the land.

Discretion

The majority of the transactions between islanders and alien entrepreneurs were conducted in secret. This was necessary to prevent opposition and envy by relatives and
neighbors and also to keep the matter from the ears of the administration in Tahiti. Few aliens arrived with the proper concessions and the administration was generally reluctant to authorize the establishment of an alien on Takaroa until some local consent had been obtained. At the same time, local collaborators were understandably reticent about disclosing their own involvement and much time would usually elapse before the concession actually came through. Atoll communities are small places and few secrets can be kept for long. But by working in quiet, it was hoped that local resentment could be mitigated or diverted altogether.

In contrast to those who actually sold or transferred the land or were otherwise involved in the establishment of the aliens were several islanders who had no objection to the establishment of aliens, but were uninvolved in the actual transactions. This latter group was comprised of a few young, well-educated islanders who had been born abroad, but had not become politically radicalized. Better able to manage financially on their own, they did not need to sell precious land resources as did some of their compatriots with a lesser amount of available capital, experience, and initiative. Not being personally involved in land alienation, they were also not subject to community retaliation--usually directed at hard action.
rather than soft opinion--and were able to express themselves freely.

**Power**

Sales, leases, and partnerships with external entrepreneurs were accompanied by collaboration at a political level. External investment was a major issue in the municipal elections of 1989. Many of those in the consent faction on Takaroa supported Louis, a Tahitian who was a territorial assemblyman for the Tuamotus and a minister in the previous government. Louis was elected on the strength of Takapoto votes, and not because the majority of Takaroa voted for him. The Takapoto support is also alleged to have been inappropriately obtained and the elections were heatedly disputed at the Papeete courts (see Chapter 9).

Louis’ key supporters, who eventually became the two vice-mayors of Takaroa, were resolutely opposed to the resistance faction and its activities. One vice-mayor was admittedly a partner of an external investor in Tahiti and had already offered him an ancestral land parcel and a lagoon concession. The other vice-mayor was also said to have partners. This was an important factor in their personal opposition to the resistance movement and its ultimate decline. The majority of the island council,
however, supported the resistance movement. The opposition between the mayor and his council created a severe power vacuum. In the wake of this political paralysis, community divisions became deeper, enabling opposing groups to develop increasingly polarized ideologies and strategies.

Moral Ecology or Moral Economy?

In Chapter 1, it was argued that there is an important distinction between indigenous resistance to dispossession and peasant resistance to exploitation. In peasant resistance, the problem is oppressive relations of production, the opposition is between related classes, and claims are based on social contract. In indigenous resistance, the problem is resource alienation, the opposition is between unrelated groups, and claims are based on ancestral rights. In part, this distinction is validated through the conflict on Takaroa, where the concepts of 'āiʻa and feiā tumu make it possible and necessary to allocate resources to returning relatives, but not to unrelated aliens.

However, the distinction between peasant and indigenous resistance is a simplification which does not tell the whole story. Over a century and a half of hegemony under external administrations, the indigenous
systems of meaning and ideology have changed. The islanders may be indigenous people, but they are no longer self-reliant gatherers and cultivators; they may also be called peasants (though perhaps closer to the "kulak" end of the continuum) in the sense that they have strong ties with and are quite dependent upon the world economy. Moreover, economic relationships do exist between the entrepreneurs and the islanders, including the purchase of seed oysters, the hiring of workers, and even partnerships.

The conflict is thus not between totally unrelated insiders and outsiders. The islanders are no longer purely native and the entrepreneurs are no longer exclusively alien. There is increasing contact between both sides, resulting in significant changes in the dynamic of social conflict. The dichotomy is not simply between feiā tumu and rātere; there is also a dichotomy between small-scale household producers and large-scale entrepreneurs, most cogently expressed in the epithet ‘ona. There is a real fear of entrepreneurial expansion, islander dispossession, and future exploitive relations. There are thus important elements of "moral economy" in this conflict and the proposed notion of moral ecology can only be applied in a limited and partial sense to the islanders on Takaroa.
It is apparent from the above analysis that today's resistance ideology is founded on a mix of ideological motivations; simplistic explanations of resistance are inadequate. Resistance is based on factors of identity as well as economics. This is a natural consequence of the processes of economic and social change that atoll communities have been exposed to. But the changes do not necessarily mean that claims of resistance proponents based on traditional concepts and rights are inauthentic or false. Tradition itself evolves and changes; it was never a matter of a static relationship between atoll societies and their environments. The maxim of Hereniko (1993) is appropriate here as well as for other Pacific societies: Tradition is "roots to grow from, not a box to be confined in."

The attachment of indigenous peoples to their territory has been well documented by numerous studies (Bonnemaison, 1981, 1985a; Martinez-Cobo, 1983). Some of these studies seem to assume that these feelings derive from a universal, timeless sense of attachment, emerging from the archetypal subconscious of indigenous peoples. It is likely, however, that this ideology did not always exist, but was more recently articulated, perhaps in response to an external threat, as Linnekin (1983; 1990) has suggested in reference to heightening ethnic
distinctions in Hawaii and New Zealand. Ideological positions are socially created conceptual constructs and they can be dissolved as easily as they were originally created.

In relatively isolated situations, conceptualizations of indigenous identity and territory tend to be vague, flexible, and contingent on the circumstances of the moment (Sack, 1973). But when a resource has been discovered, communities are subject to intrusion by external interests and ideological positions crystallize and harden. What might appear to be maladaptive, overconservative, and ethnically biased attitudes towards land tenure, migration, and resource use—or on the other hand, equally maladaptive collusion with outsiders—may be the only means available to avoid displacement. Either way, legitimation of one's activities by reference to an ideology sanctioned by tradition is a powerful tool in the hands of any society.

On Takaroa, the claims of the resistance movement were not openly mystical and metaphorical, as in the Melanesian millenarian movements (Bonnemaison, 1985b) or even modern Polynesian nationalist movements (Linnekin, 1990), but there is a similar ideological shift, or at the very least, a quest for conceptual definition, articulation, and classification. One manifestation of this evolving
sense of tradition relates to Tuamotuan lagoon exploitation, previously regulated by the government, but now--due to intense competition--claimed for their own, in a deliberate reawakening of incompletely ceded rights. Another is visible in the increasing dichotomization, also due to territorial competition, between islanders and aliens. But this may be less a question of changing traditions than of rediscovering, clarifying, and redefining ancient ones for the practical purposes of today.
Entrepreneur: The allocation of lagoon area for maritime concessions should be allocated strictly as a function of the financial capacity of the applicant to create an infrastructure which is optimal for the growth of the oysters.

Entrepreneur: The government must assume its responsibilities. Does it want the primary export of the territory to prosper or not?

Minutes, SMA/CEPP, 15 Apr. 1987

Notwithstanding the internal divisions described above, the real struggle of the resistance movement on Takaroa is with a group of actors that stand apart from the indigenous community. Nobody on Takaroa expects any of the islanders to become very enriched through transactions with the aliens. Few islanders are employed by the aliens (as is the case in Manihi and Gambiers). The money paid for land sales, leases, and sale of seed oysters is small and that which is received is expended for personal needs rather than for investment in their own pearl farms. Partnerships initially contracted with islanders usually dissolved as soon as the alien entrepreneur had obtained an official concession. The ones who really benefit are a powerful group of external economic and political interests.
The interest of the alien entrepreneurs is obvious; that of the Tahitian administration less so. Nevertheless, government authority has played a key role in the dispossession of native Tuamotuan resources, now as well as in the past, as previous chapters have shown. Lagoons have been directly expropriated for the public domain and the largest concessions have been awarded to those capable of intensive exploitation. Land is indirectly reallocated by officially recognizing and encouraging private ownership and land transactions, legitimated through a Western tenure system that is alien to the atolls. External entrepreneurs would not have gotten very far with their pearl farms had they not received the substantial, continued, and overt support of the Tahitian administration.

This chapter shows the powerful political and economic interests converging on Tuamotuan lagoons as well as the more insidious legitimating/delegitimating and persuasive influences of Western religion, culture, and the media. The case study of the coming to power of Takaroa’s mayor illustrates the labyrinthine nature of these convergences and the consequent delegitimation of the Takaroa resistance movement. It then goes on to illustrate the persuasive functioning of hegemony. An investigation of the ideology propogated and legitimated by these external
interests shows a close correspondence with that of the indigenous consent faction, as discussed previously (Chapter 8). Finally, I show how the strategic tactics of the Tahitian administration, external investors, and religious authorities are mutually supportive in the dispossession of the islanders.

**Political Authority**

At the top of the pyramid of power is the French High Commissioner's Office which still exerts considerable influence in French Polynesia. It is in the process of devolving its authority to the Tahitian territorial government, but it still controls immigration, police, treasury, and other important functions. All the municipal governments of Papeete, outlying districts, and the outer islands still report directly to the High Commissioner. It is from this office that the annual budget of each commune is allocated, paying the salaries of municipal employees, needed infrastructure, and other development projects. Mayors as well, though elected by local residents, are paid by—and responsible to—the High Commissioner's Office.

The gendarmerie and the judiciary are also institutions of the state but with the devolution of territorial autonomy, they are being increasingly brought
into relation with the local government. The events on Takaroa were indicative of this transitional status. Originally sent by the High Commissioner’s Office to enforce the law on Takaroa and release the confiscated merchandise, the gendarmes were asked to leave by the president of the territorial government. The judiciary, which had been inclined to deal harshly with violations of the law by the Association to Protect Takaroa, was pressured by politicians who needed the political votes of the outer island populations (Chapter 7).

The Tahitian government is composed of a popularly elected Territorial Assembly, empowered to legislate on a variety of administrative and economic issues, and headed by a president and a Council of Ministers, following a version of the French parliamentary system. Through its legislation, the Territorial Assembly sets the criteria for lagoon concession eligibility, currently open to all French citizens— but not to foreign investors, such as the Japanese. However, the actual allocation and administration of lagoon concessions is managed by the Council of Ministers (directives and particular allocations) and the SMA (recommendations, implementation, and monitoring). The autonomous territorial government has played a critical role in the Takaroa conflict.
Local councils, headed by a mayor and his appointed delegates, lie at the base of the political hierarchy. Although the mayor and councilors are all elected by local populations, they are seldom willing to defy the administration. As mentioned above, municipal employees in even the smallest atolls (such as the mayor and vice-mayor) are paid by, and directly responsible to, the High Commissioner’s office. They are subject to suspension or dismissal from the High Commissioner’s office if they have been suspected of unlawful activities. But the mayor often actually resides in Papeete. In the case of Takaroa, a Papeete politician had been elected because of campaign promises to deliver government aid to the island community. This had a critical impact on the resistance movement.

The Power of Capital

Unlike the political administration, external entrepreneurs wishing to invest in the Tuamotuan pearl culture industry face a double persuasive challenge. They must convince the islanders as well as the government that their activities are acceptable and worthwhile. And persuading the islanders is not simply a matter of inducing one or two landowners to sell or lease land. Before allocating a concession to an external
entrepreneur, the government itself requires evidence that the accord of the population has been achieved, usually by obtaining the approval of the mayor. Following this, the government also assesses the potential contribution of the applicant to the industry and the territorial economy as a whole.

As a territory that receives considerable aid from the French state, Tahiti might not seem to be necessarily subservient to the relatively small-scale forces of local capital. This is not the case, however. The French nuclear testing program on Moruroa, which is the main reason for Tahiti's subsidization, will eventually be phased out, and the Tahitian administration has been strongly encouraged to seek alternative sources of revenue. Expectations and standards of living in French Polynesia have grown so artificially high that true autonomy will be a difficult if not impossible task. Consequently, administrative regulation of the pearl culture industry is strongly motivated to favor those farmers who contribute most to the territorial economy.

Islanders facing alienation of their ancestral resources are less likely to accept arguments based on the welfare of the industry (whose industry?). But traditional ties to land and lagoon resources have already been severely undermined through decades of subjection to
external political, religious, and economic influences, and many islanders have become receptive to Western tenure concepts. By stressing the rhetoric of the free market and equal opportunity, alien entrepreneurs can convince a portion of the population that they have rights to farm pearls and that it is morally, politically, and economically wrong to oppose them. They can then argue (to the mayor or the administration) that they have been accepted by the population.

Religious Authority

Religious influences also have considerable power in French Polynesia. Shortly after the imposition of colonial rule, the traditional chiefs were deposed, replaced by government appointees. In many of the outer island communities, it was the missionaries and local clergy who assumed positions of dominance. Transport and communications were poor and government servants were loath to leave their comfortable Papeete offices for the harsh conditions of outer island existence and even archipelagic administrators spent far more time in Tahiti than the Tuamotus. Consequently, missionaries and religious leaders, who were not only willing to travel, but generally had a better understanding of local
communities, often handled all the necessary administrative work.

Today, of course, the situation has changed. Many outer islands are well connected to other parts of the territory by plane, frequent cargo boats, telephone, and television. Both mayors and populations have become more educated, well travelled, and politically sophisticated and the role of the church in political, economic, and social issues has diminished. But not completely. The Protestant church, to which most Tahitians belong, actively supports the pro-autonomy movement. The Catholic and Mormon churches have a less pronounced political involvement, but they, too, frequently serve as influential consultants and mediators.

Now closely integrated into the administrative power structure, the churches (except for the Protestant church in Tahiti) are loath to assume a political stance which would diminish their influence. The Catholic church in particular, whose clergy is mainly composed of ethnic French and demi, with relatives and contacts working directly in the service of the state or territorial government, is hardly likely to support movements for weakening centralized control. The Mormon clergy (like the Protestant clergy), has been largely indigenized due to a much shorter and rigorous program of clerical
ordination. However, it is reticent about supporting resistance movements due to theological reasons (defy the law equals defy God) and decades of efforts devoted to prove that they are not American revolutionaries.

The Media

Communication plays a potentially pivotal role in public persuasion. Today, many of the most distant atolls receive newspapers, radio, and television broadcasts from Tahiti. Newspaper reporting is in French, but there are daily Tahitian language broadcasts, intelligible to virtually all Tuamotuans, on both radio and television. Atoll communities are also connected by telephone, telegraph, and facsimile machines and can directly communicate with each other. Due to the extensive circulation of Tuamotuans between their home atolls and Papeete, the islanders rapidly learn of events occurring in other parts of the archipelago. The activities of Takaroa's resistance movement and the intervention of the Tahitian administration were exciting, but often misinterpreted, journalistic material.

All this had the potential to awaken resistance in neighboring atolls as well. Soon after the association's first strike against the alien entrepreneurs, islanders on Takaroa began receiving messages of support and
congratulations from relatives and inhabitants of neighboring atolls. Over the following months, associations of protection were also founded on Kauehi, Manihi, Ahe, Takapoto, and other pearl farming atolls in the Western and Central Tuamotus. By 1991, the various associations had joined in a federation in support of indigenous lagoon rights and held a conference in Tahiti which was advertised in advance and well reported in the local media. However, the media also served as a rhetorical medium for external interests.

Local television and radio have direct linkages with metropolitan France (which is relatively uninvolved in lagoon exploitation and use) and have reported events briefly; not taking an explicit side in the conflict. The written media (two daily newspapers and one monthly magazine), representing French and Tahitian business interests, is often more blatantly pro-enterprise. The Tahitian administration is praised for its intervention in the Takaroa resistance movement, but it is criticized for protecting the interests of selfish, xenophobic, and lawless islanders, and not opening the Tuamotuan pearl farming atolls widely enough to the market of willing and ready entrepreneurs from Tahiti (TP Nov. 91:20).
The Case of Takaroa’s Mayor

The convergence of external political and economic interests in the affairs of Takaroa and other pearl farming atolls is nowhere better illustrated—and perhaps nowhere more effectively so—than in the case of the Tahitian politician who held the mayorship of Takaroa between 1989 and 1991. In the current electoral system, the Tuamotus have the smallest populations per political district in French Polynesia (curiously, this electoral arrangement was originally due to a metropolitan desire to inflate an expectedly conservative vote in the 1958 referendum [Danielsson, 1983]; this in itself is an indication of hegemony in action). A mayor needs as little as a few hundred votes, and a Territorial Assembly councilor can be elected with as few as two thousand votes. Following the construction of Takapoto’s airstrip, it was easy to get there and minimal campaign funds went a long way. Political office in the Western Tuamotus boom atolls also offered economic opportunities in the pearl farming industry.

Louis, mayor of the Commune of Takaroa and Takapoto, was born in Papeete to a demi Tahitian family. Louis was active in sports, a born organizer, and eventually became the President of the Federated Sports Association for French Polynesia. He organized teams, built sports
fields, and helped arrange inter-island matches. Louis is an easy-going and jovial person and was well liked by the communities in which he worked. In the course of his work, Louis spent much time on Takapoto, a center of regional development efforts during the 1970s. Appreciative of Louis’ work, the youth of Takapoto proposed that Louis run for councilor in the Territorial Assembly. Louis won a seat in 1981, largely on the basis of the Takapoto vote.

In 1986, Louis was successfully reelected to the Territorial Assembly and he also became Minister of Sports, Employment, and Tourism in the new government. Strengthened with his new powers, Louis did not disappoint his electors. He continued to support their games and distributed uniforms and other sports equipment. In 1988, when the campaign for municipal elections began, the young people of Takapoto again approached Louis. They informed him that they wanted him to be mayor of Takapoto. Louis agreed to run, provided that he had the prior support of the major families. Louis held a political meeting at which the representatives of the large families were present. The majority agreed to support him, feeling that a government minister was a good person to have as mayor, so Louis decided to run.
To the people on Takaroa, however, Louis represented a threat. For it was the mayor alone--representing the electoral will of the population--that had the administrative authority to approve lagoon concessions on each atoll. A non-native mayor might easily be persuaded by wealthy campaign donors to admit outside investors into local lagoons. Louis had previously lobbied in favor of setting up a "sister-city" relationship between Takaroa/Takapoto and Shima, the Japanese center of the cultured pearl industry. It was suspected that with Louis' help, external entrepreneurs would take over the Tuamotuan pearl industry. These suspicions were apparently rationally founded, as shown by the evidence below.

In October, 1988, a letter was sent to the Minister of Development for Outer Islands, addressed by Mr. den Breejen, Consul of the Netherlands to Tahiti. The letter concerned proposed Japanese investment in a Takapoto pearl farm. The pearl farm had been established in 1986 by a Tahitian family who desired to return to their ancestral home. Den Breejen was the "spiritual father" of this family. The farm began with spat collection but shifted to pearl culture after Takapoto was quarantined due to disease problems. However, poor quality pearls were obtained. Den Breejen then contacted Tasaki Shinju, one
of the largest Japanese commercial pearl farming companies and invited them to send a representative and evaluate the problems.

A Tasaki representative visited the Takapoto farm and explained that the problem was related to ecological factors and poor handling procedures. To complete the investigations, Tasaki recommended that a joint venture be established on Takapoto, with 50 percent ownership by Tasaki and the rest by den Breejen and the local family. They would produce exclusively high quality pearls, which would not interfere with local producers. Tasaki was one of the major buyers at the annual Papeete pearl auction and would continue to buy in the future. The Tahitian administration would benefit from the project because of the influx of foreign currency and sharing of technical and marketing expertise. Tasaki promised to help establish a community garden on Takapoto. Tasaki then contacted Louis and informed him of their interest in Takapoto.

It was around the same time that Louis decided to run for mayor on Takapoto and Takaroa. However, a court inquiry, initiated due to complaints by a minority opposition on Takapoto and a majority opposition on Takaroa, questioned the legality of Louis' candidature, based on the technicality that he was not registered as a
Takapoto resident and voter, as required by law. Louis argued that he was indeed a (part-time) resident of Takapoto, had rented land over there, and was intending to build a house. According to him, his name had been deliberately omitted from the voting list in spite of numerous applications due to the undue influences of his political opponents.

The incumbent mayor of Takapoto claimed that the previous applications had been made before the correct opening dates and further applications did not arrive until it was too late. He also said that Louis had never been a resident of Takapoto. Louis argued that he was eligible, citing an article in the electoral code to support his case: Only 75 percent of the municipal councilors need to be residents of the commune. He interpreted this to mean that 25 percent of the candidates for councilor needed to be neither residents nor registered voters in the area. But the court ruled that all candidates needed to be registered on the voting list. Louis had not arranged to have his name on the Takapoto voter list and had also not taken his name off the Papeete list. Despite this, Louis ran for mayor, arguing that this was beyond the competence of the regular court (DT, 22 Feb. 1989; NT, 23 Feb. 1989).
Louis won the election narrowly but the election was cancelled because of irregularities in the previous candidacy and the elections themselves (NT, 14 Nov. 1989; DT, 13 Feb. 1990). In March, 1990, Louis ran again for mayor of Takapoto, duly registering at the proper time. However, the leader of the opposing ballot called a press conference and charged that Louis had been trying to arrange a secret Japanese takeover of a Takapoto pearl farm. He demanded that Louis be taken off the ballot, due to both electoral fraud and the fact that he had not resided in Takapoto for at least six months (24 Feb. 1990). On April 2, Louis was formally indicted for electoral fraud due to his vote purchasing (NT, 4 Apr. 1990). To prevent interference with institutional functioning, Louis was temporarily relieved of his ministerial duties. He was placed under legal supervision and prohibited from leaving the territory.

Notwithstanding the ongoing legal investigations, Louis ran for mayor in the run-off elections and won by a large margin. Six months afterwards, he announced a historical agreement between Takapoto and Shima, Japan, home of the Mikimoto pearl industry. The Japanese would offer technical aid to pearl farmers on Takapoto and other interested atolls. They would also build a nucleus production factory on Takapoto. The Takapoto pearl
producers would join in a cooperative together with pearl farmers in Japan. Takapoto’s pearls would be sold directly in Japan, bypassing the annual Papeete auction (NT, 4 Oct. 1989). A joint venture was to be formed: The Development Company for Tahitian Pearl (the same company proposed in 1988 by den Breejen, Tasaki, and Lai. The Japanese would transfer their sixty years of know-how to locals, help deal with Takapoto’s disease problems, and share the results and experiences of their research (DT, 10 Oct. 1989).

An application for a lagoon concession was proposed as a joint venture between Lai (10%), Louis (5%), den Breejen (35%), and Tasaki (46%). Despite intense lobbying by the Tasaki group, the request was disapproved by the Commission on Maritime Concessions:

The principal resource of the Tuamotuans should be preserved. Until now, the government as always refused foreign investment in local pearl farms. Granting this concession would constitute a precedent that would not fail to attract other petitionaires. MMA, 6 Nov. 1989

Despite the recommendation, the following article was published in a Japanese newspaper (from a translation provided by EVAAM, source uncertain):

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Tasaki will soon open a company in French Polynesia, which will ensure a better flow of black pearls on the international market. The new company, Development Company for Tahitian Pearls, will have a capital of 1.2 million yens, 55% of which is owned by Tasaki. Tasaki will send Japanese grafters to teach Polynesians the secrets of grafting and increase profitability. The black pearls produced will then be bought by Tasaki. They expect to receive between 50 and 100 million from the first harvest. Implantation in Tahiti is part of an international investment strategy by Tasaki.

During a following meeting of the Council of Ministers, the Tasaki case was debated, as was an attractive investment portfolio in a time of sorely needed foreign capital. However, the ministers noted the joint opposition by the small and large-scale pearl farmers, both of whom feared a Japanese takeover of both production and international marketing. They were also worried that Tahitian black pearl oysters might be shipped to Japan for genetic manipulation and overseas production. In the end, the Council of Ministers vetoed the application and resolved to refuse any similar requests in the future (CM, 13 Dec. 1989).

They published the following article in local newspapers:
PROTECTION OF POLYNESIAN PEARL CULTURE

The Council of Ministers has learned of a communication relative to an investment project of a Japanese company in a Tuamotuan pearl farm. After consultations, the GIE Poe Rava Nui, and the Syndicate of Professional Pearl Producers, the Council of Ministers has decided to refuse all foreign investment in the pearl sector, which represents the primary export of the Territory, with receipts of around 3.5 million CFP; the Council of Ministers will refuse all demands for pearl concessions by this company, as well as other foreign companies, in order that this sector of production remains entirely Polynesian, as it is right now.

DT, 21 Dec. 1989

Despite this announcement, Japanese investors continued with their designs on the Tuamotuan pearl industry. In May, 1990, the following announcement appeared in a Japanese periodical (again provided by EVAAM, source uncertain):

The Tenshin Pearl Company intends to create a pearl farm in Tahiti associated with a local producer. One of the company affiliates, Ogawa Pearl, has sent technicians and specialists who are already directing technological improvements. The objective of the company is to produce 150,000 pearls by the end of this year and 200,000 by the end of next year. Commercialization of these pearls will begin in September, 1990, with expected revenues of 300-500 millions of yen annually.

Few households on Takaroa had supported Louis' campaign, but the majority of the population accepted his election once officially recognized. Louis' control of
the mayorship played a pivotal role in the Takaroa conflict. Under the previous mayor as well, large-scale alien pearl farmers had been permitted to establish on Takaroa, but only after considerable negotiation and guarantees to directly benefit the local population. However, Louis did not reside on Takaroa, seldom visited the atoll, and had not been politically supported by the inhabitants of Takaroa. Less obligated to the will of the community than the previous mayor (a Takaroa islander), he approved applications for alien concessions with few compunctions, without adequate consultations or guarantees to the local population or the island council.

Louis also played a key role during the peak of the Takaroa resistance movement’s confrontation between the resistance movement, the alien investors and the administration. Had the mayor supported the resistance movement, its actions would have carried weight and legitimacy. The mayor was qualified by law to prevent unauthorized pearl farming or unauthorized expansion. Equipment confiscations would have been legally appropriate, not lawless acts. The resistance leaders could then have been duly authorized to enforce the decisions of the recognized mayor, and could not have been deported, tried, and sentenced. The occupation of the mayorship by an uninterested (or too interested) outsider
was an important element in the defeat of the resistance movement.

**Ideology**

A comparison of the rhetoric of spokesmen of the political administration with those of the external investors, expressed in public meetings and private interviews, provides further indication of the convergence of external political and economic interests in the alienation of Tuamotuan lagoon space. It also shows the ideological congruence between external interests and part of the indigenous community. After two centuries of subjugation by external political, economic, and religious influences, local populations have come to have a deep-seated respect for existing authorities, their imposed law, and even, to some extent, the ideology they represent. As in the case of the consent faction on Takaroa, this ideology is based primarily on government law, Western capitalism and democracy, and a preference for large-scale production.

**Lagoons Are Public Domain**

By virtue of previously enacted government legislation, lagoon space is public domain, and not the resource of individual communities:
The public domain includes all things which, by their nature or usage need to be open to the public, and therefore, not subject to private appropriation. . . the public maritime domain includes the gulfs, bays, lagoons. . .

JOPF, 31 Oct. 1978

The lagoons are allocated by the Tahitian administration. That is the law.

Mayor, Takaroa

Territorial claims that pre-existed French colonization only applied if they were in legal conformity with subsequent tenure regimes. Land rights (at least in part) could be alienated by individuals without an agreement by the rest of the family. Lagoon rights had never been exclusively claimed by the local inhabitants. Lagoon claims in Tahiti documented prior to the propagation of the 1890 public domain decree were validated by the courts, but the administration argues that these claims have been retrospectively invalidated by the public domain decree.
Ethnic Bias Unacceptable

The charter of this association, first of all, has racist tendencies: There is a question of "aliens". The notion is dangerous.

Trial of Association Leaders, 14 Oct. 1992

Once outsiders buy land, there’s no way to stop them. It’s against the Declaration of Rights of Man. Everybody is equal. Anybody who owns a land can give it to anybody he wants. I told them, 'If you prohibit the Tahitians to work your oysters, how can you go and work in Papeete? So you have to think well. We are all the same people'.

Mayor, Takaroa

How can anybody say 'These people are from Takaroa; these people are not? If they say, 'I am born here!', very well. But most of the people were born in Papeete.

Entrepreneur, Takaroa

Excluding outsiders on the basis of ethnicity or descent is unacceptable. All citizens of the territory of French Polynesia are now Polynesians, no matter how what their ancestry might be. By law, all French citizens have guaranteed rights of migration, employment, and enterprise in French Polynesia, just as Tahitians can do the same in France or other French overseas departments and territories. They all have rights to the common public domain. External entrepreneurs, having acquired land on Takaroa, have become residents of the atoll, with rights to lagoon access that are equivalent to those of the islanders. The resistance movement espouses irrational,
xenophobic, and dangerous attitudes which must be rejected by rational people.

**Rights Derive from Capital**

The surface area of a pearl farming concession should depend exclusively on the financial surface of the applicant.

Entrepreneur, Gambiers

If I have the means and the desire to start two, three, four farms on different islands, it's my right. We purchased the land from the owners. Ninety percent of the population was satisfied with our establishment on Takaroa. But now there is unhappiness at the unequal lagoon holdings.

Entrepreneur, Takaroa

We have evolved over the generations. Some of us are diligent and want a good life. We shouldn't be jealous of them. Let us rather think of how to make ourselves stronger.

Director, SMA

The acquisition of land and lagoon space by aliens has followed the appropriate legal procedures. Territory is not an immutable ancestral trust, but a commodity which can be freely used and transferred. Owners have rights to the income and capital of their property and they may lease, sell, or bequeath their property to whomever they please. It is the administration, not individual atoll communities, who make the laws concerning land and lagoon tenure. The resistance movement is violating the law by not accepting Tahiti's lagoon allocations and blocking
those were legally entitled to farm pearls. Moreover, having invested considerably with initial approval by the islanders themselves, the entrepreneurs could not reasonably be expected to leave.

Complementarity

To the entrepreneurs and their supporters, the islanders have benefited by the presence of large-scale pearl farms:

If an investor comes from Tahiti to graft while the locals throw stations, this is complementary. We are not here to deprive them of their bread. Far from it. In the years we’ve been here, we’ve bought stations from 90 percent of the population. We advance the money for their materials, and we employ the locals. When they start on their own, they put our techniques into practice.

Entrepreneur, Takaroa

Lee’s concession was granted because he promised to purchase oysters from the islanders. If you object to their expansion, where will they put their oysters? On the ground?

Director, SMA

It is the inhabitants of Takaroa that sell their land. They even sell their concessions.

Mayor, Takaroa

It was thanks to the pioneering efforts of external entrepreneurs that the pearl farming industry was initially developed on Manihi and other atolls. The islanders have benefited by adapting these techniques and will continue
to profit from the experiments and experiences of the large-scale entrepreneurs and their pearl farms. The entrepreneurs also purchase the oysters raised by local spat collection. Many islanders also benefit by working for the entrepreneurs. If the people sell their land, their oysters, and their labor to the entrepreneurs, why should they then complain about their presence? Once accepted, the entrepreneurs have put considerable investment into the lagoon and cannot simply be ejected when complaints arise. The islanders are being overprotective and selfish due to their new wealth.

Rational Use of the Lagoon

The lagoon would be most rationally used by the large-scale entrepreneurs:

The most adventurous have done well. . . . It is because of their diligence and hard work they became rich. They don’t just sit around all day.
Director, SMA

The administration ought to support investment in French Polynesia. Particularly people who are dynamic and ambitious. To aid the economy of the territory. If not for people of this type, the territory is headed for an economic catastrophe. It’s better to have people who can work, who are ambitious, who know what they want, who can taken an initiative, than to assist people who only know how to ask for help.
Entrepreneur
The large-scale entrepreneurs alone have the education, the capital, and the social connections necessary for conducting an up to date, scientifically based, pearl farming enterprise. Because of their scale of operations, they can conduct large-scale experiments to determine what kind of farming techniques are the most efficient and productive. Over 80 percent of the pearls in the territory are produced by the large-scale entrepreneurs. This generates a sizeable amount of export tax, aside from the influx of foreign cash to the economy. The government receives fees from the large surfaces it leases to the investors. The islanders, however, generally fail to pay their fees, do not report exports, and strain the administrative budget because of the aid and technical support they depend on. Processing the thousands of applications for small farms is also a tremendous logistical headache, compared to one or two large farms.

Too Much Spat Collection

Indigenous spat collection occupies too much lagoon space and is ecologically hazardous:
There are too many oysters being produced (by indigenous spat collection). If everybody can throw a hundred stations, there will be 30,000 stations in Takaroa’s lagoon. This is way too much. You have to look at the pearl culture farmers and then decide how many stations to allow.

Entrepreneur

The Tuamotuans do not understand a thing. They know only their own things. They are not suited for general business, for biological criteria, they are not able to say anything.

Entrepreneur

In contrast, the alien entrepreneurs are practicing safe-farming with their superior technical and managerial abilities:

We were the first ones to try spat collection in Manihi. . . The locals failed because the young oysters were eaten by fish. So I thought, the oysters need to be protected, with fencing.

Entrepreneur

I studied the pearl business, from A to Z: At what rate they grow, how to operate. . . I have written many reports, with graphics. We have nothing from the government. All they have written is old.

Entrepreneurs

The administration blames both sides for potentially causing ecological perturbation:

Pearl farming has developed chaotically. They are farming in any place, in any way, and the administration cannot follow this. We can neither provide adequate technical support nor enforce regulations.

Director, SMA
The administration is concerned that the ecological limits are being transgressed, due to excess oysters. Due to shoreline crowding, thinning the density would only be possible by expanding out towards the center of the lagoon or deeper towards the bottom. Moving towards the center would exacerbate conflicts with indigenous spat collectors, and installing the lines at greater depths makes it more difficult to care for the oysters. Spat collection is not complicated by questions of land rights, but there is still only a limited area that is sufficiently productive and much of this is already occupied by collection lines.

A Matter of Scale

Ironically, while the association was criticized for unfairly trying to keep the lagoon for the islanders alone, the entrepreneurs were cognizant of their own need for protection:
The problems began when Yi Fu tried to get established over here. I was against his establishment here. He is big, while we are small. It would be preferrable to divide the cake with the inhabitants of Takaroa. I consider myself one of the small ones. Yi Fu sells 30-50 times more than me. You cannot compare the two of us. We are (also) against Japanese involvement in pearl farming. Their resources are much more substantial than ours. We would be rapidly eliminated if wealthy foreigners come here. Right now, we manage the production and they handle the marketing. But if they become established in production as well, we small ones would be lost.

Entrepreneur

I was very surprised the way Lee began on Takaroa. Within one week after he arrived, he announced, ‘Next week, I will start my pearl farm. I will bring tons of materials.’ It’s impossible to do things like that. Lee wanted to monopolize Takaroa, to get everything for himself. This kind of attitude was unacceptable.

Entrepreneur

Ironically, the rhetoric used by the entrepreneurs vis-a-vis their own potential competitors is identical to that utilized by the association against themselves. However, the entrepreneurs maintained that their efforts did not pose a threat to the islanders since the islanders could not really expect to engage in large-scale pearl farming any way, so there was a complementarity rather than competition. Currently, the locals produce oysters, the entrepreneurs produce pearls, and the Japanese handle marketing. But if the Japanese—or Yi Fu—came in, the whole system could become monopolized.
Strategy

There was no sudden takeover involved in the dispossession of lagoon space on Takaroa; but rather a gradual process of insinuation, legitimation, and expansion by alien entrepreneurs. For the entrepreneurs as well as the administration, the problem was how to proceed without antagonizing the indigenous populations. When the external entrepreneurs began pearl farming on Takaroa, the government did not immediately allocate any lagoon space to them. Technically, the unlicensed pearl farms had violated the law, but the government did not evict them, waiting for the eventual approval of the local population. The government stood to profit from external investment due to the anticipated tax revenues, improvement of the balance of trade, campaign contributions, and other payoffs as well.

Insinuation

When an external entrepreneur initially arrived, totally unfamiliar with the atoll and its inhabitants, partnerships were arranged with one of the islanders, providing a knowledgable contact, family network, and a base to begin their future operations. In most cases, however, the relationship was merely a cover for the entrepreneur, who provided all of the investment funding,
the skilled labor, and the materials. Local partners were paid a fixed salary, not a proportion of the actual harvest. In virtually every case, the liaison came to an end within a few years. By this time, however, the entrepreneurs had already constructed their buildings and pearl farms in the outer islets.

Subsequent applications for independent lagoon concessions could be reinforced with the established existence of a pearl farm, which the Papeete administration--mindful of the necessity of developing the industry--would probably not deny. The successful establishment of a farm proved (to the Papeete administration) that the entrepreneurs had the capital and skills for establishing a successful pearl farm and it also provided convincing evidence that the local population allowed its establishment (in truth, however, the local populations were rarely fully convinced). Continued good relations were carefully cultivated with their former hosts, who were given privileged opportunities to sell seed oysters and other fringe benefits.

Legitimation

Obtaining land was critical for a number of reasons. Although pearl farms occupied underwater marine space, a
base was needed on land for a variety of activities, including grafting, other pearl farming work, and residential quarters. Some entrepreneurs built all of their quarters on pilings above reefs, but even in these cases, the consent of the adjacent landholders was normally required. Rights to land were necessary before approval of a lagoon concession by the local leadership and the Papeete administration could be obtained. However, landholdings of the aliens served primarily as a base and the areas were usually miniscule compared with the amount of lagoon space occupied.

Land was acquired by finding individuals who were willing to take the risk of alienating their families and neighbors or by the equally difficult task of finding land not subject to collective ownership, such as those parcels alienated early in the century. In some cases, negotiations were held with the population, who were promised that the acceptance of the entrepreneurs would mean better chances of seed oyster sales. Negotiations with the mayor and sometimes the religious leadership were also essential. Mayors are alleged to have been persuaded through economic incentives and by appealing for sympathy and hospitality.

Acquiring lagoon concessions was difficult, often taking years to clear the administration’s shelves in
Papeete. Private discussions with government ministers are said (by one entrepreneur) to be essential for any large investment, but the approval of the local mayor would probably have been sufficient in any case. The entrepreneurs were able to negotiate substantially lower fees for the large-scale pearl farms. The entrepreneurs also established good relations in the Papeete religious authorities. Some of the entrepreneurs had exceptionally good relations with the Catholic church, due to past construction contracts, large donations, and offers to help build new church buildings.

Expansion

Once established and in the possession of validated land rights and lagoon concessions, the entrepreneurs continued to expand their operations. When this became obvious, the local community retaliated through equipment confiscations, sabotage, blockages, petitions, and verbal hostility. The entrepreneurs generally handled these situations diplomatically. They avoided public confrontation, absenting themselves from even the most important meetings, preferring to negotiate with the mayor and the councilors in private, on an individual basis. In these situations, they rarely encountered the kind of hostility manifested in public places. They persuaded
that if they left, it would be harder to sell the seed oysters; at the same time, they threatened lawsuits if their equipment was not returned.

Secrecy and disguise were some of the most successful tools used by the entrepreneurs. After the forced return of all their confiscated equipment to Papeete, means were found to get the equipment reshipped to Takaroa. When the cargo boats arrived, the deported goods often returned, relabelled with names of indigenous partners. Also, the stations and cables used in their pearl farms were packed to extremely high densities. This created problems of its own, but it enabled the entrepreneurs to conceal their continuing expansion from inquisitive neighbors. The miniscule local police force (of two, with no boat) did not have the capability of monitoring and enforcing lagoon laws.

**Government Legislation**

Hoping to reap the profits of the Tuamotuan pearl oyster resources, the Territorial Assembly passed a public domain law in 1958, perpetuating colonial precedents that had been instituted in the 19th century. To make sure that the profits were not taken over by foreign investors, the assembly also passed a law that only French Polynesians were eligible for lagoon concessions. French,
Tahitian, and Chinese-Polynesian investors were encouraged by the administration. However, the administration moved cautiously in authorizing external investment. For elected officials, continued good will of local populations was crucial. But even the large-scale entrepreneurs in Tahiti were themselves generally opposed to foreign investment, fearful of competition.

The government also supported investment by islanders themselves. Many of the small-scale farmers were assisted by a government cooperative which arranged for marketing, finance, and supply needs that would be difficult for the outer islanders. The cooperative representative (a Tahitian politician) could, theoretically, have defended the rights of the small-scale Tuamotuan farms vis-a-vis the large-scale investors. However, during policy meetings at the SMA, the needs of the alien, large-scale pearl farmers usually prevailed.

The Stick and the Carrot

The escalating defiance of the Takaroa resistance movement represented a threat to the administration’s governance of lagoon concessions. However, the power of enforcement is still held by the High Commissioner’s Office. Consequently, the territorial government, convinced of the seriousness of the situation, had to
appeal for the help of the state, which delegated a
platoon of gendarmers to Takaroa. The association leader
voluntarily submitted to be arrested, convinced that he
would be vindicated at trial; however, the release of the
confiscated merchandise was opposed by a substantial
portion of the local population.

Worried that the strategy of force might backfire, the
Tahitian administration decided to withdraw the stick and
offer the carrot. The president, recently elected,
requested a recall of the gendarmes, explaining that he
would personally lead a high-level government delegation
to Takaroa to calm the population. Along with politicians
representing the Tuamotus and the director of the SMA, the
president held a conciliatory meeting in which he promised
to ship the confiscated equipment back to Papeete. He
promised to review the policy process for pearl farming
concessions. He also admonished the population not to
take the law into its own hands again.

Obfuscation

The government did review the policy on lagoon
concessions, but not in any way that responded to the
issues raised by the resistance movement. The director of
the SMA travelled to Takaroa and announced that proof of
land ownership along with the mayor’s signature was now
required along with applications for lagoon concessions. The connection with land was indeed in accordance with Tuamotuan tradition and forced the alien entrepreneurs to obtain some kind of accord with local inhabitants. But there was always somebody in the community who could be induced to sell or lease land, particularly if the right price was offered. It was also easy to obtain the mayor's approval since he was himself an outsider, elected through the Takapoto votes.

Repeated visits by the president and the SMA managed to quiet the population. In a series of village meetings, the administrative delegation reiterated the need to maintain law and order. They explained that the leaders of the resistance movement were revolutionaries and anarchists and that the attempted expulsion of aliens demonstrated xenophobia, racism, and greed which was unacceptable in a modern, educated society. The political evolution of French Polynesia demanded that each peripheral community be willing to share its resources with the territory as a whole. Complaints about the expansion of alien pearl farmers were brushed aside. The islanders were admonished to stop playing "cowboys and Indians" and to mind to their own quota violations before complaining about or being jealous of their hard working neighbors.
Church Involvement

The strategy of external religious authorities in the Takaroa conflict was not as overt and explicit as that of the administration or the alien entrepreneurs, but it was significant. Considering the social turmoil that existed on Takaroa, and the perceived social injustices, one might have expected some intervention by the central church authorities. Had the church voiced a public protest, it is doubtful if the government could have continued to alienate Tuamotuan lagoon resources against the majority will of resident populations. But they did not take up the cause of the local populations. Instead, they urged their congregations to love their fellow man and warned them of the dangers involved in defying the government.

The Chinese-Tahitian entrepreneurs, who were Catholic, made substantial contributions to the Papeete church. One promised to rebuild Takaroa’s Catholic church building. The Catholic church did not to take sides, but it reportedly ordered local congregants not to participate in the association’s activities. The congregants were informed that if they focussed on the service of God instead of fighting with their coreligionists, all their problems would be solved automatically. If they continued to battle with their fellow men, and disobeyed the government— who, incidentally, funded church social
programs—they were resisting the order of God and the rule of Caesar. Accordingly, few Catholics joined the resistance activities.

The Mormons had less motivation to support the entrepreneurs. The Mormons prided themselves in their independence of government handouts, being economically self-reliant through community tithes (this came to quite a bit on Takaroa and the other pearl producing atolls). Moreover, the external entrepreneurs were not only ethnic aliens; as non-Mormons, they were also heathens. Nevertheless, mindful of a past history of difficulties the French colonial government, still slightly paranoid over the Mormons' suspected pro-American sentiment, central church authorities strongly urged the islanders not to defy the administration.

The Curse of Colonialism

The curse of colonialism is that it turned natives into colonialists, into strangers in their own land. Instead of colonising, it colonialised them, so much that even the doom and glory of decolonisation is today traded as second-hand merchandise among emerging nations.

Sack, 1974

Scott's rebuttal of hegemony theory (see Chapter 1) has been supported by evidence from societies worldwide, but
it too easily assumes that power domination is universally contested. Western society is built upon the acceptance of certain values, among which the most important are democracy, individualism, and capitalism, all of which not only contrast with—but are also sometimes to the detriment of many traditional cultures, as is well documented in the ongoing saga of the dispossession of indigenous people. Post-colonial administrations are run by Western educated elites who have little interest in rural communities and are far more interested in ways to enrich government coffers, urban populations, and (not least) their own salaries. But most importantly, they often believe their own political rhetoric and can be very persuasive when talking with populations in rural areas (see Appendix B).

The ideological and operational congruence manifested by the Tahitian administration and alien entrepreneurs illustrates how intimately the interests of these two powerful bodies are joined and how effective they are in eroding the resistance of rural populations, particularly when the local political leadership is co-opted. The case of Takaroa also shows that how the institution of Western law, pivoted half-way between the low ground of coercion and the high ground of persuasion, is one of the most effective tools of hegemony. It not only enables the
alienation of the means of production; by setting the law, it automatically dictates what is right and what is wrong, what is current and what is outdated, what is moral and what is immoral, and thereby effects changes in one of the most fundamental, enduring, and potentially protective features of the indigenous culture: the traditional system of land and lagoon tenure.
We have seen that the successive efforts of colonial and territorial political administrations to appropriate Tuamotuan lagoons have encountered considerable resistance by local populations. This contest has essentially resulted in stalemate, the administration allocating portions of the lagoon to whom they please, and to a certain extent, the indigenous people taking what they desire. However, none of the parties involved is satisfied with the status quo. All would like to regulate the growth of the industry, but each has a very different idea of the optimal management strategy. For the administration, the preferred option is the existing system of public domain; it simply needs to be strengthened by more monitoring and enforcement. For the alien entrepreneurs, the highest and best use is preferred. The islanders are divided, but most would like to see some additional devolution to the community.

In this chapter, the different management options are evaluated using theoretical arguments and case studies. I will show that each option has particular strengths and weaknesses. Private and public control are both potentially problematic. Regionalization is
promoted programatically, but administrative policy makers are loath to relinquish centralized power. Community control has been strongly advocated by a number of recent studies. Most of the arguments are based on considerations of productivity, equity, and ecological sustainability. In fact, however, questions of ideology and rights may be critical in the selection of a management regime.

Managing the Commons

Lagoons, like other waterways, are considered common-pool resources throughout the world (Hardin, 1968; Wade, 1987): Oceans, rivers, streams, and lakes are subject to common use because the benefits of shared use usually outweigh those of fencing off small areas and excluding others. However, the shared benefits are finite and mutually dependent. If one person uses more, there is less available for others, due to direct withdrawal from the resource or to the inadvertent damage due to pollution or other effects of intensive exploitation. Unlike resources which are privately owned, common-pool resources are especially vulnerable to congestion, overexploitation, and degradation. This problem--and its management implications--has been persuasively outlined by Hardin in his well known essay on the "tragedy of the commons"
(Hardin, 1968). The history of the mother-of-pearl industry (above, Chapter 6) provides an apt illustration of this tragedy.

Hardin's point of departure is the Malthusian observation that population increase, left to itself, will eventually overtake agricultural production. But the problem happens much sooner than the point of absolute insufficiency of food and may already be occurring. Unfortunately, the invisible hand of the market cannot be expected to control population. The example of herdsmen in a common pasture, in which individual benefits outweigh the collective costs, is cited. Hardin concludes, "Each man is locked into a system that compels him to increase his herd without limit--in a world that is limited. Ruin is the destination to which all men rush, each pursuing his own interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all" (Hardin, 1968).

Although Hardin is credited with the concept of the tragic nature of common property and use, its origins can be found in much earlier writings (Mattews and Phyne, 1988). Hobbes believed that without the legal and restrictive mechanisms established by the state, the clash of individual interests would produce a war of everyone against everyone else (Hobbes, 1962). To resolve this
problem, Hobbes argued that it was necessary to establish a social contract, empowering a sovereign to enforce law and order. More recently, in relation to the problem of fisheries, Hardin has also been preceded by Gordon (1954), arguing that the rational action for each individual is to take as much catch as possible, resulting in long term collective costs (including species extinction) that are much larger than the summed piecemeal benefits.

While there is concurrence with the logic and reality of Hardin's essential argument, there is disagreement on what course of action is thus implied. One school (a narrow, neo-classical economic perspective) maintains that full privatization is a viable and rational solution which ensures the highest and best use (Demsetz, 1967; North and Thomas, 1977). Another view, which includes Hardin himself (at least in one version), argues in favor of regulation by an external agency (Ophuls, 1973; Hardin, 1968; Carruthers and Stoner, 1981). Recently, however, it has been claimed (contra Hardin) that individual rationality does not necessarily preclude the collective good, and that commons can be rationally controlled by the users (Wade, 1987; Ostrom, 1990; Birkes, 1989; Matthews and Phyne, 1988). Each of the proposed management alternatives is discussed below, beginning with what is
generally believed to be the most dangerous one: open access.

Open Access

The extreme form of open access is the totally unregulated situation described by Hardin. Access is freely available to any party, at any time, and any type of exploitive technology is possible. But few common-pool resources meet these specifications. Even in the non-human environment, a tragedy of the commons occurs mainly in species that have evolved in marginal and patchy habitats, whose ecological strategy is migratory, opportunistic, and subject to periodic fluctuations of rapid population growth and decline (such as locusts or lemmings). In most cases, tragedy is averted due to territoriality and other mechanisms of population control (Wynne-Edwards, 1965). In human societies as well, a situation of open access is usually precluded, due to the acquisitive and territorial interventions of both powerful landed interests (Brookfield, 1970; Bayliss-Smith, 1974) and traditional/communal prohibitions (Johannes, 1978; Danielsson, 1955).

The de-facto situation of lagoon tenure on Takaroa is an example of a limited form of open access. While Tuamotuan lagoons are nominally regulated by the Tahitian
administration, islanders and aliens alike pay little heed
to administrative licensing requirements and
restrictions. Due to the distance from Tahiti, effective
centralized control has become a near impossibility. But
local populations which can regularly monitor their
lagoons and control exploitation, have never been given
the power of enforcement or a real voice in the policy
making. None of the parties in the conflict is satisfied
with this situation, realizing that pearl farming has
become increasingly chaotic, leading to increasing
competition and possibly also severe ecological
perturbation.

A test of Hardin’s hypothesis, using a real world,
limited form of open access, has been presented by Wilson
(1977) in a study of the Maine inshore lobster fisheries.
In brief, two forms of lobster fisheries occur in
neighboring areas. In the controlled form, the total
number of men engaged in the fishery is regulated through
voluntary, de-facto arrangements among the fishermen
themselves. In the uncontrolled form, "outsiders" are
excluded, but establishment of residence is easily
accomplished and the entry of younger men of the resident
population is not restricted. If Hardin’s argument is
correct, the uncontrolled lobster fisheries harvest should
show a declining catch per unit effort, lower ages and value per trap, and fewer reproducing female lobsters. It was found that the lobster catch in the controlled fisheries, measured in terms of number or weight, was almost twice that of the uncontrolled fisheries. There were also significant differences in size of reproducing lobsters. The probability of a female being mature at the time of capture was 1.5 times greater in the controlled areas. Although the Maine lobster fishery has not yet been as depleted as other ocean resources have, the case of the uncontrolled fisheries does appear to support Hardin’s argument. The case of the controlled fisheries, however, indicates that, contrary to Hardin, individual efforts can be mobilized to serve the collective interests, and the tragedy of the commons can be averted without privatization or state control, as discussed below.

Privatization

To the external entrepreneurs, privatization is the optimal management alternative for the pearl farming in the Tuamotus. The most extreme formulation of this option is articulated by Tahiti-Pacifique, a pro-enterprise Tahitian periodical. It proposes that the right to occupy lagoon space should depend exclusively and proportionately
on financial ability. Neither local populations nor the administration should meddle with the pace of progress. Criteria such as descent and length of residence cannot play a role for reasons of moral and economic rationality. Ecological considerations are also secondary as the invisible hand of the market will ensure that the resource is not overexploited:

The role of a credible public administration must be to create all the conditions conducive to the development of productive enterprise. Certainly not to block the investors from the archipelagoes. What objective criterion can permit the selection of one potential investor more than another? How could there be someone less qualified to make a judgement with such heavy consequences--for individuals as well as the country--than an urban bureaucrat who knows the Tuamotuan lagoons only through his jet skis? What is therefore the use of always wanting to control? What will happen to the principle of free enterprise? It would be sufficient to fix a relatively high lease fee to exclude the non-serious applicants.

Tahiti-Pacifique, Nov. 1991:20

While institutional particularities may differ radically, private claims and concessions to lagoons and even nearshore resources are common and have become well recognized in the academic literature, under the acronym TURF (territorial use rights in fisheries). Many studies--including those of both traditional and modern forms of sea tenure--are convinced of the ecological value of these systems and advocate their propogation or
institution today (Cordell, 1985; Johannes, 1978; Birkes, 1989). Private owners are held to have a greater incentive to manage the resource for the highest possible returns. Overexploitation is unlikely since it is within their own interest to restrict access and limit exploitation to a level that ensures the maximum sustainable economic yield (Bish, 1977).

These opinions are disputed by others, arguing that rigid tenure systems could reduce access to fisheries and create "sea lords", whose interest would be in reducing labor costs by employing fewer fishermen or paying lower wages. Even the extraction of resource rents would be an insufficient way of making up for the loss of access or control to those for whom the fishery may be a resource of last resort (Christy, 1982; Polunin, 1989). Moreover, individuals or individual communities are insufficiently motivated to control third party effects of overexploitation or pollution. Where technological innovation and gear intensification are possible, privatization poses a dangerous threat to the livelihoods of small-scale fishermen (Alexander, 1975; Bailey, 1985).

Public Control

The management option preferred by the Tahitian administration is public control, which is the de-jure
system according to law. Because of the need for economic development and cash inflow, administrative decision making on lagoon allocation is heavily balanced in favor of investors with sufficient capital for large-scale enterprise. However, the administration cannot fully satisfy the demands of these investors due to opposition by islanders who exert other pressures on the administration. In the system currently in place, the community, represented (administratively) exclusively by the mayor, has a strictly advisory basis. All important management decisions are made by the Territorial Assembly and the Council of Ministers.

Considering the conflicting political and economic pressures—not to mention the lack of scientific information concerning the ecological state of the lagoons and the pearl oyster stocks—it is not surprising that the administration has been vague with regard to the specific regulations and procedures for lagoon concession allocation. In a "Note Concerning the Maritime Concessions", the SMA complained that the Council of Ministers had not given explicit directives on the requirement for residence and land ownership, the inheritance of concessions, the sales or leases of concessions, desired changes in concession location, concessions in multiple locations or more than one island,
increases in the size of concessions, and what sanctions to be imposed for the violation of concession fees (SMA, 7 May 1991).

Public control is often advocated as a way to prevent environmental costs as well as monopolistic privatization. However, as Hardin has asked, "Who shall watch the watchers themselves?" The decisions, orders, hearings, and press releases by the custodians of the commons give symbolic satisfaction and assurances. But the day-to-day decisions and operations of administrative agencies contribute, foster, aid, and even legitimate the special claims of influential individuals and small, well-organized groups to differential access to common resources. According to Hardin (1968), this "has been so well documented in the social sciences that the best answer to the question of who watches over the custodians of the commons is--the regulated interests that make incursions on the commons".

The problem is well summarized by Bish (1977): All that really changes in converting resources from private to public ownership are the incentives faced by the managers of the resources. The private owner faces market demands and the political official faces political demands. If anything, the private owner might respond to all potential user demands even more efficiently than the
political official. The private owner will have better information on alternative values. Moreover, if private ownership does create negative external effects, the individuals affected still have recourse to political officials and the courts to obtain compensation. This is less likely in the case of partiality by political officials, which may be more difficult to prove and lawsuits more easily avoided (Bish, 1977).

A historical study of oyster farming in the province of Zeeland, Holland (van Ginkel, 1988) provides a striking example of the long-term inadequacy of public control over common-pool resources. The rural Zeeland estuaries, exploited for their edible oysters, were expropriated by the state in the early 1800s. After the depletion of oyster stocks, the oyster farming techniques developed in France were introduced experimentally. A government auction was proposed in which the existing oyster banks would be divided into five to ten hectare parcels and leased for ten year intervals. The auction was vigorously contested by local oystermen, fearing that they would not be able to obtain the best and most expensive plots. But these protests were in vain and the first auctions were held in 1870.

Many entrepreneurs attended the auction, most with an urban background, and bid with alacrity. Local oystermen
also attended and managed to secure parcels, sometimes in partnership. But many could not afford to pay the lease fees and were compelled to either find a job with the newly established companies, exploit the (diminishing) still free grounds, or turn to other occupations.

Yerseke, the small agricultural village studied by van Ginkel, became the center of oystering. Many external entrepreneurs and companies became established and the village was linked to an international railway network. Within a decade, the village population doubled (to 2,000) and by the 1890s, had doubled again (a European Takaroa?). Most of the migrants who worked on the large farms were impoverished tenants and landless laborers from neighboring districts.

Within a short period of time, the social relations of production were completely transformed. From a relatively egalitarian business—all oystermen being independent, having equal access rights and possessing similar means of production—oystering became stratified. First to be victimized were the oyster gatherers who could no longer exploit the tidal flats. Even those who could afford a small parcel were usually only able to use this for spat collection, and were eventually forced to sell the plot to those who had access to better plots. Those who profited the most were wealthy outsiders who invested in the lease
of the best parcels, boats, oyster sheds, and storage basins. They were also in a better position to develop a network of customers in neighboring countries.

A handful of these entrepreneurs, among whom were the founding fathers of the industry, combined oyster farming with shipping and often engaged over a hundred seasonal laborers during the campaigns. These were the undisputed "oyster barons". The social consequence of the state supported lease system was the extremely unequal distribution of access rights, means of production and income, and the creation of social cleavages. The outcome was an "odd amalgam" of urban financiers, independent planters and dredgers, tile farmers, foremen, laborers, and artisans who were all dependent on each other. The state, as "owner" of the Zeeland streams, collected fees (as well as export taxes) and "lined its coffers". Predictably, profit margins soon shrank due to overproduction and escalating mortality rates (van Ginkel, 1988).

Regional Control

To some pearl farmers on Takaroa, the Tahitian administration is best qualified to manage the lagoons, due to its purported neutrality and superior scientific knowledge. Local residents would be too biased to their
relatives and neighbors to serve any useful role except in the advisory process. But many would like to see some form of regional control. Some would like a revival of the Toohitu. To others, times have changed and new solutions must be found. The mayor or island councilors, being the elected representatives of the population of each atoll, (supposedly) would be most knowledgable of local needs, in the best position to actually monitor lagoon exploitation, and could best manage the allocation of concessions.

Even if authority is devolved to local authorities, and even if local authorities (unlike Takaroa) are native islanders, there is no guarantee that it will work any better than other forms of public management. Just as is the case with external political authorities, the problem is who will watch the custodians? Mayors, councils, and other forms of local government are equally vulnerable to persuasion by external interests and can be more naive or corrupt than government politicians and bureaucrats. Recent events in Manihiki, Cook Islands (Newnham, 1988) provide an apt illustration. Manihiki is an atoll whose lagoon is abundant in black pearl oyster stocks. A pearl farming industry has developed there, based on the experiments in the Tuamotus, but it has run into serious problems over lagoon management.
Following negotiations with the central government of the Cook Islands, an Australian entrepreneur had been granted a three year contract in 1973, with a right of review. When the contract came up for review, an automatic renewal was vetoed by the member of parliament representing Manihiki, due to objections by the islanders. The island council of Manihiki (quite understandably) objected to making the contract an exclusive one, thus limiting their own pearl farming initiatives. They were only partially successful in their negotiations and a contract was signed in 1976 by the central government for a 20 year exclusive lease. The entrepreneur farmed roughly 50,000 oysters and employed as many as 20 locals. However, relations soured due to allegations that cash was being siphoned out of the island and the contract was terminated (by the central government) in 1983.

This episode led to rancorous feelings in Manihiki and there was a subsequent internal reexamination of the issue of lagoon rights. Local inhabitants had now become very unsatisfied with the central government deciding on the allocation and management of their own lagoon space (traditionally claimed by the islanders, much as in the Tuamotus). Due to pressure from the islanders, a law was passed specifying that a permit from the island council
was needed before any person could perform spat collection or pearl farming operations on the atolls. However, even if refused by the council, a permit could be obtained by special appeal to the Minister of Agriculture and Fisheries.

In 1984, a Ministry of Marine Resources was created whose function was to seek and promote a rational approach to the development, exploitation, management and conservation of all marine resources in a way that ensures the maximum benefits to the people of the Cook Islands. Island councils were given a role in "supervision input and implementation of the management plan". However, as in the Tuamotus, practical matters were outpacing administrative attempts to manage the industry. A Chinese-Tahitian pearl farming entrepreneur, originally situated in Hikueru in the Central Tuamotus, had run into oyster disease problems and was looking for possibilities of pearl farming in uncontaminated atolls and had heard that there were rich, unexploited stocks of black pearl oysters Manihiki.

In 1986, the entrepreneur travelled to Manihiki and requested permission to begin a large-scale pearl farm, offering a lease to the island council, employment for the islanders, and grafting services (for a fee) for local pearl farmers. The council instructed the entrepreneur to
take the matter to Rarotonga for further discussions with the central government and the permit was successfully finalized. The entrepreneur began his pearl farming operations in Manihiki in 1987, duly employing many of the Manihiki islanders. However, when the islanders tried to begin their own pearl farms, they were denied permits. Even pearl grafting technicians sent by the Ministry of Marine Resources were refused by the council, apparently trying to preserve the monopoly for their ally, the entrepreneur (Newnham, 1988).

Community Control

If the decisions of elected leaders diverge so significantly from the will of their own populations—as is the case on Takaroa’s mayor and the Manihiki island council—and if it is too late to revive the traditional system of authority (now defunct for well over a century), who can claim to represent the community? Some Takaroa islanders feel that the lagoon concessions can be best allocated by a community association of pearl farmers. Due to their distance from politics and the government administration, their knowledge of local needs, desires, and capabilities, and their ability to effectively monitor use patterns and the state of the industry, local pearl farmers are best qualified to manage their own lagoons.
Such an association can include both islanders and external entrepreneurs, provided the entrepreneurs have been accepted by the community and its representative leaders.

But we come back again to the problem raised initially by Hardin: individual rationality does not favor collective interest. In the absence of external enforcement, association members would have little motivation to limit their own use patterns and eventually a tragedy of the commons would result. The failure of the Tuamotuan pearl farming cooperatives despite substantial financial and technical support by the Tahitian administration (see Chapter 2) shows that collective efforts would be faced with serious problems of internal organization and financial management as well. However, a preference for pearl farming on an individual, smallholder basis does not preclude cooperative effort at the control, allocation, and marketing level.

The controlled case of the Maine lobster fishery (cited above) shows that collective voluntary control can work, at least under certain conditions. Other cases of successful community-based management are presented in the case studies edited and discussed by Birkes (1989), McCay and Acheson (1987), and Ostrom (1990). These authors, coming from a variety of academic disciplinary
perspectives, show that some of Hardin's basic assumptions are incorrect. Hardin assumes that individual users have no information about the aggregate state of the commons and its nearness to a point of collapse, permitting them to make decisions that are against their own interest. In many situations, however, the monitoring of cheating as well as some degree of monitoring the state of the resource is possible and potentially enforceable (Wade, 1987).

Hardin also does not distinguish between commons where the resource is vital for the individual's survival and those where it is not. It is more likely that Hardin's "relentless logic" will operate where the resource is not vital than where it is (Kimber, 1983), since the rational individual is more likely to exercise restraint where his survival is at stake. Hardin also fails to make the distinction between situations of open access and those of common property. Many successful cases of common property are not open as they may exclude outsiders and even regulate internal use. Community-based resource management is especially likely to be successful if the resource is clearly bounded, easily defended and monitored, where the resource is vital to survival, where there are small and homogeneous user groups, and where the
state has not undermined the power of local authorities (Wade, 1987).

One of the best examples of collective management is provided by the case of Japanese coastal fisheries (Ruddle, 1989). Since 1949, the fishermen of each community have been joined in Fishery Cooperative Associations (FCAs) which are the principal rightholding groups in Japanese coastal waters, managing their own local fisheries as well as aquaculture. Though subject to the authority of the government ministries of controlling natural resources, it is the FCAs who are empowered to implement and enforce national legislation and to complement this with local legislation on seasonal closures, conservation measures, as well as membership and allocation of individual tenure rights. Routine functioning is carried out by the FCAs' executive committees, but the policies are decided by cooperative meetings of all members which emphasize consensus rather than authority.

Birthright, together with the requisite training, residence, and full time fishing, function additively in the acquisition of an FCA membership and fishing rights. Some communities formalized this through rigorous apprenticeships, but this was uncommon. Most entry has always been informal, based on years of on-the-job
training within a family or kin-group, supervised by and in partnership with older kinsmen and family members. A man than applies to the FCA for a fishing right, after which he works independently or with his instructor—to whose fishery rights he will eventually succeed. In many FCAs, the senior person holds the fisheries rights as a full, voting member of the association, while the others are non-voting, associate members. Requisite experience to qualify for an FCA can also be gained by crewing on a boat or marrying into the community and working with the family (Ruddle, 1989).

The policies by which fisheries rights are acquired vary in detail among FCAs and are strongly influenced by local historical, economic, and sociopolitical factors, as well as by everyday face-to-face interpersonal relationships within a village. In many villages, there is a "subjective legitimation logic" (see Kada, 1984; Ruddle, 1989) regarding the allocation of fisheries rights, reflecting—consciously or unconsciously—an FCA membership’s perceptions regarding equity and social justice. This refers not only to present day circumstances but even to social justice for the ancestors and its long-term implications in paying off the debts incurred by descendents of former upper-class families,
who had long discriminated against other social strata (Kada, 1984).

For example, in one FCA, the use of fish weirs was allocated about a century ago solely to the village paupers. With the democratization of coastal fisheries in 1949, the paupers became the dominant class in local fisheries, while local landowners lost their absentee rights. Because of historical precedent, and by assent of the membership, which includes other classes as well, weir fishing remains allocated exclusively to the descendents of the pre-war pauper class. This practice is regarded as fair by the membership since it represents social justice for the descendents of the paupers who had been long discriminated against (Kada, 1984). In another FCA, membership is automatically inherited by succession of stem family members. Branch descendents must wait ten years to apply for membership and fishing rights; while new residents must wait for as long as one generation (Ruddle, 1989).

Conflicts do occur as well. Some are easily and amicably solved; solutions to others are sometimes found only after outbreaks of violence and bloodshed. Some have been only local-level, intra-village disputes between factions within a fishing community or between adjacent villages. Some of the more important conflicts have
involved fishermen from different prefectures and have to be resolved at the national level. Some major incidents have had a long and continual history, going back to feudal times; others have been short, sharp, and quickly settled. The causes of these major disputes have varied, stemming from entry-rights disputes, gear conflicts, illegal fishing, island ownership, boundary jurisdiction, and institutional reform problems. The differential rates at which neighboring communities adopted new technologies are among the most important sources of conflict (Ruddle, 1989).

The Significance of Rights

It is evident from the above discussion that the academic debate on the management of common-pool resources revolves largely around social and environmental issues subject to empirical measurement (e.g. Hardin, 1977; Birkes, 1989; McCay and Acheson, 1987). The central question is which management regime would best maximize public welfare or which regime is ecologically most sustainable. But one of the most important factors is sometimes overlooked. On Takaroa, I have shown that the conflicting claims of all the key contestants are ideologically pivoted around disputed claims to land and lagoon resources. Elsewhere as well, the issue of
rights--rather than welfare--may well be one of the most cogent real world considerations in the selection of a particular management regime.

The legal and social imperatives of indigenous territorial rights have been intensely debated in the academic literature. One author argues that the whole concept of indigenous rights is unsound. The term "indigenous" originates in the early phases of European colonial enterprise. Anything found in-situ was considered indigenous; what they introduced was foreign, exotic. The distinction was thus relative to a particular time in history. Reserving the concept of indigenousness for precolonial peoples essentially "freezes time" at the point of settlement: Settlers can never put down roots in a new land, however long they have stayed, and no matter how well they have adjusted (Mulgan, 1989). The concept of special indigenous rights (it is implied) is provincial, racist, and contrary to the general principles of human rights.

The potential of human rights has more generally been criticized from the radical perspective. It is argued that the liberal faith in rights--that those suffering disadvantage should seek redress by striving for protection through legal recognition of claims as rights--is an illusion. The "liberal myth of rights" is
premised on a direct linking of litigation, rights, and remedies with social change, which is not always the case (Scheingold, 1974). It is also argued that the pursuit of rights through the legal system is counterproductive since it atomizes the issues, impeding the visibility of their political substance. Moreover, hegemonic systems of law provide a prop for political regimes and are themselves part of the problem (Bumiller, 1988).

Both of the above critiques have been rejected by the pro-rights camp: The former, because the principle of equality of opportunity, as understood in Western societies, is simply not accepted by many indigenous societies, for whom traditional concepts of kinship and descent may be paramount. Even Western societies make significant distinctions based on length of residence and even kinship (not least of which is evident in the formal criteria for citizenship eligibility). Property rights and inheritance are almost universally based on the freezing of time. Moreover, the plight of indigenous victims of progress worldwide makes indigenous rights advocacy a moral necessity (Torres, 1991; Bay, 1984; Bodley, 1982).

Against the more general critique of rights, it is argued that appropriately selected test cases do not atomize social movements if they reflect the wider themes
pursued by social movements and that they represent the most efficient investment of resources and commitment. To dismiss the struggle for rights because law is part of the problem is to imagine a terrain of struggle in which a social movement can, by an act of will, step outside the terrain on which the struggle is constituted. Refusing this terrain marks a refusal to engage with the conditions in which social change is grounded. Instead, it is through a limited engagement with the existing terrain that the possibility of long-term transformation becomes possible (Hunt, 1990).

In the case of Takaroa, rights, expressed in the rhetoric of fundamental ideological positions and associated claims to land and lagoon resources—rather than some objectively evaluated "highest and best use"—are key arguments in the conflicting positions on resource management arrangements. For miniscule and isolated populations with rich resources, a steadfast pursuit of their rights may be the only way to resist the inevitable intrusion by external political and economic interests. The resources themselves may be more of a threat to a population than a treasure, as Steinbeck (1972) so poignantly demonstrates.

On Takaroa, the issue of rights became increasingly well articulated when resistance emerged into the open.
Deprived of their ideological justification, the leaders of the resistance movements would have become criminals, not small-scale revolutionaries and could be summarily dealt with by dominant political authorities. But armed with a coherent ideology of land and lagoon rights, the struggle became transformed from a particular to a universal level, effectively engaging the political authorities (at least for a time). External intrusion on Takaroa has elicited what Gramsci (quoted in Hunt, 1990) has called the "need to construct a new intellectual and moral order, and hence the need to develop more universal concepts and more refined and decisive ideological weapons."

For the Tahitian administration as well, rights were—and continue to be—pivotal. Hegemony, like resistance, can work most effectively through a shift from the material to the ideological, from "the discourse of interests to the discourse of rights" (Hunt, 1990). In the rhetorical justifications for managing lagoon concessions under the control of the Tahitian administration, human welfare and ecological sustainability played a secondary role. Consent was achieved primarily by invoking obligations to the law. The gendarmes, threatening with force rather than rights, did little but antagonize the population, and if left to
themselves, would undoubtedly have provoked a small bloodbath.
CHAPTER 11
CONCLUSION

To conclude this study, and to summarize its contribution to the larger issue of resistance to dispossession by small island communities, the key findings will be reviewed, focussing on how the theoretical propositions developed in Chapter 1 apply to the case of the Tuamotuan black pearl boom, and to Takaroa in particular.

Hegemony

This study has shown that the dispossession of Tuamotuan atoll populations has occurred through complex, insidious forms of domination. The Tuamotuan atolls were not very attractive places for European settlement, but the value of the pearl oyster stocks was well recognized. It is thus not surprising that land surveys in the Tuamotus were conducted by the colonial government as early as 1888. Relatively little land could be directly appropriated by the government since there was not very much emerged land in the first place and almost all of this was occupied or exploited by islanders. But the individualization of titles which followed the official
survey enabled land to be pledged to traders and lost in an altogether too predictable fashion.

The dispossession of lagoon space, expropriated in its entirety by the colonial government, presented a much greater provocation to local populations, but it was also accomplished insidiously. In 1890, lagoons were declared public domain under a colonial decree intended to facilitate the settlement of French oyster farmers. In 1958, the Tahitian administration was given internal autonomy over public maritime domain, but the lagoons were not returned to the island inhabitants. Instead, lagoon space was put to the most profitable use: large-scale pearl farms established and operated by wealthy investors from Tahiti. Islanders were granted concessions as well, but these were relatively miniscule.

Local politics provides a further illustration of hegemony in dispossession. In theory, community approval should have been maintained by external investors. On Takaroa, this provided an adequate safeguard so long as the mayor was a native of the atoll. In 1988, however, a Tahitian was elected mayor of Takaroa and Takapoto over the express wishes of the Takaroa population. Shortly after his election, the large-scale pearl farmers received enlarged concessions and applications for concessions by newly arriving entrepreneurs were freely approved. But
this was not the only problem. Some of the native islanders, including the two vice-mayors, were alleged to, or had freely admitted to, having established partnerships with wealthy alien investors. Numerous visits by gendarmes and high-level government officials and church representatives also helped persuade the population to give up their resistance.

<table>
<thead>
<tr>
<th>Table 11.1. Forms of Domination</th>
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<tbody>
<tr>
<td><strong>Consent</strong></td>
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<tr>
<td>Land Alienation</td>
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<tr>
<td>Survey</td>
</tr>
<tr>
<td>Registration</td>
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<tr>
<td>Division</td>
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<tr>
<td>Titles</td>
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<tr>
<td>Civil law</td>
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<tr>
<td>Lagoon Alienation</td>
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<tr>
<td>Public domain decree</td>
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<tr>
<td>Concessions</td>
</tr>
<tr>
<td>Surveys</td>
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<tr>
<td>Co-optation of mayor</td>
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<tr>
<td>Co-optation of church</td>
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<tr>
<td>Co-optation of locals</td>
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<tr>
<td><strong>Force</strong></td>
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<tr>
<td>Arrest</td>
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<tr>
<td>Deportations</td>
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<tr>
<td>Confiscation</td>
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<tr>
<td>Protest breakup</td>
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<tr>
<td>Restriction of civil rights</td>
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</table>

Domination, then, plays a key role in the dispossession of small island populations, but it is accomplished through legitimation, persuasion, and consent, rather than force or threat of force alone (Table 11.1). Today’s transitional and post-colonial political administrations have been quick to denounce the yoke of colonial domination, but they have been slow to acknowledge
that the colonial yoke has, more or less deliberately, been insidiously kept in place. By ratifying, validating, and even taking personal advantage of previous legislation on individualized ownership and public domain—even using the same disingenuous arguments of productive use and the common good (whose production and whose good?)—the triumph of colonialism has been ensured.

**Resistance**

In the Tuamotus, resistance to dispossession was seldom militant, but resistance was not absent. Individualized land titles granted by the colonial administration have deliberately been allowed to revert to a state of indivision. Different, yet similar to the gati, the landholding group provides an insurance for the islanders and their descendents and is an effective means of resisting dispossession. Return migrants are accepted after generations, even if descent is traced through adoptions, oral wills, and other transactions not registered or recognized under civil law. At the same time, the multiplicity of claimants, which becomes magnified every generation, makes it almost impossible for land to be alienated. Most of the land needed by the alien pearl farmers was only obtained through leaseholds and other temporary arrangements.
Tuamotuan lagoons were a much stronger attraction for external intruders and resistance was accordingly more defiant. Since the late 18th century, pearling ships were attacked and sometimes beaten off by atoll residents. But the greatest and most insidious threat was the colonial public domain decree of 1890. The Tuamotuans knew that their ancestral rights were being fundamentally challenged, and protests rang out throughout the archipelago. The protests subsided when it became apparent that the settlement program would not succeed. During the following decades, protests resurfaced when diving teams from Tahiti attempted to intensively exploit the lagoon bottoms of certain atolls, threatening the stocks with extinction.

In the 1980s, the situation became aggravated again. Now the Tahitian administration had complete control over the lagoons. But the colonial public domain laws were left unchanged. To promote the pearl farming industry, administrative policy accords large concessions to entrepreneurs with the necessary capital and expertise, providing they were local residents and had been approved by the local mayor. For wealthy investors, these strictures were easy to bypass. On Takaroa, 41 hectares, the majority of lagoon concession area had been allocated to aliens. In practice, they occupied far more. The
situation was similar, or even more inequitable, on other atolls as well.

In the eyes of the locals, a "great māhele" (see Kameeleihiwa [1992]) had begun in their ancestral lagoon. On the surface, and perhaps in future history, it may seem as if the islanders had been profligate, that they did not realize the value of their resource. To the newspapers and the judicial system, acts of resistance were ignored or treated as acts of anarchy, racism, and the "Wild West". But this was not the case. Islanders recognized an external invasion and they resisted valiantly, through everyday resistance such as fee evasions, quota violations, pilfering, and arson; and also through explicit petitions, angry village meetings, equipment confiscations, lawsuits, expulsions, and occasional violence (Table 11.2).

Table 11.2. Forms of Resistance

<table>
<thead>
<tr>
<th>Everyday Resistance</th>
<th>Defiant Forms</th>
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<tbody>
<tr>
<td>Land Alienation</td>
<td></td>
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<tr>
<td>Indivision</td>
<td>Petitions</td>
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<tr>
<td>Modes of succession</td>
<td>Confiscations</td>
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<tr>
<td>Reoccupation</td>
<td>Expulsions</td>
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<tr>
<td>Redemption</td>
<td>Protest</td>
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</tbody>
</table>

| Lagoon Alienation  |                |
| License evasion    |                |
| Quota violations   |                |
| Elusive locations  |                |
| Deadly words       |                |
| Pilfering and arson|                |

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It has thus been shown that dispossession, like other forms of domination, does meet with resistance, even in the case of small, relatively powerless atoll populations. The historically ascribed profligacy of islanders may reflect factual misrepresentations and simplistic conceptions of resistance. Resistance, like dispossession, can assume a variety of forms, and can sometimes even deliberately be masked. But on occasions when the "water has reached to the shoulderline", covert forms of resistance may no longer constitute an effective means of responding to dispossession, and more defiant forms of resistance are utilized. It is also on such occasions that the ideology of resistance is most openly and explicitly articulated.

**Ideology**

Resistance to dispossession on Tuamotuan atolls derives from perceived rights to land and sea resources which are at variance with the position of successive colonial and Tahitian administrations. For those in the Takaroa resistance movement, land and lagoon resources were an 'āi'a, a patrimony. These resources were inalienably bound to the feiā tumu, the descendents of the "original" settlers of the atoll. Alien migrants could only be rātere, temporary residents, unless a bond of
kinship was established. The large-scale entrepreneurs were regarded as 'ona; their establishment and expansion on Takaroa feared as foreshadowing a process of dispossession, social stratification, and exploitive relationships (Table 11.3).

Table 11.3. Ideology

<table>
<thead>
<tr>
<th>Environment</th>
<th>The Ideology of Resistance</th>
<th>The Dominant Ideology</th>
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<tbody>
<tr>
<td>Society</td>
<td>'Ai'a</td>
<td>Commodity</td>
</tr>
<tr>
<td>Rights</td>
<td>Feiā Tumu</td>
<td>Producers</td>
</tr>
<tr>
<td>Obligation</td>
<td>Ancestors</td>
<td>Government</td>
</tr>
<tr>
<td>Opposed to</td>
<td>'Ona</td>
<td>Descendents</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Territory</td>
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<tr>
<td></td>
<td></td>
<td>Racism</td>
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The resistance ideology had both continuities and discontinuities with past conceptualizations. The term 'āi'a was linked with the teachings of Pouvanaa, a Tahitian independence leader and appears to have acquired specifically political connotations. As a metaphor for environment, the term 'āi'a seemed to lack the more elaborate—even metaphysical—connotations described so frequently in other indigenous societies throughout the world (e.g., Martinez-Cobo, 1983; Bonnemaison, 1981, 1985a). The traditional importance of descent implied in the distinction between feiā tumu and rātere is shown by the care and even sanctity with which genealogies are memorized and regarded.
To those in the resistance movement, the concepts of 'āi'a and feiā tumu served to support the claims of the "original" community to their land and lagoon resources. But the authority of the Tahitian administration was also not questioned. Due to the isolation and difficulties of life on an atoll—even given the rich lagoon resources—Tuamotuan are quite cognizant of their long term dependence on demographic and economic exchange with neighboring atolls, Tahiti, and the external world. What they wanted from the Tahitian administration was not independence, since that also meant severance, but rather more attention to the ideas and desires of the wider population.

To the entrepreneurs, the administration, the church, and even some of the islanders, lagoons were considered public domain, and were subject to regulation and allocation by the government. The rationale for allocation could not be based on the criterion of descent, which would be considered racist, but rather on the need to promote the economy of the territory. The locals themselves stood to benefit from the presence of the external entrepreneurs. There was plenty of space left in the lagoon to accommodate the islanders, even if they had the capacity for large-scale investment. According to this view, traditional Tuamotuan concepts of land,
society, and rights had never existed, were irrelevant, or were outdated.

Resistance to dispossession, and even the meaning of "possession" and "dispossession", depend on an ideology of environment, society, and rights. While the metaphorical particularities may vary, this ideology appears to have common elements with that of indigenous resistance movement throughout the world. The ideology of resistance may be based on historical concepts—it is certainly ascribed to be so—but neither the modification of these concepts nor the assimilation of foreign elements makes them any less valid, less appropriate, or less rooted in tradition.

This study has shown that islanders are not cogs in a mechanical wheel, but sentient, sophisticated people attempting to preserve their resources as well as their culture, however modified this may be. The fundamental problem is dispossession. But dispossession is only defined by reference to systems of meaning and particular concepts of resources, identity, and rights. It was neither desirable nor necessary to reject return migrants, as they had a territorial claim equal to that of the resident community. In contrast, the rights of aliens were contingent. Under duress by the administration, and
lacking a community-minded local mayor, some external entrepreneurs were accepted, but indigenous claims have not entirely been relinquished.

Today, as well as in the past, the contest over Tuamotuan land and lagoons reflects a deeper contest over an ideology of rights, over interpretations of environment and society, and over meaning and cultural systems. Since the time of their subjugation by the Pomares and the French, the Tuamotuans have never categorically defied the dominant order, mindful of their limited resources, isolation, fragmentation, and weakness vis-a-vis the outside world. They have complied, to an extent, with external regulations on land and lagoon tenure. But they have never entirely foresworn their traditional rights, attempting to hold on to the smallest and most barren bits of ancestral territory, often expending a seemingly inordinate amount of money, time, and other effort in the process.
APPENDIX A
COMMUNITY PROFILES

By attempting to bring out the common ideological argument in each faction of the Takaroa conflict, this study has somewhat obscured the fact that each individual does have a personal point of view which is in many way distinctive and even mutually contradictory. To highlight the underlying multivocality in both positions, selected profiles of individual islanders and aliens are presented, focussing on personal attitudes on the conflict. As elsewhere in the study, all names of islanders have been deleted or fictionalized.

Pamae

Pamae is an official of the Association to Protect Takaroa, born on Takaroa of mixed ancestry. His father was a Tubuaian who came to the Tuamotus for the diving industry; his mother is a native of Takaroa. Pamae went on to Papeete for schooling rather than continue in his father’s diving profession. He worked for two years at Moruroa and then settled down in Papeete for a career in construction, initially working for the military. While in Tahiti, Pamae joined the political party of Faaterere
Tiama, which demanded the decolonization of Tahiti and the return of Polynesian sovereignty.

Pamae does not condemn the missionary activities of the Mormon church, which mainly "tried to teach us not to be too savage." But he does blame the French colonial administration. Firstly, they introduced an influx of outsiders. It was under French rule that Chinese laborers first came to Tahiti, later to make up a wealthy 10% of the population of French Polynesia, followed by a wave of some 20,000 Frenchmen. Pamae complains, "I no longer know who I am. There are many groups who are said to be Polynesian, such as the Chinese. But in my idea, a Polynesian is somebody with brown skin, who does not have slanted eyes. Now my culture has been overtaken by aliens, so I don't know who I am any more. I would like to recover my identity."

Pamae complains that all the notable Polynesians are "hidden": "We are forgotten, we are put to the side, considered as simple people." In school, laws were formerly instituted mandating the use of French and prohibiting the use of vernacular languages. There were severe punishments if students were caught speaking in their own language at school and many parents tried to encourage the use of French even at home. Consequently, Tahitian language skills have declined and the Tuamotuan
language has almost been crushed out of existence (at least on some atolls). Although the situation is changing today, and Tahitian (but not Tuamotuan) is even taught at schools, "I cannot forgive this (the past)", says Pamae, "It's an entire race that was being suppressed."

With the completion of the CEP construction work, jobs became harder to find, and Pamae considered returning to Takaroa. Even in Papeete, Takaroa had been "an image before me in my mind all the time." He had kept in touch with events on Takaroa through the "coconut telephone" which linked the Tuamotuan "diaspora." When Lee was initially barred from Takaroa, for example, it was not reported in the local newspapers, but he heard about it through family contacts. In 1986, Pamae decided that the time was right to return to Takaroa. He built a two story house on his family land in the village. But the house burned down several months after it was built.

Fortunately, funding for return migrants was available through FEI and FADIP. Pamae received 500,000 CFP (approximately $US 5,000) from these sources, which enabled him to purchase roofing materials, cement, and plywood, but there was no money left to buy planks. So he took these materials along with the burned planks from his ruined house in the village and built several bungalows for his family to live at his newly established pearl farm.
in on family land at the far islets of the atoll. Pamae husbanded his resources carefully. Revenues coming from oyster sales and other sources were reinvested into the pearl farm.

Pamae and his family were neighbors of Lee, who had recently expanded to the far side of the atoll. Because of his construction experience, Pamae was asked by Lee to assist in building quarters for his new workers. Pamae agreed to help if Lee employed his sons in his pearl farm, giving them an opportunity to learn the business. When the construction work ended, one of Pamae's sons worked for Lee assisting the Japanese grafter; the other was a diver. However, Pamae was unhappy because Lee did not provide diving insurance for his son (insurance could not be obtained since the boy was not a certified diver). Yet the job was risky. It demanded the use of four to eight tanks a day, at depths of up to 60 feet or more.

So Pamae's sons quit working for Lee and began helping their father, who had a smaller scale of operations and did not normally dive more than once or twice per week. By 1990, Pamae sold four stations of seed oysters to a private pearl farm in another atoll. Because he waited until all the others had sold their stations, Pamae was able to command a good price, receiving ten million CFP (approximately $US 100,000) for the purchased oysters.
With a large oyster stock of his own and experience gained through working with Lee, they were now ready to begin grafting on their own. Just as they had gotten to this point, disquiet had begun to grow among the islanders about the continuing waves of alien newcomers.

Pamae had no specific hostility towards the newcomers, even if they were aliens, but he realized that their expansion would be a problem for the local people: "We have children, brothers, who still live in Tahiti but want to come. All the people of Takaroa in Tahiti want to come back to Takaroa. They don't yet have the means to return. But they want to come." On Takaroa, there are few resources besides pearl oysters, while in Tahiti "there is everything". Yet the administration continued to authorize investors from Tahiti to occupy the limited space in Tuamotuan lagoons, and some of the investors had become established even without authorization from Papeete.

Lee, for example, had arrived without a concession and his farm was subsequently regularized by the government. He had already deployed up to 30-40 cables in the lagoon, occupying in excess of 20 hectares, and was now occupying additional space. Lee had initially been accepted by the population because he had agreed to purchase their oysters. According to Pamae, however Lee frequently
purchased stolen stations (perhaps stolen by Lee’s own workers) at a lower than normal price. "Gradually," Pamae says, "Our lagoon will be alienated; the small pearl farmers will be crushed. Our children will not be able to begin. Maybe as workers of the larger farms. It will be the same as in Papeete. Only the large will survive."

Giscard, the second largest pearl farmer was able to obtain land and a pearl concession because his grandfather had acquired land on Takaroa. But Pamae complains, "His ancestors were Chinese. There is no such thing as a Chinese-Tuamotuan." Pamae opposes the sale of land to aliens who have "no real interest in joining our community." To Pamae, the only motive of these aliens is to exploit the oysters. When the oyster resource dries up, they will leave. Giscard’s grandfather purchased land on Takaroa many decades ago because of the booming oyster trade. When oysters became scarce, he left. According to Pamae, neither Giscard, nor his grandfather, nor any of the aliens, had any genuine interest in the community itself.

Pamae was equally opposed to indigenous "partners". Although run by locals, these pearl farms have "many people inside", which Pamae considers dangerous. Once established through the help of islander contacts, the alien entrepreneurs frequently break up with their
partners, taking other islanders as partners or taking
over on their own. Both Richard and Lee started out
initially as partners of Tagaroa; but before long, they
set out on their own, leaving Tagaroa without any
substantial benefit. Lee had subsequently made
arrangements with Hina and Tere for land purchase and
lease, but now there were difficulties even with them. He
adds, "These people (the aliens) have means, they can take
everything. What will be left for the small Tuamotuans?
The same is happening everywhere."

Pamae observes that divisions are deepening between
Mormons and Catholics within the community. Previously,
when the Catholics would build a church, they would ask
the Mormons to help (there were only about three Catholic
families). Now, new Catholics arrive from Papeete and the
Mormons are seldom invited to Catholic events. While
there are capable builders among the Mormons, the
Catholics solicited Lee (a Catholic) to build the new
Catholic church. The Catholics even started to hold
dances on their own; previously they joined the Mormon
dances. Pamae is sure that should the pearl riches
decline, many of the new Catholics will rapidly disappear
as well.

To Pamae, the primary concern was the disempowerment
of the Tuamotuans: "From the time of my grandfather until
today it has been like this. The Tuamotuans never had any power of their own. I am not happy. When will this change? Something has to be done. So we created an association to protect and support our island." The confiscations at the quai may have been directed towards the outsider pearl farmers, but they were also intended as a protest of government policy. Because it was through the administration’s lagoon allocation policy that the current influx of aliens has been initiated. The association statutes had been sent to Papeete but they were ignored. Pamae regrets, "Here in Polynesia, nobody pays any attention to the Polynesians."

The confiscations at the quai were intended as measures to provoke discussion rather than as acts of categorical defiance. People on Takaroa have normally been law abiding citizens despite the impositions of the colonial administration. They were forced to violate the law (through the illegal confiscations) because there was no other way to get the government to respond to their complaints. "Here in Polynesia," says Pamae, "Unless there is an act, you will not get a response." However, the administration has not yet indicated how—if at all—existing lagoon allocation policy will be modified. Pamae is willing to let Tahiti administer the concessions, providing that local wishes are respected.
Kai

Kai was born in Takaroa in the 1940s. A few months after his birth, his father died. Kai’s mother left to Papeete to marry another man and Kai was left with his grandparents. Kai was the only grandson. The stores did not sell canned milk at the time, so Kai was fed with coconut milk. When he had difficulties with his grandparents, he would go to his aunt, who also lived on Takaroa. In 1958, he was one of three students to be awarded a scholarship to Papeete, but his grandfather refused to let him go. Kai tried to stow away in a cargo boat in a carton of clothing, but the island policeman had been alerted to look out for him, and Kai was caught. So he stayed on Takaroa.

In 1962, Kai went to Hikueru for pearl diving with his uncle. During his stay, he witnessed gendarmes expelling a group of Tahitians who had wanted to work the Hikueru lagoon. In 1963, he left for Papeete to stay with his mother. Kai became a leader in French Polynesian youth associations and remained in Papeete for over 20 years. By 1988, when Takaroa’s pearl industry was booming, he decided to return to his home atoll. He was a candidate in the mayoral elections in 1989. Kai’s party won three seats on the island council, the most out of all the
parties on Takaroa. But his party did not win the mayoral office since the Takapoto votes had been with Louis.

Kai and his colleagues contested Louis’ election, arguing that Louis was not a resident on Takaroa or Takapoto. The elections were cancelled but Louis won easily in the run-off elections, having validated his candidacy by registering as a Takapoto voter well in advance of the elections. However, the new council, composed of members of radically opposing factions, was racked with dissention and could not successfully lead the community. Since the recent elections, the council had not even been able to meet once with the mayor. Even without Louis, the full council was only able to meet once, and then only because of the confiscations at the quai.

When the association was founded, Kai became a member. They decided to act when they heard that Yi Fu had sent a shipment to Takaroa and had privately chartered an additional three shipments. The council had been in agreement on Yi Fu, as he did not even have a lagoon concession for Takaroa, but they differed on the confiscations of others. The vice-mayor, who had wanted to bring a partner from Tahiti, explained that the partner would help the community as he was a physician. But the council confiscated the partner’s goods anyway, as well as
those of several return migrants who were alleged to be associates. These individuals, too, had never presented themselves to the council. They simply came to Takaroa, built houses, and deployed stations without asking anybody on the council.

"If they had come to see the council, they might not have been opposed," says Kai. "There’s an administration in Papeete elected in Papeete. There’s also an administration over here elected here. All they would have needed to do is to see us (the council) and see them (the Papeete administration). But they never came to see us. They received their approvals and residence certificates directly from Louis (in Papeete)." Kai does not believe Louis should be entitled to approve concessions on Takaroa. Louis is not a native of Takaroa; he was elected primarily through Takapoto votes; and his approval does not truly represent the will of the majority on Takaroa.

Kai believes that Takaroa is different from Papeete. Papeete is the district center of French Polynesia so anybody can move there and purchase land. But the outer islands are different. Even if they purchase land, the place is not their 'āi'a. Consequently, despite their purchases, the migrants can be expelled if the local populations are unhappy with them. While growing up in
Tahiti, Kai had been a follower of Pouvanaa. Kai recalls the warnings of the Tahitian leader: "Tahitians, watch for your future! Watch for your 'āi'a! Tomorrow, Europeans will come among you and you will have to leave." Current events on Takaroa appeared to fulfill this baneful prophesy.

During the confiscations at the quai, Kai went to see the people whose goods had been confiscated. He told them, "Don’t be angry. What we want to do is to straighten out our common resource, the lagoon." In talking about "our" resource, Kai used the term tātou ("we, including you"), rather than mātou ("we, not you"). Kai explained that he thought that the confiscations were necessary for the well-being of all the community. Relatives now living in Tahiti would eventually want to utilize the lagoon in the future and it was important that the lagoon not be overcrowded before they had a chance. So 38 tons of materials were sent back as a result of the recent confiscations and much more was diverted during Yi Fu’s aborted entry.

Lee, who had been previously approved by the population of Takaroa (because of his agreement to purchase their stations), was rejected because he had gone beyond the terms of the original agreement. The population had approved Lee’s first concession of 3.8
hectares; but then Lee applied to the administration for a 20 hectare concession extending to four additional islets across the lagoon. He did not consult directly with the local people. The association was afraid that large concessions such as this would pose a greater risk of disease than those posed by the local people. The establishment of Yi Fu would have posed even a greater risk.

As a result of his expansion, Kai claims, Lee's pearl farms have now blocked land and channels which he does not own. Some of this he rents and some of this he occupies by permission of the land owners. But other landowners are being blocked against their will. Moreover, by expanding from pearl farms on opposite ends of the atoll into the center, Lee is trying to take over all the lagoon space between, and islanders are being blocked from portions of the lagoon. In the Gambier Islands, Yi Fu is said to have already blocked off a large sector of the lagoon and patrolled it with guards to prevent anybody from passing through his space. And problems of access can be considerably more troublesome on a narrow atoll like Takaroa.

Kai says that much of the current problems are due to the undue influence of the entrepreneurs. Lee, Giscard, and other large-scale alien pearl farmers have other
people backing them financially in Papeete. With their combined influence, they can easily subdue government officials. So it is no surprise that protests in Takaroa have no effect in Papeete. The community would have liked to act according to law and in cooperation with bureaus in Papeete, but when Yi Fu arrived with a thousand unauthorized buoys and other goods, the government in Papeete did nothing, said nothing. Should the council and local community members have just stood by and waited for their lagoon to be filled up by these aliens before acting?

Kai observes that divisions are deepening within the community. The leadership has been paid off and has joined with the wealthy aliens. Marama has a partner, Teura and Marama have supported Louis, Louis has supported others, and is trying to bring in the Japanese. Meanwhile, the poor people are gaining little and losing much. The Catholics are being co-opted through Lee’s construction of their new church building. The Mormons do not have this problem because their church is new and receives large annual tithe donations from the members. So now a rift is emerging between the Mormons who are generally opposed to the aliens and the Catholics who are supportive or neutral.
According to Kai, community cohesiveness deteriorated when the traditional rule of the elders was undermined. "Previously," says Kai, "the words of the old people had power. When they spoke, it is as if it were done. When they decided, the people moved between the village and outer islets, between Takaroa and Tikei. Even the land and the lagoon 'moved' with their words. There was oneness within the community. During a marriage, everybody would come. Nobody spoke of Mormons and Catholics and Sanitos. The village was kept orderly and clean. Then the people started travelling to Papeete and the people drifted apart. The words of the ancestors are no longer respected. This is the cause of many problems today."

When Mahinui was taken to Papeete, the council on Takaroa--despite the orders of Louis--decided to continue the confiscations by themselves. But (Kai says) although the councilors talk in favor of confiscations, they stay at home when the ship arrives, and Kai and his sons are the only ones who go to the quai. Kai adds, "If the gendarmes come tomorrow and ask, 'Who confiscated the goods?' they will say, 'It's Kai!' Even Robert (a councilor) is afraid. Louis called him and warned him that he would send him to jail if he helps with the confiscations." But Kai feels that he is within his legal
rights. The council does have the right to police the lagoon and prevent the deployment of unauthorized goods, even if physical force is necessary.

Kai is unhappy that the administration has authorized lagoon concessions to aliens without the approval of the council. But unlike Moeroa, he believes that the authority of the government should be respected. He explains, "We must respect the law of the government because we must respect the law of God. Without respecting the government, we cannot respect God. If the government lays down a wrong law, we can try to straighten it out, but we should not go against the law. This doesn't solve any problem. Just like if somebody fights with you. It's not good to fight back, it will just get worse. It's better to talk to him (the opponent) and straighten it out."
Jim

Jim is a young man who was born in Tahiti. His grandfather was a captain of one of the Tuamotuan cargo boats of mixed Tahitian and English ancestry. Jim's grandmother lives in Tahiti but descends from a number of prominent lineages on Takaroa. After moving to Papeete, Jim's father started a pest control business, but Jim grew tired of this and, in 1986, decided to return to Takaroa. Jim's brother was initially supposed to continued the business in Papeete while Jim began the pearl farm in Takaroa, in partnership. But Jim's brother took off to New Zealand and Jim was left holding the financial burden on his own.

Jim knew that if he "just left with an axe and a little bag", he'd eventually return to Papeete and never go back to Takaroa. So he took everything. That way, once he got on the boat, he "knew" he wasn't going back anymore; he had nothing left to hold him in Tahiti. Accompanied by his grandmother, who was now in her 70s, they arrived in Takaroa. When they got to Takaroa, they set off in their boat across the lagoon to the far side. As they passed the numerous islets strung out along the atoll rim, his grandmother would say, "That's ours. That's ours. That's ours." When they got to Kaminihi, an islet on the far side of the atoll, she said, "That's
Jim had already heard about Kaminihi in Papeete. He had been waiting for that parcel of land. When he saw it, he liked it. He said to his grandmother, "That's where I'm going. That's all." They did not go any further.

When Jim settled in Kaminihi, there was hardly anybody living on the outer islets. Jim wanted to live there because that's where his work would be. But to the villagers, Jim was crazy. The outer islets had no cisterns, electricity, or telephone, luxuries which had become necessities to the villagers. Moreover, the church was located in the village. In the outer islets, there were the ancestral spirits, not all of whom had kindly intentions. There was also fear that settlement in the remote outer islets would lead to the theft of oysters and copra belonging to the villagers. But Jim persisted. He built a house, installed a generator, and learned pearl farming from his relatives and neighbors.

Jim never joined a pro-independence party. Jim had had still been a youth at the time of the powerful orations of Pouvanaa. Jim feels that Tahiti is not "mature enough" for independence. Without French aid, where would there be enough money for propping up the faltering local economy? How would inter-island transport be financed? Jim blames the economic problems on
corruption in Papeete. Money that could have been raised and used for making roads and schools is used to pay inflated salaries to bureaucrats who "sit at their desks and read newspapers all day" instead of fulfilling their public obligations. "Before we get to independence," Jim concludes, "We need some brains: lawyers, judges, police, scientists."

However, Jim also believes in the need for empowering rural communities. Each atoll community should be entitled to manage the allocation of its own lagoon space. But decisions should not be left solely to the local council. In Takaroa, for example, where the mayor is from the outside, the council cannot protect the island against an influx of aliens. Instead, the association could manage lagoon allocation. Being native islanders, they would ensure that aliens are appropriately regulated and monitored. The advice of government scientists and experts could be consulted as to ecological limitations, but for the rest, the local people should manage themselves.

Alternatively, lagoon concessions could be managed by reviving the Toohitu. Each family could choose one old person. Collectively, the Toohitu would allocate the concessions. The old people know who owns the lands, so "They can say, 'Okay, that's your father's,' 'Okay, you
can go there,’ ‘Even though that’s your uncle’s or your
antie’s, you can go there.’ They’re the only people who
can do that. The head of one family can be president for
one year, the next family head can be president for
another year, and it can go on like that."

Jim feels that the Tahitian government cannot accept
this because they want the power themselves. The
Tahitians are afraid that if they don’t keep the power,
the Tuamotuans won’t produce enough oysters or pearls to
keep the economy going. But (according to Jim) they’re
wrong. The reason the Tuamotuans are slow is because the
administration never teaches them. Jim’s uncle had gone
to EVAAM for information because he had collected many
seed oysters, invested quite a bit of money, and wasn’t
sure how to take care of them--where to put them, whether
to drill them--and nobody gave him an answer. He lost
many oysters in this way and blames it on the bureaucrats
at EVAAM.

Jim has no fundamental objection to the establishment
of aliens, provided that the community is willing to
receive them. He also does not object to partnerships,
provided they stay with their original partners. But he
feels that there are limits to how many aliens the lagoon
can contain without crowding out the locals. Most of the
aliens had never properly obtained the consent of the
local community. The entrepreneurs have blocked shore access and some of them have begun to fill up the lagoon with spat collection stations. Lee had initially received a petition of support, but his welcome has now been withdrawn because Lee took up more lagoon space than was agreed upon. Jim also criticizes Lee's workers violating Mormon public anti-alcohol customs.

When resentment began building against the aliens, people came to see Jim and asked him to take a leadership role in the resistance. Jim considered the request, but then Moeroa arrived on Takaroa, and Jim left him to run the association. Jim reasoned that Moeroa ran less of a risk, being single, and having few close relatives. When Moeroa started the association, he asked Jim to be an officer. Jim refused, explaining, "I didn't trust the Tuamotuans for doing something to the end. All our work would have been a waste of time. And Moeroa understood, because he is a Tuamotuan." Moeroa might succeed if he personally made sure that decisions were followed through. Jim trusts Moeroa, "But not the others."

Jim feels it will be very difficult for the association to "follow through", but he believes that Moeroa will stick to his plans. "It will be very hard. He will be very unpopular. He (Moeroa) is a very brave man. I knew him since I was small. He's never done
anything good in his life. Maybe he's finally going to do something good now." Jim supported the association and signed its petitions, but he did not become a formal member. When Moeroa returned from Papeete, the confiscations stopped for a while, and Jim grew nervous about the aliens continuing to come in again. Had Moeroa not acted the second time, Jim would have stepped in. As it turns out, he did not have to.

Moeroa made mistakes, according to Jim. He could have negotiated more. Perhaps more community support could have been obtained; perhaps Lee would have been persuaded to leave by himself. But Jim believes that the association is still the only chance for the Tuamotuans: "If it doesn't work, nobody will take any notice of us. It will be the 'jungle', until the day there is a murder or something like that." The population alone does not have any power. If the gendarmes order materials released, the people cannot argue that the population refuses. The gendarmes will say, "Who is that?" But the association (a legally constituted body), has power, even to the Papeete authorities.

Moeroa alienated many people because of his unsubstantiated and possibly erroneous accusations that many islanders were "partners". But in Jim's view, this is not a problem. Accusations are part of the "Tuamotuan
mentality", and they are withdrawn as easily as they are fired. "A mother can kick a son out," says Jim, "And if the son doesn’t understand the mentality of the mother he can get really upset. But if he understands, he will just forget it. She’ll change her mind, maybe the moment she said it... It’s the same with the Tuamotuans. They act mean, but they have good hearts." Moeroa may lose support because of his accusations, but local people will forgive and forget.

Jim is angry at the Patiras, families from another atoll who began pearl farming on Takaroa during the past two years. Their ancestor was a French government appointee on Makemo and assisted the official Tuamotuan land surveys in the late 19th century. During the course of his survey work, he somehow managed to obtain titles to lands throughout the Tuamotus. On Takaroa alone, he obtained over 150 titles, most of them disputed by local landowners. One of his descendents, Teuira, settled on land that had previously been occupied by Jim’s grandmother, even though the Patiras had not lived on the lands for five generations (or at any known previous point).

On arriving in Takaroa, Teuira, seeing the name of Jim’s grandmother on the official land survey, came to see Jim and announced that he was coming to take possession of
his ancestral inheritance. Jim said, "Well, if you think you have rights to the land, go, but if you don’t have rights, you’re going to get kicked out." Teuira said, "No, I have rights to it." Jim went to see the mayor’s office in the village to "show them his rights". But the mayor failed to act on the matter, so Jim will have to travel to Papeete to file a court case. Jim is concerned that previous court decisions may have been made in the favor of the Patiras due to their connections with a number of astute lawyers, and reversing the titles may be difficult and expensive.
Patira

Patira is a middle-aged man whose extended family has become well established in successful professional, technical, and agricultural careers throughout French Polynesia. Patira was born on a small Tuamotuan boat between the atolls of Raroia and Takume (in the Makemo district). He grew up in Makemo working as an oysterman and a fisherman and moved to Noumea when opportunities opened in jobs associated with the nickel industry. In Makemo, he knew Moeroa, Tehiva, and the other Takaroa migrants that had spent time in Noumea, although he didn’t know they were related to him. In 1985, he returned to Makemo to take up pearl farming.

But spat collection was not productive in Makemo and oysters had to be gathered one by one from natural stocks, and even then, only when the government opened the season. So Patira decided to move to Takaroa. He claims he had already received permits from the administration and the mayor of Takaroa. He built a house and a paepae on one of the outer islets, but relatives started making trouble, so he moved to another site. But there too, other landowners began disputing his rights, claiming he was not really a native, and that the Takaroa land titles of Patira’s ancestor had been improperly obtained.
So Patira moved to a parcel of land which had never been claimed by any of the locals.

Patira’s ancestor was born on Anaa, but grew up in Takaroa during the era of the chiefs. At the time, explained Patira, land had "not yet been deeded", and people were free to circulate between the atolls. His ancestor met a Makemo woman and moved over there. Their son, Hotu, was born on Makemo, and was one of the first Tuamotuans to be trained at a European school. Hotu did well and became an assistant of the administrator of the Tuamotus. Hotu claimed land on many atolls in which he claimed ancestry. On his father’s side, he claimed land on Anaa, Kauehi, Takaroa, Takapoto, and other atolls. On his mother’s side, he claimed land in Makemo.

Patira does not believe that the land on Takaroa (or any other atoll) belonged to anybody in particular. The land belonged solely to the chiefs. When the French took over, it was they who distributed the rights of land to the people. But since Hotu had been living on another atoll, the Takaroa people exploited his land and claimed it for themselves. Patira and his family say that they went to court over the disputed land "in order to give power to our ancestor." So they moved to Takaroa and invested quite a bit of money. But the Takaroa families
disputed their claims, arguing that the Patiras did not have power, that they did not have the right to talk.

"I don’t want any trouble," says Patira, "I didn’t come here to fight. We came here to find money. We have land here but we didn’t come for the land. I just came for the oysters, that’s all. We do not plan to stay very long. We have come for the lagoon resources and we don’t know how long this will last. But right now, it is a resource which God has given us all. So we came here, cleared the land, built houses, planted coconuts, erected cisterns. When we leave, we will leave our coconuts, our cisterns, our houses and all to our relatives on Takaroa." But he did encounter trouble within months after his arrival. Patira’s two front teeth were knocked out by Moeroa at the quai. And shortly afterwards, petitions were sent to Papeete requesting the ejection of the Patiras.

Patira believes that the association does not represent the population, but rather, influential individuals who were not even long term residents of the atoll. Patira respects the aim of the association—the protection of the lagoon of Takaroa. But he argues that (unlike the Chinese and Tahitians) the Patiras are not rātere; because of their ancestor and have a genuine right to the land. Moreover, they have not even come to take
the land. They have come for the marine resources, a wealth which is the common property of all French citizens. But because they need lagoon access, they have asked their relatives on Takaroa to share the land as well.

On Makemo, Patira says, this situation would never have occurred. No matter how many years, how many generations, people are away from the atoll, they are welcomed when they return. Patira believes the Takaroa people have gotten wealthy and think only of themselves. He and his family are shocked and outraged at the behavior of the community on Takaroa. "We have land on the island," Patira complains, "We are not aliens. Don’t we have rights to share in the wealth? Even if we have been away for a hundred years or more. We are very surprised at this atoll. It’s a good land, with such wealth. . . . but the people. . . . Because of the money that has come, the way of thinking of the ancestors—love for one’s relatives—has been lost."

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Tapu

Tapu was born on Moorea. After finishing school, he went to work in construction in Tahiti, where he met and married a Takaroa woman. In 1987, Tapu and his family heard about the success of pearl farming in the Tuamotus and decided to move to Takaroa. He built a house in the village and a pearl farm on the outer islets. He was successful in spat collection and learned how to graft his own pearls. Two of his sons are married and have now built houses for themselves on one of the islets that is connected by road to the village. Tapu is active in the local Mormon church. In 1990, when (due to population expansion) the Takaroa church was divided into two branches, Tapu was designated president of the outer island branch.

When Moeroa first founded the association, Tapu became a member. He too was worried about the entrepreneurs coming to Takaroa. At the time, he was a councilor to the president of the Takaroa branch of the church. When they confiscated the shipments at the quai, Tapu participated. However, when the goods belonging to Gau, one of the church members, were confiscated, Tapu told Moeroa, "It's better not to confiscate the goods of this brother." But Moeroa said, "No, it is necessary to confiscate!" They
confiscated Gau’s sugar, rice, and other goods Gau needed to survive. Gau had recently arrived and built a small house on an isolated islet on the far side. But Tapu put Gau’s materials aside and later returned them to him.

Shortly after the confiscations, the church leaders from Tahiti and Takapoto visited Takaroa. They asked local church members that had been involved in the confiscations to see them. They spoke individually to Moeroa and other association leaders. "It is forbidden," they said, "To strike somebody. But if somebody strikes you, you are allowed to defend yourselves." However, they urged restraint and prayer. Tapu adds, "We told our members, 'Go ahead, if you like, but do not mix the work of the association with that of the church.' We also advised them that, according to law, they should let the mayor and police deal with the problem."

After personal meditation, Tapu decided to withdraw from the association, due to his prominence in the church. "It is a good thing I did," he says, "Otherwise I would have gone to prison like Moeroa. We cannot go against the law, even the church." He believes that it was right to defend the lagoon against Yi Fu, who tried to get in illegally. But he does not support the expulsion of Lee, Giscard, and the other established aliens because they already obtained their lagoon concessions according
to the law. "It's not the fault of the people in Papeete," says Tapu, "It's the people from here who gave their land away. Now look how much they (the aliens) have invested. It's not easy to expel them."

"I try to explain this to the people through the Gospels," says Tapu. "I tell them, 'All the people here are my brothers. Even Lee. Even Richard.' But they don't listen. They leave the church and no longer see each other as brothers and sisters." Then Tifai came to see Tapu asking him to sign a petition to expel Paul Yu and the outsiders. Tapu examined the petition and discussed it with his wife. When Tifai came back, Tapu told him, "The petition is worthless, I'm not going to sign it. Even if they're are not from here, they're good people. They rented land." About Tifai and his father, Tapu says, "They have 'hard' heads. They don't want the good of the others, only themselves."

The land doesn't belong to us," says Tapu. "All that is here belongs to God, he that created the land. The people that have come are just like us. They have come to earn money. If we say, 'No, return to Papeete,' the oysters will disappear. We may become annihilated. Our leaders have forewarned us. I received instructions from Papeete: 'When you have new arrivals from Papeete, love your brothers and sisters'. If we are good, we will
all have everything we want. The church can help people if they accept the Gospel. But the church cannot help if the people don’t believe, don’t act. Sixty percent of our members don’t even pay their tithes."

Moeroa had originally belonged to the village branch but he got mad at his president and he joined Tapu’s branch. After consultations with church leaders from Papeete, Tapu cautioned Moeroa not to go outside the law: "There is a mayor here. Without the mayor we can do nothing. It is very simple. If you go against the law, you will be arrested and go to prison." But Moeroa would not submit. He violated the law again and he was taken away to Papeete. "Now Moeroa is disengaging himself from the church," says Tapu, "We’ve seen him doing things which are strictly prohibited by our church."

Tapu is surprised that the people on Takaroa have even tried to expel their own relatives, church members. Toau and Pua, for example, came to Takaroa to begin pearl farming. But their cousin, Maco, had cleared the land earlier and didn’t want them on the family land. One day, Toau fell ill and Pua claimed that Maco’s wife had used witchcraft against her husband. Toau died suddenly and Pua and her children were forced to move out of the family land. They moved to an outer islet which they claimed
from a different ancestor. "Now they rarely come to the village," says Tapu, "They feel everyone is against them."

Tapu attributes all this to the discovery of new wealth. It happened in the 1940s, during the mother-of-pearl diving period. Then, too, money flowed freely and the people drank, gambled, and quarreled. The devil had become established on Takaroa. It is even said that a local woman even started to grow horns. So the prophet in Utah ordered a missionary to come to Takaroa. When the missionary arrived, he didn’t shake anybody’s hand. He even avoided the village church. He went straight to the lighthouse and told the people, "The whole island, the lagoon, and all belongs to God. Once we die, we cannot take it with us. We are merely the occupants."

The trouble stopped for a while.

However, the people began to quarrel again, they stopped paying their tithes, and the church almost shut down altogether. The oysters disappered and the coconut palms got sick. So the church sent another missionary. He blessed the lagoon and the land and the oysters came back, the coconuts gave fruit. "Now it is starting again," says Tapu, "It is the third time. If it continues like this, there will be no more oysters, if people think only of themselves." Tapu adds, "If we don’t let others come over here, one day, when we no longer have
this resource of oysters, this gold, we will have to go to Papeete again and look for work. And if they don’t let us go over there? Maybe they will do the same thing. They will say that nobody else can go there."
Alex

Alex was born in Noumea in 1961. His father, Tufau, was born on Takaroa of a Chinese-Tuamotuan union. Tufau and his family had left for New Caledonia during the nickel boom together with large numbers of other Polynesians. Alex looks back nostalgically on the traditional culture and community life among the Melanesians on New Caledonia. "It was like this in Tahiti long ago, but now we have become more individualistic. We never had the problems of money we have here now." Alex received a scholarship to France, where he specialized in aeronautics at a military engineering school. He considered remaining in Europe. He was single, had friends, a good salary, and he travelled extensively.

In 1984, Alex's father had already established a pioneer pearl farm on Takaroa and he invited Alex to visit during his annual vacation period. Alex went for a brief visit, but he was attracted to the island and thought about staying. "I wanted to be chez moi," Alex explains, "The problem was that I didn’t know where I came from or where I was going to. I was born in Noumea, raised a few years in Tahiti, but neither was really my own place. In Noumea, I was a Polynesian Chinese. In Tahiti, they said I was born in Noumea. So where was my home? The Tuamotus
is the home of my ancestors so I think I am chez moi. It was the problem of seeking for my place of origin."

Alex stayed with Tufau in a small house on one of the far islets. There were plenty of mosquitoes, lots of sun, and few basic necessities. They dove for oysters without tanks because at the time, the government was afraid of depleting the natural pearl oyster stocks. To begin his farm, Tufau had invested the capital obtained by selling his home and business in Noumea. By the time Alex arrived, Tufau had already gathered a large stock of seed oysters through diving and spat collection. They hired a Japanese grafter, but this proved costly (they asked for half the pearls produced) and the results were mediocre. The Japanese grafter had refused to reveal his techniques, but Alex decided to experiment on his own.

Tufau and Alex already had a stock of over 30,000 oysters ready to be grafted. In the village, he asked where to get the grafting instruments and the nuclei. Both were expensive and there were many obstacles. Disease was present in Tufau’s stocks and mortality in the grafted oysters rose to 70 percent. But results improved as Alex perfected his grafting technique. Within a year, he was able to graft 2,500 oysters a month, with a 25 percent success rate. Alex studied the local market and made contacts in Papeete for selling his pearls. Before
long, Alex was training young people in the village as apprentice grafters and was taking grafting contracts for other pearl farmers on Takaroa.

By 1990, Tufau and Alex had set up separate pearl farms. Tufau specialized in spat collection and oyster culture, while Alex specialized in grafting and outside contracting. In choosing their locations, they made sure that they found places which were not disputed by anybody else. Otherwise, "At any time, a cousin could come and try to kick us out." So they found out which lands belonged directly to them. Although almost all lands were collectively inherited, there were some lands that had been worked by Alex’s grandmother (for copra) for decades. According to French law, land that has been continuously utilized for thirty years or over is considered the exclusive property of the occupant.

Alex is not opposed to the establishment of alien investors. "We have to weigh the pros and cons," he says, "Without being prejudiced or segregationist. It is good to have new capital, you cannot move without this. But there must be conditions. The large farms could easily employ more villagers. Oyster sales could be centralized." He criticizes the association’s efforts to eject the aliens, feeling that this is a form of discrimination. "But have they ever thought what the word
Alex realizes that the large pearl farms run by alien investors may some day put the small, local farms out of business. However, he feels that this is all part of the "evolution of a population". Previously, people had large families; now they are learning about contraception. Previously, the people were community oriented; now they are becoming individualistic and materialistic. "Today we are all capitalists," says Alex, "We live in a capitalist society. You do what you want with your money. It is all part of civilization. It will be bad from the point of view of Tuamotuan culture. You can't stop the future."

But Alex is not completely happy about these changes. "Takaroa is becoming like the cities," he complains. "The people are individualistic, they separate, and the new migrants don't want to be integrated into the population. Everybody minds his own business. I don't think we have progressed in the right direction. With every step of civilization, we have lost something. At one time, people could live here without money. Now everybody wants a car. There are many who have come from the exterior, with new points of view, new ways of life. Now even the villagers don't want to help their neighbors any more."
Alex also regrets the sale of family lands to aliens. The land, he says, is a "patrimony", something which was given by the ancestors. "Why sell something given which was given to your ancestors, particularly a (parcel of) land? You can sell within families, but why sell to aliens? But now money talks faster. It's too bad. We don't worry as much about our cultural riches. The land should be an essential property of the family. If you sell your grandmother's land, it's too bad."

Nevertheless, "Once aliens have bought the land, nothing can be done. A Tahitian can buy land here just like Tuamotuans can buy land in Tahiti. We are all Polynesians. You can't deny Tahitians the right to buy land."

Alex feels that the problem on Takaroa is that there is no dialogue. "With discussion, things can be arranged. Compromise is possible before moving to action. But with acts, things get worse. Over here, they confiscate things without even talking; they opt for the easy solution." Alex understands the local desire to protect their lagoon. To the islanders, the aliens pose a threat to their livelihood and to their traditional sense of community. To Moeroa and the association members, Lee and the other aliens are not a part of the local community. "But to be a real community," says Alex,
"There must be tolerance, fair treatment for all. Fresh blood and new ideas can potentially benefit everybody."
Taitua

Taitua, vice-mayor of Takaroa, was born in Papeete. His father is a Tahitian and his mother, Fara, is of a family that is prominent on both Takaroa and Takapoto. Fara had previously been the mayor of Takapoto for many years. Taitua was at the head of Louis’ party during the past elections. Although Taitua had been living on Takapoto at the time, Louis, anticipating problems on Takaroa, sent him over there. This accorded well with Taitua, whose wife was a Takaroa native. Taitua’s parents and brother-in-law had already transferred to Takaroa themselves, due to the oyster mortality problems on Takapoto.

Among some of the Takaroa Islanders, there was ill feeling toward Fara and her family. They recalled the time Fara, as mayor of Takapoto, had forced Tagaroa to remove oysters from their lagoon. The oysters died and Tagaroa had cursed the islanders, "May your lagoon dry up." Some people attribute Takapoto’s current mortality problems to Tagaroa’s power. But the situation was compounded when Taitua was sent over. It was bad enough that the Takapoto people should impose a mayor on the commune that was against the majority will of Takaroa. To also send over their vice-mayor was adding insult to injury. However, Taitua was also district president of
the Mormon church (for both Takaroa and Takapoto) and he was grudgingly accepted on Takaroa as well.

By 1989, Taitua knew that there was going to be trouble on Takaroa. "As soon as there was one station with lots of oysters on it," he says, "You knew there would be trouble. If there are oysters in the lagoon, people will come." When Moeroa acted, Taitua had been in New Zealand. When he returned to Takaroa, he tried not to take sides. "It was very difficult to respond to a problem of this nature," he explains, "About a third of the population participated in the confiscations, over a hundred persons. We only have two police agents permanently on Takaroa. Two agents against this population is not easy. It’s not the same as in Papeete. We only had two agents against a hundred. We wanted to enforce the law, but the people would not listen."

"I am trying to resolve the problems here," says Taitua, "But if the people don’t want to understand, that’s not my problem. The important thing is not the mayor. There is a code of law to be respected. The Council of Ministers makes the decisions. Everybody should respect them. But if Lee has a concession and the association tries to block him, what can you do as mayor? Do you intervene? If you do, the population will be angry at you. They will say you’re not a good mayor. Do you
say, 'Wait a while and we’ll see what to do?' Others will be angry at you. The Council of Ministers will say, 'There are laws which have to be respected'. So what can you do?"

Taitua says that the islanders have themselves to blame for the establishment of aliens on Takaroa. "If they don’t want somebody to come to the lagoon, even if he offers a lot of money, they should not sell their land. It’s logical. If people rent their land, we cannot block it. We don’t have the authorization. What can we do if people associate themselves with people on the outside? It’s up to the people to protect themselves. It’s this population that confiscated the goods at the quai. It’s this population that sold its land. We can try to intervene, but the decisions are not ours. They are the decisions of the territorial government. We cannot make any rules over here. The only thing we can do is follow the civil law."

He agrees that there is a problem with the large lagoon surfaces being occupied by aliens and their pearl farms. But here, too, the local people are to blame. "They have their oyster stations scattered all over the lagoon. If they had respected their concessions and had them all in one place, it would not be so bad. But like this, of course they are going to run into problems with
their neighbors. It is understandable that they try to move to another spot if they find a better place for their oysters. But they must respect the law. We discuss things every week, sometimes every day. Since last October, we have been calling Papeete to try to regularize everybody, but nobody responded. So what good do meetings do?"

To Taitua, a small island like Takaroa is not a good place for an association. "Too many people are leading," Taitua says, "Too many problems. Why not let the mayor decide? Why create associations? If there are too many leaders, we cannot resolve any problems." Taitua complains that the community problems are interfering with his personal life and he is thinking of resigning. "I have a pearl farm," he says, "But I cannot attend to it. I return to my house and I no longer have the energy to do my work. I receive visits, phone calls in my house every day. I can do nothing. If I had grown up children, it might be different. Now I also have problems in my own household. I have to resolve my own problems before I resolve the problems of the population."
Richard attributes the Takaroa pearl boom to three factors, all of which occurred at the same time: A boom in spat collection, the opening of an airstrip, and Richard's own initial successes. Richard was not surprised that Tagaroa, who had earlier been associated with him, began to help Lee. Nor was he surprised that Lee decided to come to Takaroa. But he was surprised at the way Lee began on Takaroa. Richard had begun slowly, slowly building up a rapport with the local population and gradually building up his pearl farm. "But when Lee arrived, he announced within a week, 'Next week I will begin my pearl farm. I will be bringing tons and tons of materials.' But the land, the paper work takes time. . .It's impossible to do things like he wanted to. It was also shocking to the population."

Richard himself had taken pains not to antagonize the local population. Giscard also built his way up quietly. But Lee was attempting to monopolize Takaroa for himself, spoiling the situation for the rest of the outsiders. So Richard anticipated trouble before it began. More and more people were arriving on Takaroa, a community which, he knew, does not easily accommodate the settlement of outsiders. Richard's fears mounted when he saw in the newspapers that a new pearl company "Takapoi" had been
had been started, headed by Yi Fu. From the name, he knew there was a connection with Takaroa.

Sure enough, an enormous shipment of pearl farming materials arrived on the Takaroa pier with the next cargo boat. The shipment was labelled with the name Chu, a former employee of Giscard, who had been fired and vowed to come back working for an even larger entrepreneur. Chu rented land on one of the far islets, and was alleged to be in partnership with Yi Fu. There was no reaction from the population at the time, as Moeroa was just beginning to organize the association, but there was "a lot of talking". During the next shipment in October, Richard learned that confiscations were planned, so he didn’t send any goods on the cargo boat.

When the ship arrived, the association confiscated all of the goods destined for Chu, Lee, and also the goods of islanders said to be partners with Tahitian investors. Yi Fu was worried because, through Chu, he had already deployed numerous stations in the lagoon illegally and he did not want trouble from the government. So he decided, as Lee had earlier, to buy numerous stations on Takaroa "in order to calm the population". Yi Fu is said to have spent at least 60 million CFP in oyster purchases, at prices much higher than usual, hoping to emerge from the
situation unscathed. Yi Fu's boats were sent to Takaroa and all Chu's shipments were sent away.

Neither Richard, Giscard, or Lee were very happy at the high prices Chu was paying for oysters. Prices would go up and there would also be fewer oysters available. When the gendarme arrived, Richard went to see him. Richard told him that he was expecting two whaleboats. He added that he had previously contacted the local councilors and explained that everything he did was legal--that he owned land, voted in Takaroa, and was moreover, the first who had really believed in pearl farming on Takaroa. Unlike the other entrepreneurs, Richard lived on Takaroa, had put all of his investment in Takaroa, and had no other business besides his Takaroa pearl farm. The gendarme assured him that he wouldn't have any problem. When the cargo boat arrived, Richard's boats were released untouched.

Richard's brother (his partner), sees black pearl farming as the future of French Polynesia's economy, particularly for the inhabitants of the Tuamotu Archipelago. He is glad to see the Tuamotuans returning from Papeete to their atolls to find a better way of earning a living. But he does not want to see a "pearl rush": No multinationals, no "heavy capitalists", no production of pearls by the tons. This way, prices can be
maintained at good levels. If pearl production is kept at a family or artisanal level, the Tuamotuans will be assured of a good life for decades to come: telephone, television, schools, airports.

Richard's brother came to Takaroa for economic reasons, but he recognizes that money is not an end itself. He has found a new way of enjoying life: quiet, calm, no pollution, and no stress. He has "learned to respect nature and the environment and he is learning every day." He enjoys his new profession and hopes for the future of Takaroa pearl farming. However, he too hopes that additional tides of migrants can somehow be controlled. For if the influx continues unabated, he fears that the boom will evaporate due to overpopulation, lagoon pollution, jealousy, troubles, and deterioration of human relations that can potentially spoil the cake for everybody concerned.
Giscard

Giscard is the second largest pearl farmer in Takaroa. His grandparents migrated from Canton, China, as part of the labor migration to Tahiti in the late 19th century. Giscard’s grandfather, Afo, was a powerful banker and had considerable political influence in Tahiti during the early 20th century. Afo purchased land in many parts of French Polynesia, including the Tuamotus. Afo’s bank collapsed in 1929-1930 and he lost almost everything, but he managed to reestablish himself through a soap manufacturing business (using coconut oil). Despite his tribulations, Afo managed to salvage or repurchase much of the land he had acquired.

Giscard was about 12 years old when his grandfather died. Following high school studies in Papeete, he went to France to study engineering. When he returned to Tahiti, there was plenty of work in constructing the ports, airport, hospital, and other work associated with the establishment of the CEP. Giscard also taught mathematics at local schools. With the income he received through inheritance, construction, and teaching salaries, Giscard invested in real estate himself. One of the purchases he made was some land in Manihi, where he had intended to vacation and scuba dive.
Giscard was a friend of Lee, who had already begun investing in the newly developing pearl culture industry. So Giscard thought about combining pleasure with work on Manihi. He began in 1981 with a few workers from the Austral Islands, who have a reputation of being strong and reliable. Giscard hired a Manihi man who had studied grafting and began culturing pearls. However, Manihi's lagoon was oyster poor, and Giscard ran into supply problems. In 1985, the oyster epidemic was already raging on Takapoto and the mayor refused to allow him to import oysters to Manihi, saying that he did not want the local oysters to be affected.

"The people were jealous." Giscard explains, "They imagined that all the gold is for them, its their country. We were Chinese, we had eyes like this. Its somewhat racist." So he decided to move to Takaroa, following Lee's example. Through Afo, Giscard had inherited several land parcels on the far side of the atoll. He decided to settle on one which was protected from the winds and relatively isolated. Initially, the mayor (a native) had refused to accept Giscard. But Giscard told him, "I am an owner here. If you do not sign, I will depose all my papers to the government." The mayor signed, provided that Giscard did not deploy any collection stations of his own.
After settling down, however, his neighbors tried to get Giscard out. They claimed that, despite Afo’s purchases, he (or his descendents) had not used his land in the sixty or seventy year interval since the purchase, and the land had been exploited by their original Takaroa owners. In their view, the land was now theirs under the French law of prescription. But Giscard told them that he already had obtained his authorization for lagoon farming in the area from the government. Moreover, he had constructed his buildings on the adjoining reefs rather than on the land which they now claimed. He also agreed to purchase oysters from the local population.

But the administration turned down his petition. Under pressure from local cooperatives, the government passed a regulation against running pearl farms on more than one island. This regulation is applied unfairly, Giscard claims, because Yi Fu is allowed to run pearl farms on at least four atolls. Lee was also able to keep his Manihi farm (under his wife’s name). Giscard, however, with considerably less political influence than Yi Fu, was forced to choose between Manihi and Takaroa, and had to give up his Manihi farm. "It’s a very wild business," Giscard says. "It’s too bad. I had a good reputation and I had no problems there. I never lied. I
never made tricks to the population. If I said cash, it would be cash."

According to Giscard, he did not enter the pearl farming business for the money. Since fifteen years ago, he was already able to live without doing anything. He owns many buildings in Papeete with quite a bit of income in rent. But the business is interesting intellectually and it may also provide an opportunity for his children. One of his daughters is studying marine biology in the U.S. and is interested in pearl oysters. On Takaroa, Giscard conducts studies of graft success rate, oyster mortality, and the quality of harvest. Each pearl is labelled by the size of the nucleus, the color of the graft tissue, and the date of operation. He has even experimented with microsurgery tools.

Giscard began with a concession for 3.8 hectares, but his houses alone occupied a space of a hectare and he needed additional space to avoid conflict with his neighbors. He wanted to apply for a 20 hectare concession, but at the rates for his previous concession (ten CFP/meter square or 100,000 CFP/hectare), he would have had to pay two million CFP annually for the concession fees. So together with Lee, Yi Fu, and several of the other large pearl farmers, a different rate was negotiated for large farms: 10,000/hectare, similar to the
fees charged by the administration for leasing agricultural land. So he only pays 200,000 CFP. He now grafts about 50,000 oysters per year, producing about 20,000 pearls with an expected revenue of 200 million CFP.

Giscard was surprised when his materials were confiscated. There were many buoys which he needed for his pearl farming. Some of the people involved in the seizures had tried to sell Giscard collection stations the day before. Giscard told them, "How can I purchase your oysters if I don’t even have any buoys to keep them afloat? If I put your stations on the sand, they will die." Giscard had a long discussion with Moeroa afterwards. Moeroa told him that there were complaints from Giscard’s neighbors about the size of his pearl farm. Giscard responded that the confiscations were illegal and if there were complaints, they should let the judge decide.

Moeroa told Giscard that if—20 or 30 years later—Tuamotuans come back, they will need to be accommodated as well. Giscard answered, "I was the first one to occupy it. Besides, the Tuamotuans own quite a bit of land themselves. My neighbors don’t need my land." Giscard only asks that strict rules be implemented with equal treatment for everybody. "How can anybody say, 'These people are from Takaroa, these are not?'" Giscard
adds, "It’s very difficult to define. How do you define who is a Tuamotuan? Most of the people here were born in Papeete. Even if a grandfather was born here, he was probably married to someone from Papeete. In that case, almost everybody in French Polynesia would be a Tuamotuan."

Giscard understands that the Tuamotuans are trying to reserve space for their descendents years from now. But he does not like it when he hears people on Takaroa complaining, "Why do the Chinese entrepreneurs come here when they already have plenty of money?" Giscard does not like to come across racist attitudes, but he is not worried about them either. "We Chinese are like the Tuamotuans themselves," he says, "We don’t break down even if the wind is strong. We are survivors. We are very similar to them. I learned their language when I was a housing contractor. When I came back from France as a young engineer, I had already learned Tahitian."

Giscard considers himself a resident of Takaroa. He says that he has given up his other businesses and has devoted himself entirely to pearl farming. Giscard claims that the large-scale pearl farms are good for the Polynesians, generating jobs for divers and other workers as well as the concession fees and export taxes required by the Territory. But Giscard is opposed to indigenous
partners who deploy stations for external investors in return for 50 percent of the oyster harvest. "They (the investors) have no authorization to put their stations here. They are from Ahe, Manihi, Aratika, and Negonego. The big people can afford to buy stations. Let them buy the oysters directly."

Giscard is willing to contribute directly to the local community. He feels that this would be more appropriate than paying the concession fees to the administration in Papeete. But he does not feel that lagoon concessions should be managed by the Tuamotuans. This would be too dangerous. There would be endless disagreements within the community. "We are professionals at producing pearls. But we are not biologists. We do not know how many pearls can be produced, how much food is needed. We need the advice of specialists. The SMA, with all their biologists, does not know either, but limits should be set. Without this," he worries, "There would be anarchy. We might have all the oysters dying of disease."
Lee

Lee is the largest pearl farmer on Takaroa. With over 20 workers on farms spread over five islets on two sides of the lagoon and two full time Japanese grafters, he grafts well over 50,000 oysters per year. "I came in good faith," he says, "Not looking for any trouble. But there were misunderstandings. I did not know that this population was different, against...They were afraid that we would deploy collection stations and if we did that, what would be left for them? I told them that was no problem. We had come to graft oysters, not to deploy stations. So there was a complementarity, not an opposition." The islanders were persuaded by this and Lee was allowed to become established. So it is not reasonable to reject him now.

The economy of French Polynesia, according to Lee, demands external investment in the pearl industry. Consequently, the administration should support people who are dynamic and ambitious. Without this, the territory is headed for an economic catastrophe. "It is better to have people who work, who are ambitious, who can take an initiative," says Lee, "Than to assist people who only know how to ask for aid." This helps the locals as well. "We buy their oysters, their stations. When they can't afford materials, we advance it to them. At the harvest
we deduct the price of the materials. We are not here to deprive them of their bread. Far from it."

Not very many of the local inhabitants can afford to start pearl farms. Most of them have just enough financial capacity to deploy stations. Technicians for grafting are expensive (40,000 CFP/day) and the Japanese are also not willing to graft for everybody. They want to be sure they are going to get paid. Lee says that his presence helps the population. When his workers go to the village, they talk to the locals. When the locals start on their own, they put Lee’s techniques into practice. Lee was the first to develop the system of floating lines, which maximizes spacing and nutritive supply; now all the pearl farmers are using the same technique.

Lee feels that the troubles began on Takaroa with Yi Fu’s attempted entry to Takaroa. Lee was himself opposed to Yi Fu’s establishment on the atoll. "Yi Fu is big, while we are small. Yi Fu sells 30-50 times more pearls than me. It would be preferrable to divide the cake with the inhabitants of Takaroa. If Yi Fu comes to Takaroa, he is taking the bread away from the small ones." Lee also blames Moeroa, a trouble maker that was unhappy because he was denied a concession while others received one. Why should Lee receive a concession and not Moeroa? "Because the government realized that we were here to do something
for the population. It weighed the pluses and minuses and
decided that our presence was beneficial to the
population."

Lee agrees that the locals should be afforded some
degree of protection. Lee himself would like to be
protected. Not only against Yi Fu, but against the
Japanese, who have already infiltrated into Takapoto. Lee
is worried because the resources of the Japanese are so
much more substantial. "We would rapidly be eliminated,"
says Lee, "If wealthy foreigners come here. If this
happens, they would control everything from the graft to
the sale. If they become established in production as
well, we small ones would be lost. They would have a
monopoly on the pearls and we would be blocked from
selling." But protection mechanisms should be enacted
legally, through dialogue and negotiation, not through
confiscations.

Lee claims that the aliens are being used as
scapegoats for problems among the islanders themselves.
Unemployment is high in Tahiti and people are migrating to
the Tuamotus to claim land of their ancestors. But their
cousins, who have already been living on the place, are
not always happy about the new arrivals. Conflict then
develops between the established people and their
relatives over the rights to ancestral land. The people
are also frequently unhappy that some have received the rights to more collection stations than others. Unable to vent their anger at their relatives, they channel their frustrations and jealousy into racism against the Chinese and other outsiders.

Lee has no difficulties with the Catholics on the atoll, but "With the Mormons it’s a different story". Lee is a Catholic and has offered to personally finance the construction of a new church on Takaroa. But this financing, he explains, was simply an offer of aid, and was not intended as a bribe. His offer was also intended as a way of returning things to the population. Later on, perhaps, he will build a new mayor’s office or a hurricane shelter on Takaroa. "It would only be right to do so," he says, "When their lagoon has benefited me so substantially." But right now, he is still repaying investment debts, and cannot afford to incur additional responsibilities towards the community.

Lee does not see any reason to limit his pearl farm to the waters adjoining his land, so long as his neighbors have no concessions and do not need their shoreline space for pearl farming. If a neighbor does begin pearl farming, however, it is easy enough for him to move the oyster cables further into the lagoon, as the cables are not permanently fixed to the lagoon floor. He also does
not see the need to limit himself to pearl farming on one atoll alone. "If I have the desire to start two, three, four farms on different islands, it's my right. It's a form of insurance. Every head of an enterprise must consider the future. If we keep our nose glued on the ground, we will never advance."
APPENDIX B
A VILLAGE MEETING, JUNE 1991

The following is an edited translation of a public meeting held in Takaroa on the occasion of the SMA fact-finding mission. This was one of the climactic events in the war of words between the islanders and the Tahitian administration. It provides insight into the minds of the contestants and shows how deliberately oblique these engagements are. The mission was supposed to be one of listening and information gathering; but it turns out that the administration's position had firmly preconceived. As elsewhere, all names have been deleted or fictionalized.

Vice-Mayor: I have the pleasure to present to you the members of the SMA and I must thank them for having come to reevaluate the problems of the lagoon.

Director, SMA: I thank you for having come in such numbers this evening. My thanks are also addressed to the presidents of the government and the assembly who came last week, despite their busy schedules, for trying to solve our problems. I am particularly thankful to the vice-mayor and his council for the work which we have
accomplished. Your mayor has done all that is possible to find a solution, but the cooperation of the whole population is necessary.

We have examined the new requests for concessions which have come. We have encountered many difficulties at the level of property titles. We have primarily been concerned with lagoon concessions, but we have now been forced to also be involved with land titles. It is not sufficient for you to claim that you are the owners; you must furnish the titles to prove your claim, as well as proof of your genealogical descent.

Since 1987, Takaroa has been an attractive atoll due to its spat collection. The most adventurous have done well. Some have become wealthy. Knowing that land division generally leads to lawsuits, we have decided to require property titles for maritime concession applicants. Tomorrow morning, we will review your applications for maritime concessions. Those that are incomplete will be returned to the mayor, who will contact you. At the same time, you can come to pay your annual fees. As the president of the government announced last week, the final decision concerning the allocation of concessions is the domain of the Council of Ministers.
The problems can be avoided if the population respects the laws.

Due to the development of pearl culture, many of the Tuamotuan atolls send us applications for maritime concessions. We have even received applications from the Marquesas and the Leeward Islands. Even though working overtime, our personnel cannot keep up with the work. They try to do things right, but they sometimes make mistakes. Last year, we received 933 requests for concessions, many of which required further investigation. This is an enormous number. You are not the only ones involved in pearl culture, but you are more fortunate than the other atoll communities.

From March to May, 1991, there were 500 requests for concessions. Collection is also successful in Ahe, Aratika, Kauehi, and the Gambiers. There is a great competition between the atolls and it is necessary to sell pearls of good quality in order to attract buyers. Respect the limited number of stations you have been authorized to have. If the quota is fixed at five, you do not have the right to deploy a hundred. We have also heard that some of you have deployed stations without any authorization at all.
Do not take the problem of competition lightly because it will be hard for you to sell the oysters later if you continue to produce in such quantities.

Vice-Mayor: I want to remind you that there will be a chance for individual meetings with the SMA tomorrow morning. It would be preferrable to wait until then for questions of a personal nature.

Director, SMA: Anybody who wants to apply for a concession should come tomorrow morning with the property titles and the birth certificates of yourselves, your parents, and your grandparents, in order to avoid any confusion, because the family names frequently change between father and son and between son and grandson.

Islander: It has been a long time that I have waited for this moment. Finally, we have the occasion to talk. I don’t understand why the authorities require us to show our property titles for the land. The collection stations are deployed in the water, and it is this that is your area of concern.

In November, 1990, I obtained a concession for collection, breeding, and grafting. After having deployed my stations, I returned to Takapoto. Normally, the
representatives of the commune should verify the location in the lagoon, the distance which separates the stations, and the name of the land. After their observations, they should send the information to the SMA. But my stations were not registered. My son deployed many stations, but most of them disappeared. That's why I have come here. I have lands from my parents on Takaroa.

I have now put in a request for a concession for one hectare. Can I deploy a hundred stations? You complain that we have indiscriminately deployed our stations anywhere in the lagoon. I don't see the problem, so long as the stations have been deployed by residents with property titles.

Islander: In respect for the local council, I contacted your mayor to advise him of my intention to come and deploy stations on Takaroa. I was born on Takaroa, but I lived on Takapoto since the age of 38 because I inherited lands from my great-grandmother. But when I came here yesterday, I was not able to contact the mayor. I've given you my application and I intend to deploy my stations tomorrow.

Director, SMA: We follow the instructions of the Council of Ministers. We require the property titles
because otherwise anybody could claim any land. The president announced to you during his last visit that the allocation of concessions is under the jurisdiction of the Council of Ministers. Since 1976 I have observed problems between the people of Takapoto and Takaroa. The lack of respect between one and the other is the cause.

An approval by the mayor is not sufficient for obtaining a concession. You also need to prove that you are landowners. We also do further research at the SDE. The number of stations is fixed at five because of the oyster mortality which appeared in 1985 and because of the return of your children to the island.

It is impossible for us to regularly visit the islands to survey and police the pearl farms, due to lack of funds. So we are trying to reduce the number of stations to prevent over-density.

Islander: I repeat what I said just a moment ago. If I requested one hectare, can I deploy as many stations as I want after paying the fees?

Islander: I arranged for my concession with the SMA. But there are some people who present false property titles or deploy stations in front of land parcels which do not belong to them. Installations in the lagoon which
do not belong to the owner of the adjacent property should be removed from the water. First worry about applications of the Takaroa pearl farmers. Then worry about the Chinese.

I want to give you my advice concerning the number of collection stations to be authorized per concession. Five stations are not sufficient, because many oysters die. Of ten stations I deployed last year, only six gave satisfactory results. This was not even sufficient to cover the expenses.

It is true that our living standards have become elevated because of the pearls, but none of us have become wealthy. We are willing to follow the law if the quota of stations is raised.

Islander: I disagree. The number of stations per concession should be reduced, because we must also think of our children.

Director, SMA: You do have to worry about your children, who are returning to the atoll. That's why we can't give you 20 stations per concession.
Islander: I would like to comment on what that woman just said. It is the Chinese who have become wealthy. In the beginning, Lee rented a parcel of land. Three years later, he sold his pearls for a billion (CFP). He did not have a maritime concession during this time. He was associated with a resident who had a concession. He was able to rent the land by promising to purchase the oysters of the landowner. But now he only wants to purchase the oysters at very low prices, so nobody wants to sell to him. So he deploys his own stations, against the original agreement. I’ve seen the stations with my own eyes.

Islander: You talk about regulating the problems of the concessions tomorrow morning. But we are here because of the problems which happened at the quai. Those are the problems which should be addressed: Who was responsible (for the struggle on Takaroa)? What are the causes and how will it be solved? Should the Chinese be expelled or not?

I was on the council during the year that the Chinese came. There was nothing we could do because they were here legally. Lee purchased a piece of land. Giscard inherited land from his grandfather. Richard rented his land. The millions they make do not concern us. At the time, the council was much more strict than today. One
time, a young man originally from Takaroa came to request a concession. The mayor did not approve the request since he did not know the man. Many months later, when the mayor understood exactly how the young man was related, the approval was granted.

So it’s necessary to be careful about tenure rights. Even young people who are returning should not just go ahead and occupy the land and lagoon. They should respect their elders on the atoll. The quarrels between Takaroa and Takapoto have been going on for a long time. During the diving seasons, Takapoto’s population would prohibit us from diving in their lagoon. They’re the one’s who began this: the ones who just spoke. So my advice is: give them only one station when they come here.

There are three categories of pearl farmers on Takaroa now: the entrepreneurs, the islanders, and the partnerships. The islanders should be given priority, but it doesn’t seem to work like this. So how could the population defend itself? The only way was through the confiscations. Entrepreneurs got in through partnerships with the islanders. The islanders can’t manage their business on their own. When they sell their stations, they buy cars. How can they be successful on their own? So they go into partnerships with the entrepreneurs. That is also part of the problem.
It's like a plate of food that I shared with my brother. One day he come back from abroad, but he brings along a guest who takes the whole plate for himself. That's why the Bible says, "Be fair to each other, don't try to rise above each other, don't be bad towards each other."

Director, SMA: I want to make things clear to you. When somebody receives a concession, he must pay the annual fee in advance. At least make a partial payment. I don't want you to set a bad example for the young people. Many problems would be avoided if the law would be respected. There is no respect here. When you go to Papeete and come to see our office at the SMA, and you go to our parking low, we don't tell you, "You are Tuamotuan, go away." That would be a bad thought. This is Polynesia. It is for all of us. So I don't like to see this kind of attitude. We must all respect each other.

Lee's concession was granted because he had contracted a legal rental for the adjacent property and because he promised to purchase the oysters from the islanders. These two conditions were imposed on him. The entrepreneurs are willing to purchase your oysters in order to expand their farms. If you object to their expansion, where will they put your oysters? On the
ground? It is because of their diligence and hard work that they have become rich. They don’t just sit around, walk around all day until the evening.

Islander: I went to see Hina, who brought Lee over here. Hina gave Lee one small portion of her land. But now Lee has continued to expand. Initially, Lee only paid her 50,000 CFP for the rental. Then her children complained that the price was too low, so she raised it to 100,000 in the third year. At the same time, Lee continued to expand his pearl farm. He now blocks my land which lies right next to Hina’s. My son told him to keep clear of our land, but he keeps expanding.

When the fights broke out at the quai, I was in Tahiti. When I heard about it, I returned here. I have eight children and many of them would like to return here. If I would have been here that day, I would have joined the battle. My arm is ready; my leg is ready. Would I have fallen down or would he have fallen? This is what I am like. I’m a very quiet person. But if somebody wants to start, I’ll start as well.

Director, SMA: I think you have been too influenced by the television and videos, particularly by the westerns. What has happened here on Takaroa is just like
what happens between cowboys and Indians in America. Perhaps you think the Chinese are the Indians. It's like a gold rush over here. You say you don't want any investors to come to the Tuamotus. But word of this will get to Papeete. Nobody can come to the Tuamotus, only the Tuamotuans. You will have problems then, as I told you a moment ago. They will make problems for you (if you want to go to Papeete).

Islander: Last week, we saw the president come here because of problems on Takaroa. That's why you have come as well. Thank you for coming here. You are trying to straighten out the problem. An elder in our church has just spoken aloud. On Sunday, he greeted my wife warmly in church. At the end of the service, when walking outside, he turned his back. It's not like that. Before you complain about others, straighten yourself out.

Islander: The people who don't have a concession, will they have their stations removed? If so, I will remove mine as well. But if the others leave theirs, I will not take mine out. Secondly, you say it is we who have broken the law. Who made the mistakes? It is the French, not us. In the 1880s, my grandfather made a claim to a parcel of land on Takaroa and received a title. Now
the government does not recognize my grandfather’s claim. I don’t care whether my concession has been approved. I am a person of the land.

Director, SMA: I want to explain something to you. The early property titles included not only the land, but went to the center of the lagoon. This is not a problem so long as the lagoon is perfectly round. But what if it is elliptical. How do you determine the center of the lagoon for a person who lives at a tip of the islet? Is this clear? Secondly, there are some people who have sold their land. Others have no land bordering the lagoon, only on the ocean side. Others have land in areas which are no good for pearl farming. Should they be excluded from the lagoon? I think not. It’s very hard to satisfy everybody.

We have evolved over the generations. At one time, our bodies were strong, but our minds were weak. Now, our bodies are strong, our minds are also strong. Some of us are diligent and want money, a good life. We shouldn’t be jealous of them. Let us rather think of how to make ourselves stronger.

Islander: Why have the people ceased to respect the law? Those who have broken the law are all Mormons. They
have been reprimanded by the church president. Now people
deploy as many stations as they can. Some tell the
mayor's office how many stations they have, some give
false figures.

When I came to Takaroa, four years ago, I asked for a
concession for five stations. The number was reduced to
three because the lagoon was said to be overexploited.
The quotas were imposed because aliens had taken up too
much space with their breeding and pearl culture. It is
the aliens who have to be stopped. The lagoon is too
small. But there is plenty of room for spat collection.
The small farmers are being discriminated against.
Moreover, the small farmers pay an annual fee of 30 CFP
per square meter, while the large scale farmers pay only
one CFP per square meter.

We were originally law abiding people. But we have
encountered problems, not arising from within our
community, but from without. It is the people from
outside who have come into our land against our will.
Leave our wealth for ourselves. Even if one alien comes,
there may be 20, or even 200 persons behind him
(financially). We will be wiped out. It's even become
hard for us to get pearl farming equipment from Papeete.
It is being blocked or delayed by the (Chinese) shop
owners. So we have no cables, no cultch (polyethylene
collection material). If you are partners with one of the businessmen, no problem. You’ll see your equipment arrive very quickly.

The Tuamotuans who have gone to Papeete know this. I would like the Tahitians to know that the copra and oysters are the only resources we have in the Tuamotus. These are resources which can be easily overexploited. If the entrepreneurs come here in a massive wave, what will be left for the Tuamotuans? When this resource becomes extinct, the entrepreneurs will be gone in a flash. We will be left behind. Should we return to Tahiti, where we are despised? Have you thought about this? What kinds of indemnities will be paid by the entrepreneurs? They cannot be allowed to gather up the wealth and then take off.

Director, SMA: It’s very difficult to regulate pearl farming without understanding the exact causes of the oyster mortality, but we are continuing to research. The (spat collection) quota was initially fixed at three stations because there were too many stations in the lagoon. We surveyed the lagoon in 1987, but it was difficult to determine a quota because there were many factors to consider. After reflection, we raised the quota to five so you could sell more oysters.
We lowered the fees for the large concessions because the system of pearl farming has changed. Before, there were platforms of six by six meters, which could easily be kept within a concession of 1000 square meters. With floating lines, much more space is occupied, so it would be too expensive to charge at the same rate.

We discuss the situation of the concessions at each of our meetings, along with representatives of the communes, the president of the GIE, and several members of the Department of Finance. We changed the system to facilitate things and to minimize quarrels between you. Some have already been informed of this. By the end of this meeting, you will understand everything.

We are trying to encourage the people to space out their oyster farms. We suspect that excessive crowding is the cause of the mortality. So the new system allows the oysters to be more safely farmed. However, we still do not know how far to space the cables from each other.

Islander: I have only one question. These people who come here and exploit the oysters in this lagoon. When the oysters become extinct, they will return to their islands. What about us, the islanders, who will have no choice but to stay? The atoll is ours. I am speaking as vice-president of our association. We feel there is a big
problem on our atoll. If we don’t stand up, more troubles will follow. If we didn’t stand up, you, perhaps, would not have come. What we have done was done in self-defense. I don’t think that we have committed any wrongs. It was provoke you to come here and straighten things out.

You say that the solution is to be strict about requiring property titles. But for the islanders there is no problem. It is the entrepreneurs who don’t belong here. Now the entrepreneurs remain on Takaroa, while our president was sent to jail in Papeete. We are protecting our wealth. Watch out! This is no joke. We are not playing around. This is not only talk. We have considered things carefully before we took action. If we must continue to be embattled, so be it. Let there be battle. I don’t want problems. But we are concerned that our wealth be taken away.

Islander: Just a short word. After confiscating the goods at the quai, my father and I went to Papeete to see the assembly president. He told us to draft a petition. The petition has been drafted against the Chinese and the other alien migrants. These are their names: Lee, Giscard, Richard, Yi Fu, and others. All these will have to leave. It is already done.
Now I will circulate through the households for your signatures. Then I will take the petition to the president of the government. And soon afterwards, the aliens will be expelled, as explained by our vice-president. After the resource is depleted, the Chinese will go and we will remain.

As far as the quota is concerned, we keep to our limits. Five stations per concession. But others do not. What about them? If they have 100 stations for one concession, what will you do?

Islander: When you talk about the lagoon being overexploited, are you sure that the sickness was caused by crowding?

Director, SMA: I am not sure. Perhaps.

Islander: If so, why don’t we sell our oysters to pearl farmers on another, uncrowded atoll, instead of letting outsiders come to start large farms on Takaroa. We want to stop aliens from coming here. They can buy them here but raise them on a less crowded atoll. That would end the conflicts between the people of Takaroa and the aliens.
Islander: In my opinion, the problem starts with our mayor’s approval of the concession to the aliens. It is Louis who has approved the concessions. Our problem today is our mayor. He was legally elected, but leads the council from outside. I suggest that you make a new law, that the approval of the councilors be solicited as well.

Why don’t the aliens respect us? Because Louis tells them (in Tahiti) ‘The island mayors don’t have power. It is me, Louis, who has power. I alone am the mayor of Takaroa and Takapoto.’

When somebody comes to Takaroa to start pearl farming, he is asked for a land title. Then he must make an application to your commission. To facilitate things, he contacts Louis directly, who can give a favorable opinion and approve the concessions. The aliens do not respect the population here because Louis tells them that we have no power. But we are situated better than he is to know who is originally from the island. The mayor even gives residence certificates to people who never lived here. It is impossible for us to oppose Louis because we are underneath him in the municipal hierarchy.

I would like to personally meet with the presidents of the government and the assembly to expose my point of view. I will also demand that a new election be held.
Director, SMA: I will allow two more people to express their opinions and that will be the end.

Islander: I presented my property titles to the council. Then I submitted my file for signature of the mayor, Louis. I have recently returned here because my parents were born in Takaroa. The elders can confirm to you that this is true, because they knew my parents. My ancestors were all originally from Takaroa. That is why we have returned. My grandfather left us land over here. Is there a law which permits the expulsion of a landowner from his own property? Tomorrow I will bring my whole genealogy and you will see.

Islander: Let us not forget why we have come here. The problem is not the concessions. You can easily solve that tomorrow morning. The problem is the entrepreneurs. Make sure you take my words to the president. Goods were confiscated at the quai because this group of migrants has come with entrepreneurs supporting them. If the resource disappears, so will these migrants. We alone will be left.

Director, SMA: Thank you all. I will now turn the session over to Bernadette.
Government Official: The documents necessary to obtain a concession are: birth certificates, residence certificates, property title, and survey map. As long as one has property titles, nobody can be blocked from moving to the Tuamotus. According to law, anybody can live wherever they want.

Director, SMA: I will transmit all your ideas and propositions to our superiors. Concerning your petition, however, it would be wise to reflect carefully before transmitting it to the authorities. A few years ago, a petition was sent to expel somebody from Takaroa. Two months later, another petition was sent to cancel the first petition. Our drawers are full with many petitions of this kind. So don't send the petitions too rapidly to Papeete.

Vice-Mayor: Tomorrow, you can meet individually with the representatives of the SMA in order to complete your applications for concessions or ask any additional questions. The meeting is ended.
APPENDIX C
TRIAL OF ASSOCIATION LEADERS, OCTOBER, 1992

The following text is an abridged report on the criminal trial of Moeroa and other resistance leaders, taken from a local newspaper (DT, 14 Oct. 1992), with quotations retained as used. The arguments of Moeroa and his attorney stress the material threat of dispossession, rather than an indigenous ideology of rights. This is at variance with the actions, petitions, and rhetoric expressed during the conflict on Takaroa, as noted perceptively by the procureur (see below). But this conforms with Scott's (1990) theory on retraction, disguise, and ideological subservience in direct confrontations with the dominant order. Faced with immediate threats of fines, imprisonment, and other penalties, arguing the case in terms understandable to the court may have seemed imminently more sensible than a strident insistence on ethnic distinctions.

Wild West on Takaroa

They were all united, the actors in a brawl which happened some two years ago on an atoll in the Tuamotu Archipelago. Justice has been given a serious knot to untangle, having seen the members of a committee of
defense, made up of some inhabitants of Takaroa, and the pearl farmers whose presence is contested. The purpose of the committee of defense is to defend the "interests" of the islanders against aliens. These aliens are neither Chinese, nor American, but mainly investors from Tahiti, working in collaboration with local proprietors. The "pearl wars" having claimed their first violence, the government at the time felt the need to deplace itself to closely study a question which affects the development of the pearl farming industry.

The role of the association was to defend and to limit the "chaotic" development of pearl farming concessions given to "aliens" without the consent of the community. "There must be justice in all the allocations!" begins the president of the committee of defense, "If we had not intervened to defend those who originated from the island, we would have been submerged by aliens who know no brakes to their expansion." The committee of defense had decided to block seize all the work equipment of "alien" pearl farmers at the moment of its arrival from the cargo boat, placing the goods in a communal warehouse. About 40 persons participated in this commando operation, led in the name of grand principles. The same individuals repeated their operation a second time one month afterwards.
"But who are the aliens that you are talking about?" asks president Allard to the president of the committee of defense. The latter answered, "It was all those who were not originally from the island and who obtained concessions which we had refused." "That is false," cries one of the proprietors, mentioning that his great-grandparents had originally come from Takaroa.

To summarize, according to what has been explained to the court, on one side there were pearl farmers who had received all the necessary authorizations, but considered aliens to the atoll, and on the other a fringe of the population which had applied for concessions since 1985, but had never received them. The latest episode occurred on the first of May, 1991, when the pearl farmers were opposed by the members of the committee of defense, who attacked them and broke their teeth; complaints were deposed and the situation has waited.

Mr. Liu-Boulloc represented the interests of the victims, the pearl farmers, for whom the committee of defense’s intervention was a robbery, aggravated by assault and injuries. Mr. Cross defended the interests of the "locals".

Two ways of conceiving the development of pearl farming were opposed to each other. For Mr. Liu-Boulloc, it has returned to the times of the cowboys in the Wild
West, with its brawling. The interest of the island in general was being endangered since they would have trouble selling their oysters. In any case, it is not for this committee to take justice into their own hands, because they always could have complained to the proper authorities if they needed to. Moreover, not only were blows given and received, but one of the proprietors was surrounded and beat up by a veritable wall of defenders, resembling the Furies of ancient Rome.

Mr. Cross then remarked, "These people were opposed to greediness, Mr. President. Because the territorial government allocated the concessions to rich proprietors who permitted the entry of large investors, a kind of infiltration. And equity? Four out of six councilors were associated with this vast protest at the time. When my clients speak about an invasion of aliens, they are referring to vast concessions allocated to some, up to 24 hectares, while they only demanded a small concession."

He also raised the problem of overexploiting the lagoon, leading to different diseases. Mr. Cross asked the acquittal of the members of the committee of defense because of absence of proof of blows and injuries. Concerning the robbery, he remarked that the goods had been returned.
It remains to present the requisition of the procureur, Mr. Dran, who made it quite clear that there are problems to resolve at the policy level, but the court must apply the law, it is only qualified to do that. Mr. Dran did not mince his words: "One should not confound discussions which should be rightly held in the Territorial Assembly with those that pass in this court. The question here is not that of the legitimacy of the allocation of concessions. If the law is mocked, the sanctions fall. I will also note several points in this case:

"The charter of this association of defense is, firstly, racist. There is a question of aliens? The notion is dangerous. Private justice, by itself, is intolerable. This association is not the justice. Takaroa is not the Wild West. One should rather utilize the courts to contest by judgement what has been done with blows and blood. I cite the president of the committee of defense, 'I told everyone that I would not hesitate to do it again.' Does this man have the right to do anything? The law must be respected and the respect is assured by applying sanctions against criminal acts. Here there is no problem of policy, nor of allocating concessions, but only the existence of robbery, blows, and injuries."
"The robbery is admitted, even though he calls this a 'confiscation'. Concerning the blows and injuries, let us remember that there were forty people surrounding this proprietor. It was they who began. Being that they have no past criminal record, I propose that the committee president given two months of suspended sentence in prison and suspended sentences of lesser duration for two other islanders."

The court decided to follow the recommendations of the procureur, and condemned all three leaders of the committee of defense to symbolic punishments; it is in effect, only a warning. Mr. Cross remarks that his clients will appeal.
The following glossary contains the principal Tahitian words used in the text and/or related to the black pearl farming industry. Tuamotuan forms are denoted with an asterisk (*).

`āi`a homeland
ari`i chief
`etene heathen
fa`amu feed, adopt
feiā group
feiā tumu indigenous islander
gāti* clan, lineage, descent group
hōā inter-islet channel
marae temple sites
mātou our (excluding the person spoken to)
`ohipa work
`ona entrepreneur
paepae platform
rāhui restriction
rātere tourists
taravana diving illness
tātou our (including the person spoken to)
tōmite land title
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Toohitu</td>
<td>traditional court of law</td>
</tr>
<tr>
<td>tumu</td>
<td>origin, root, trunk, foundation</td>
</tr>
<tr>
<td>tūpāpa'u</td>
<td>ancestral spirits</td>
</tr>
<tr>
<td>tupuna</td>
<td>ancestor</td>
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